VOLLEYBALL AUSTRALIA COACHING MANUAL
VOLLEYBALL / BEACH VOLLEYBALL

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Resource contains (but is not limited to) course material for Volleyball Australia,
Level II and Level III Volleyball / Beach Volleyball Training Program.

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This manual originated in 2009, revised in May 2018.
EXPLANATORY NOTES TO MANUAL

GENERAL
This manual has been written with the objective to be not only a reference manual but also an ongoing coach’s resource. It is intended to be useful to the coach on an everyday basis and not only during the Advanced Coach Training Program of which it is the required text. For this reason, manual also goes into greater detail and explores issues and ideas that are not directly covered in the Advanced Coach Training Program.

BEACH AND INDOOR VOLLEYBALL
This manual covers both indoor and beach volleyball disciplines. In each technical section (the individual skills and systems) there are separate sections for beach and indoor volleyball. These have been written as unique sections. That is the beach volleyball section can be read without reference to the indoor volleyball section and conversely if both chapters are read together there is some repetition.

The general chapters (Performance Analysis, Rules of the Game, etc.) have been written to cover both disciplines together. Specific notes are made through the text of these chapters describing similarities and differences between the disciplines.

STRATEGY - TACTICS - TECHNIQUE - SKILL
To clarify some terms that are commonly used or understood throughout the text.

Strategy is the general objective.
Tactics are the specific methods of implementing the strategy.
Techniques are how tactics are implemented.
Skill is performing techniques in a match situation. In most situations skill involves including the decision making process.

For example, the strategy for blocking is to cause maximum disruption to the spiker at the net. The tactics are to put as many blockers at the point of attack as possible, in the direction of the spiker’s most likely attack. The technique is ‘read blocking’. The skill is successfully read blocking in a match.

There is obviously room for debate about where in this classification specific things fall. For example, it could be said that ‘read blocking’ is a tactic and the movement for block is the technique. In this specific example, the interpretation has been made that the decision making process is not separate from the action of blocking, but rather an integral part of it.

The terminology itself is less important than the consistency of usage throughout the manual.

SIDEOUT - BREAK POINT
In the rally point scoring system all rallies end in a point so the terms ‘sideout’ and ‘point’ are no longer relevant. However, it is still necessary to differentiate between the phases of the game where each team serves. Therefore ‘sideout’ is still commonly used to describe the phase of the game that starts with the opponent’s serve. Instead of ‘point’, the term break point is commonly used to describe the phase of the game when a team is serving. Sideout and break point are used in the text to describe these situations.

OFFENCE - ATTACK - SPIKE
Throughout the text the word ‘offence’ is used to the coordination and organisation of a team’s attack. In indoor volleyball this is the coordination of the team’s spikers to achieve a point. In beach volleyball, this is the various options that a team has. The word ‘attack’ is used to describe the action of a single spiker / attacker. ‘Attack’ and ‘attacker’ are
often used instead of ‘spike’ or ‘spiker’ to emphasise that the spike in only one form of
attack.

NOTES ON DRILLS

The drills described in the relevant sections are meant to be ideas for drills rather than
necessarily complete drills in themselves and as such are not always described in complete
detail. They are not intended to be prescriptions for success nor are they meant to
replace the coach’s own experience. Each coach should be proficient in designing their
own drills. This section may provide some stimulus in this area.

Different drills are obviously more relevant to some groups than others and to different
training periods than others. Each coach must first analyse the level of the group and the
training period before deciding on the specific drills to use. Remember no drill alone will
create improvement. All drills chosen by the coach should be part of a coordinated plan
for development of the team.

The drills in the beach volleyball sections have been chosen as specific beach volleyball
drills. Many drills suggested in the volleyball sections can also be modified for beach
volleyball, especially those for young players.

NOTES ON TROUBLESHOOTING GUIDE

The Troubleshooting Guide attached to each section is intended to recognise common
problems, identify the most common causes of these problems and provide simple
solutions. It is NOT intended to be exhaustive and there is no substitute for the coach who
is in the gym every day. Each coach brings their own experience and knowledge to a given
coaching situation. Again it is hoped that this will provide stimulus to the coach to solve
the problems with which they are faced. Therefore, some space is provided for the coach
to include their own experiences for future reference.
THE SPORT OF VOLLEYBALL

History of Australian Volleyball - Nationally

- 1918 - Volleyball brought to Australia by returning servicemen and refugees
- 1962 - First interstate matches (VIC, SA, NSW) for men
- 1963 - First National Championships (SA) men
- 1963 - Australian Volleyball Federation founded
- 1965 - First National Championships (VIC) women.
- 1969 - First referees course (TAS)
- 1969 - First National Junior Championships (ACT) for U18
- 1975 - Australia organised and hosted the first Asian Championships (Melbourne)
- 1979 - First full time employee of AVF
- 1982 - First Australian Beach Volleyball Championships (QLD) men
- 1983 - First Australian Volleyball League (women)
- 1984 - First National Schools Cup (ACT)
- 1988 - First Australian Beach Volleyball Championships (SA) women.
- 1989 - First National Junior Beach Volleyball Championships (WA) Under 21
- 1992 - First FIVB Beach Volleyball World Tour Event held in Australia.

History of Australian Volleyball - Internationally

- 1971 - First volleyball international (v NZ) men
- 1972 - First volleyball international (v NZ) women
- 1972 - First overseas tour (to NZ) men
- 1973 - First Oceania Championships
- 1975 - First Asian Championships for men and women (both 4th)
- 1975 - First overseas tour (to China) women.
- 1976 - First Junior Volleyball Internationals & Tour (to NZ) men
- 1977 - First Junior Volleyball Internationals & Tour (to NZ) women
- 1982 - First qualification for Volleyball World Championships by both men & women
- 1988 - First Australian teams participate in FIVB World Tour event (3rd ever World Tour event).
- 1990 - Australia represented at first Beach Volleyball World Championships
- 1991 - First FIVB World Tour event held in Australia (NSW) men
- 1995 - First FIVB World Tour event held in Australia (QLD) women
- 1996 - First qualification for Olympic Games by Beach Volleyball, bronze to Pottharst & Cook.
- 2000 - Second qualification for Olympic Games by Beach Volleyball, gold to Pottharst & Cook
- 2000 - First qualification for Olympic Games by Volleyball
- 2001 - Australian teams qualify for 2002 World Championships
- 2002 - World Championships men 19th=; women 21st=.
- 2004 - Men’s Volleyball team finishes second at World Olympic Qualifying Tournament, claiming Asian berth and qualifying for the Olympics for the first time
- 2007 - Asian Senior Championships. Gold Medal for the first time
- 2004 Olympics - Beach Volleyball
  - Cook & Sanderson 4th; Lochowicz & Pottharst 9th=
  - Prosser & Williams 4th; Schacht & Slack 9th=
- 2004 Olympics - Volleyball
  - Men’s team finished 11th=.
The Structure Of Volleyball

- Federation de Internationale Volleyball (FIVB)
- International peak body for Volleyball
- Founded in 1947
- 217 member countries
- 177 full members (some colonies are not full members)
- 5 confederations - Africa, Asia, Europe, North & Central America, and South America.

Asian Volleyball Confederation (AVC)

- The Asian Volleyball Confederation is the largest of the five confederations
- The AVC has 64 members
- The AVF is represented by its chairman
- The AVC represents the world qualification route for Australian teams.

VOLLEYBALL AUSTRALIA (VA)

- Established in 1963
- Trades as ‘Volleyball Australia’
- Goal: To foster the sport of volleyball as a human endeavour
- Two main focuses:
  - High Performance
  - Sport Development.
# The Organisation of Volleyball

## Affiliated Member State

- Queensland Volleyball Association
- State Volleyball New South Wales
- Volleyball ACT
- Volleyball Northern Territory
- Volleyball South Australia
- Volleyball Tasmania
- Volleyball Victoria
- Volleyball Western Australia.

## Participatory Structure - Internationally

- One of the top 3 international sporting bodies
- Over 34 million registered players worldwide.
Participatory Structure - Nationally

- Approximately 15,000 members registered with the AVF
- Reportedly, 200,000 people participate in the sport throughout Australia
- The difference represents the strength of corporate providers.
- Participation Opportunities - Internationally (FIVB)
  - World League (men - held annually)
  - World Grand Prix (women - held annually)
  - World Championships (held every four years)
  - Olympic Games (held every four years)
  - World Junior Championships (under 21 men, under 20 women - held every two years)
  - World Youth Championships (under 19 men, under 18 women - held every two years)
- There is a qualification process that determines the countries that participate in each competition.

Participation Opportunities - Internationally (AVC)

- Asian Championships (held every two years)
- Asian Junior Championships (held every two years)
- Asian Youth Championships (held every two years)
- Some of these competitions double as qualifying events for FIVB competitions.

Participation Opportunities - Internationally (Beach)

- World Tour (held every year with 10 or more events)
- World Championships (held every two years)
- Olympic Games (held every four years)
- World Junior Championships (under 21 - held annually)
- World Youth Championships (under 18 - held annually).

VA National Programs

- The three Australian programs are:
  - Volleyball Team Australia Men (VTAM) - Indoor
  - Volleyball Team Australia Women (VTAW) - Indoor
  - Team Australia Beach Volleyball (TABV) - Men & Women.

Volleyball Team Australia Men

- Full-time training program established in 1990 in Sydney
- Relocated to the AIS, Canberra in 1997
- Highlights:
  - Qualified for World Championships in 1982
  - Participated in 2000 Olympic Games
  - Finished 19th at 2002 World Championships
  - Participated in 2004 Olympic Games.

Volleyball Team Australia Women

- Full-time training program established in 1991 in Perth
- Relocated to the AIS, Canberra in 1997
- Highlights:
  - Qualified for World Championships in 1982
  - Participated in 2000 Olympic Games
  - Finished 21st at 2002 World Championships.
Team Australia Beach Volleyball

- Full-time training program established in 1995
- Relocated to SASI, Adelaide in 1997
- Current partnerships with SASI, QAS & WAIS
- Highlights:
  - Natalie Cook & Nicole Sanderson (women) - Third World Championships (2003), Fourth at Olympics (2004)
  - Lee Zahner & Julien Prosser (men) - First World Tour title in Germany (2001)
  - Julien Prosser & Mark Williams (men) - Fourth at Olympics (2004).
  - Alice Rohkamper & Beccara Palmer - First Youth Beach Championship (2006)
  - Alice Rohkamper & Beccara Palmer - Second U/21 Beach World Champs (2007)
  - Andrew Schacht & Josh Slack - Third Beach World Championships (2007)
Volleyball Australia Performance Pathway

Volleyroos - Men
Volleyroos – Women
Beach Volleyroos -
Beach Volleyroos –

Volleyball Australia Centres of Excellence –

Junior Men’s
Development
Junior Women’s
Development Program

Junior Beach Volleyball Development Program –
Men and Women

State Representative Program

State Institute / State Academy Program

Regional / Private Academy Program

School / Club Program
Development Pathway

TASK
• Identify the development pathway as it applies to your current team and athletes
• Create a flow diagram which identifies the steps that the athletes would take to make it to the top of the sport in an Australian national senior team, on the Beach World tour, or playing professionally for a club somewhere in the world
• Use either a single flow diagram encompassing each step or use multiple interconnected flow diagrams. If using the multiple diagram approach the structure could be one diagram for school/club participation, another for State and another for National programs
• Write the name of each member of your current team on the diagram at the point in the pathway that you believe each athlete is capable of reaching.

TASK
• Identify the development pathway as it applies to you as a coach
• Identify the level of coaching you aspire to reach, then develop a flow diagram to illustrate how you will get to this level
• At each level of the diagram indicate how long you wish to stay at that level before progressing to the next and any key indicators that you may use to suggest when you are ready to move forward
• At the level you aspire to reach, identify why you do not wish to progress any further.
THE ROLE OF THE COACH

Personal Requirements
Coaches seeking accreditation at an Advanced Coach level should already be involved in coaching a team or teams participating in a high level of competition. Senior high school, senior club, State and AVL club teams are examples of the teams with which Advanced coaches should be associated. The coach has progressed beyond having merely an understanding of the sport. Whereas a Development coach should be capable of conducting quality training sessions and provide leadership to the team during matches, an advanced coach should be developing a complete program for their athletes.

The Assistant Coach
While the initial role of the assistant coach is to help the coach with the conduct of practice and with other coaching tasks there are no limits to the areas in which a good assistant can help the coach. As well as assisting in the head coach’s tasks, the assistant can play a large role in through the simple act of being involved in discussions about the team’s development. A good assistant will always be prepared to provide their honest opinion and a good coach will always accept the opinion of the assistant. However, for the effectiveness of the relationship to be optimised both parties must understand and accept that while discussion is encouraged, it is the head coach who has the final decision making responsibility and the assistant must always support that decision even if they do not personally agree with it. This is often a source of tension in a coaching staff but need not be. As with all working relationships in a team, assistant coaches are more engaged if they have their own area of responsibility. It could be a portion of the practice session, or the assistant may be responsible for giving feedback to one group of the team. For example it is common that the assistant is responsible for coaching the non starters in practice.

Young coaches should always be prepared to work as assistant coaches with more experienced coaches and at higher levels than they have previously worked as an integral part of the development process.

The Coach’s Role as a Team Manager
While the coach does not necessarily have to hold the position of team manager, the coach does have a management role to play. Before the season commences the coach needs to consider the support they desire to enable them to successfully coach the team. This involves the coach identifying the tasks that need to be fulfilled and which of these tasks they would prefer for someone else to take responsibility. Even once the coach has handed over responsibility for specific tasks they must still liaise with and manage those individuals who have accepted roles within the program. In the event that something goes wrong it is the coach who will usually be held accountable.

Identification of Tasks
As part of the pre-season planning phase the coach needs to identify the tasks that need to be performed to service the team. The process should identify tasks such as the collection of finances, provision of uniforms, coordination of fundraising and/or sponsorship initiatives, booking required travel and accommodation requirements, the provision of a referee if necessary, and risk management processes. If the coach is not intending to perform one or more of the identified tasks then they must identify the skills required to perform the unfilled roles.

Identifying Available Resources
Once the coach has identified the skills required to perform unfilled roles the focus turns to identifying the people best suited to fill these roles. Taking the time to get know something about the people associated with the team or the organisation that the team represents will be invaluable in finding the best person for a particular role. Depending on
the age of the team, likely support personnel may be parents, partners, and developing coaches keen to be involved with a higher calibre team. A coach wanting to present a professional approach to potential support personnel should provide a written position description disclosing the extent of the commitment required in the role.

People are not the only resource that coaches need to identify. In planning a program it is necessary to identify the availability of a number of other resources. Examples include access to training facilities and equipment, transportation, and first aid equipment.

**Identifying Networks**

Another resource that coaches should look to access is networks. Examples of networks that may be applicable would be the AVF Coaching Commission, State coaching networks or networks of coaches involved in the same club or organisation or even the same competition. Some of these networks may already exist, whereas others may require an individual to be the catalyst for establishing the network.

**Budgets**

It is a reality that coaches should be capable of managing the finances of a team. To ensure that this process is a success it is advisable to prepare a comprehensive budget that identifies every expense that will be incurred. Expenses that should be considered include transport, accommodation, tournament fees, referees’ levies, uniforms, support staff, food, team photographs, contingencies, and allowances for other activities the team may participate in. Initially a budget will contain estimated costs and it is important to remember that it is better to overestimate costs than underestimate them. Also, if athlete’s fees need to come in before final costs are known, have them pay more than is expected as it is much easier to refund money to them than ask for additional fees at a later date.

**Risk Management**

Risk management is the process of identifying possible incidents of injury, loss or damage before they occur and implementing strategies to reduce the likelihood and/or impact of the risk. Risks that coaches should identify and minimise include injury, harassment, use of drugs and alcohol, theft, and cancellation of events. Insurance is often an option to reduce the impact of risks, but coaches should also be looking for ways of reducing the likelihood of risks. It is recommended that players, parents and others involved in the team agree to and sign codes of conduct and it is a necessity to have all adults that will be involved with junior teams, including the coach, sign documentation certifying that they have no history of child abuse and consent to a police check to confirm this fact.
RULES OF THE GAME - FOR COACHES

Rules for both Disciplines

Understanding the rules of volleyball is crucial to the ability of a coach to impart technically sound knowledge to their players and ensure that team strategies are within the rules of the game. It is also the responsibility of the coach to ensure that their players fully understand the rules and how they are implemented in competition. For these reasons it is highly recommended that advanced accredited coaches obtain at least a Level 1 Referee qualification specific to the discipline in which they will coach as this will provide them with the knowledge of the rules that they require.

Coaches should also encourage their players to take an active role in learning and understanding the rules. The recommended option for players is to attend a Level 1 Referee theory course. Even if players have no desire to actively referee, their enjoyment and understanding of the game will be enhanced by a sound knowledge of the rules.

Recent Changes to the Rules

Volleyball is subject to constant review of the rules in order to keep the game exciting for players and spectators alike. There have been many rule changes over the last ten to fifteen years virtually all of which have been with the aim of making volleyball more exciting and easier to understand for spectators. Of ongoing concern is the balance between offence and defence. The advantage the attack holds over the defence reduces the number of rallies, which is often associated with the excitement of the game. There have been many rule changes that have sought to redress this imbalance and increase the number and length of rallies. Two examples of this are the introduction of the libero and the relaxation of ball handling rules for the first contact. Rule changes have also be implemented to make the game more ‘user friendly’, such as reducing the length of the game by the introduction of rally point scoring, and reducing the number of subjective referees decisions (i.e. ball handling).

In 2008, the FIVB introduced new rules affecting actions around the net and substitutions. The rule regarding substitutions has been changed to remove some of the associated protocols. This means the coach is no longer required to actively call for a substitution. The incoming player moves to the zone in front of the 3m line holding a paddle of the outgoing player. As soon as the player enters his zone, the scorer OR second referee blows a whistle to attract the attention and the substitution is then completed as before. In the case of multiple substitutions, all players must move directly into the zone. If players do not cross this line, a delay of game warning should be called.

The most significant change relates to net faults. The key to this rule is whether or not the player interferes with the opponent. For example, a player is allowed to touch the opponent’s court with any part of their body (except foot/feet) provided it does not interfere with the opponent. With regards to net touches the rules clearly define what does and does not ‘interfere with the opponent’. It is now only a fault for a player to touch the top of the net or antenna above the net during the action of playing the ball. Touching any other part of the net is no longer a fault. However, taking support of the net while playing the ball or trying to create an advantage over an opponent, or hinder their attempts to play the ball IS a fault.

In 1997 the use of a specialist back court player, the ‘libero’, was officially introduced into the rules of volleyball. The libero is permitted to replace a back court player and libero substitutions do not count towards a team’s substitution quota. The libero is not permitted to serve, block, or attempt to block, and may not hit an attack shot if the ball is higher then the top of the net at the point of contact. The libero is also prohibited from completing an overhand finger pass in front of the 3m line to set up an attack. The libero is required to wear a contrasting coloured shirt to the rest of their team. The coach
should note that if the libero does enter the court for a different player there must be one rally in between entries. This is not normally a problem if the libero is only used for the middle blockers. However, if the coach decides to put the libero in for a different player instead of the middle blocker, the coach must take the libero off the court for one rally before putting them in for the new player. The FIVB is constantly reviewing the rules surrounding the libero and has introduced the possibility of multiple liberos in some competitions. Be sure to be aware of the current rules governing the use of the libero as well as any specific rules that may be in use in your competition.

Prior to 1995 the ‘Ball Handling’ rule stipulated that, “The ball must be hit cleanly and not held. It can rebound in any direction”. However, in 1995 this rule was changed and now reads, “The ball must be hit, not caught and/or thrown.” The interpretation of this rule is that a double contact is permitted on the first hit as long as these contacts occur during one action, therefore resulting in almost no faults on the first contact. Note that while a first contact is allowed to be a ‘double hit’ it is not allowed to be ‘held’ or ‘carried’. The refereeing guidelines refer to two distinct actions, “first catching then throwing the ball”. While beach volleyball has similar wording for the ‘Ball Handling’ rule, the interpretation is different. In practice, the rule is interpreted on the basis of the type of hit. If the ball is ‘hard driven’ (i.e. spiked with power), then the defender has a relatively free reign to play the ball including holding the ball slightly if the ball is played overhead with the fingers. The key for the normal interpretation is to note how long the defender has to make a decision. If the ball is travelling too fast to change the action then the defender has a relatively free reign in playing the ball. However if the ball is not hard driven (e.g. a shot or a free ball) the player MUST play the ball cleanly. In beach volleyball clean contact is interpreted very strictly. When receiving a serve, the ball cannot be played with the fingers. This is a significant difference with indoor volleyball interpretations.

The ‘Contact with the Net’ rule for beach volleyball has not changed. Since 2007 incidental contact of the net has been allowed. Beach volleyball also specifically allows incidental contact of the net by the hair.

The rule allowing simultaneous contact by two opposing players above the net has been different in beach and indoor volleyball. Prior to 2007, a simultaneously contact was allowed in beach volleyball, but in indoor volleyball was called as a double fault and the point was replayed. Under the current rule all play above the net is allowed even if the ball is held simultaneously by both players. If the referee deems that contact was simultaneous by both players and the ball flies directly out of the court, the point is awarded to the team on the side of which the ball went out of play.

**Differences in the Rules of Beach and Indoor Volleyball**

**Number of contacts per team**

- In both indoor and beach volleyball each team is allowed three contacts. In indoor volleyball any contact by the block does not count as a team contact. However, in beach volleyball any contact by the block is included as a team contact, meaning that there are only two remaining hits after the block has touched the ball. In this situation, the blocker is allowed to play the ball again before their teammate contacts the ball.

**Scoring**

- Indoor volleyball is played as best of five sets, (the first four sets to 25 and the fifth to 15) whereas beach volleyball is played as best of three sets (the first two sets to 21 and the third to 15). In both disciplines a team must be ahead by two points to win the set. In indoor volleyball teams change ends at the end of each set in the first four sets and in the fifth set when the leading team’s score reaches 8 points. In beach volleyball, teams change ends at multiples of seven points in sets 1 and 2, and multiples of five points in the third set.
Timing
- Indoor volleyball allows three minutes between sets whereas beach volleyball allows only one minute. Official rules for indoor volleyball allow for a ten minute break between the second and third sets at the discretion of the hosts, although this possibility is rarely used.

Sanctions
- There are significant differences in the sanction scales between beach and indoor volleyball. The three main differences are:
  - Between beach and indoor volleyball there are differences in the cards shown for the same scale of offence. Note for example, that in beach volleyball a yellow card shown does not carry a point penalty.

<table>
<thead>
<tr>
<th></th>
<th>WARNING</th>
<th>PENALTY</th>
<th>EXPULSION</th>
<th>DISQUALIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEACH</td>
<td>Yellow</td>
<td>Red + point</td>
<td>Red + yellow</td>
<td>Red + yellow separate</td>
</tr>
<tr>
<td>INDOOR</td>
<td>Verbal</td>
<td>Yellow + point</td>
<td>Red</td>
<td>Red + yellow</td>
</tr>
</tbody>
</table>

- sanctions for misconduct and delay in indoor volleyball are cumulative for the match, but in beach volleyball sanctions are cleared at the end of each set.
- in beach volleyball, players can receive more than one unsportsmanlike conduct sanction in one set. That is the first event is sanctioned with a yellow card and the second AND SUBSEQUENT events are sanctioned with a red card. In indoor volleyball each subsequent event attracts a greater sanction.

Court size
- Indoor volleyball is played on a court measuring 18 metres by 9 metres separated by a net in the middle (i.e. each side of the net is 9 metres by 9 metres). Beach volleyball is played on a court measuring 16 metres by 8 metres separated by a net in the middle (i.e. each side of the net is 8 metres by 8 metres).

Ball
- An indoor volleyball should have a diameter between 65-67cm and a pressure between 0.30-0.325kg/cm² compared with a beach volleyball which has dimensions of 66-68cm and 0.175-0.225kg/cm².

Rotation
- In indoor volleyball the players must stand in their correct rotational order before each serve. When a team wins the right to serve its players must rotate one position clockwise and start the next rally in this new position. In beach volleyball the players can stand in any position on the court relative to each other. The only stipulation being that they must alternate serving.

Service rotational errors
- If the incorrect player serves in indoor volleyball the team loses the point and any points that have been scored while the team is out of rotation. In beach volleyball, the point is replayed with the correct player to serve.

Timeouts
- Teams are permitted two 30 second timeouts per set in indoor volleyball. The rules also allow for two automatic, ‘technical’, timeouts lasting 60 seconds to be taken when the leading team’s score reaches 8 and 16 in the first four sets. Technical timeouts are not used in all competitions. Coaches should be aware of the rules for each competition. In beach volleyball, teams are permitted only one 30 second timeout per
set, with an automatic technical timeout when the sum of the scores equals 21 points. In addition to the 30 second timing of the timeout, beach volleyball allows the players up to 15 seconds to leave and re-enter the court.

Faults at the net

- In beach volleyball players can penetrate into their opponents’ court underneath the net without fault providing there is no interference with the ability of the opponent to play the ball. In indoor volleyball, a player is only allowed to penetrate into the opposition’s court with the foot for as long as his foot remains touching, or above, the centre line. 2008 volleyball rules allow players to touch the opponent’s court with any other part of the body providing they don’t interfere with play. This is similar to beach volleyball. The player can also be on the opponent’s side of the net outside the court without committing a fault. A player may pass under the net providing they do not touch the opponent’s court or interfere with an opponent. In this situation, opposition players can hold their position but may not actively prevent that player from playing the ball.

Ball In or Out

- In beach volleyball players can request that one the referees check a ball mark to clear any disputes on in / out calls. Players are not allowed to interfere with ball marks before they can be checked.

Uniforms

- In beach volleyball specific requirements define the length of shorts for men and the sideband of bikini bottoms for women. These rules may not be enforced for all tournaments.

Important Rules to Know and Understand

The most common rule that has strategic and tactical implications for the coach in indoor volleyball is the rule that determines the allowed rotational order that must be adhered to during the serve. When the serve is contacted, each team must be in its correct rotational positions - I to VI. Most of these positions are relatively obvious. For example, position III must be between position II and position IV and in front of position VI. This will effect the positioning of players in a two receiver system when the receivers are in positions III and VI. It is a common fault that the backrow receiver (position VI) will stand in front of the frontrow receiver (position III) (see below). The situation that has the biggest effect on the game is the player in position V. As the server contacts the ball, position V must be behind position IV and to the left of position VI. However, there is no defined relationship between position V and position III. That means that although position V is in the backrow, the player in this position can stand in front of the player in position III when waiting for the serve. This provides an advantage for the setter penetrating from position V.
A much misunderstood rule is that relating to the setter playing the ball above the net. If the ball is above the plane of the net it is theoretically free to be played by both teams. However there are two important points relating to this. Firstly, the setter is not allowed to play the ball on the opponent’s side of the net. That means that while the ball may still be in 'free' space, if part of the setter’s hand is on the other side of the net, for example when attempting to set the ball with one hand, the setter commits a fault. Secondly, the blocker may not prevent a player from legally playing the ball on his side of the net. The implications of these situations are clear. If the setter can take the ball with both hands then this in most cases a legal attempt playing the ball. The blocker cannot interfere. If the setter can only play the ball with one hand, then they must take care that not to penetrate over the net.

In case of injury, the injured player must be substituted by one of the available substitutions. If the team cannot substitute the player legally, then they are permitted to make an ‘exceptional’ substitution. ‘Exceptional’ substitutions are not allowed for players who have been sent off. If the libero is injured and cannot continue, then he can be replaced with any available player. The key point is ‘available’. An available player is one that is not on the court at the time of the requested libero replacement. That means that if the replacement libero is on the court at the time, they must first be substituted off the court before the libero replacement can be made. If the player cannot be substituted by a legal substitution they may not be redesignated as the libero for that set.

**Match Protocols**

Coaches are not permitted to talk to any of the match officials (referee, second referee or scorer) or make official protests. Only the captain is permitted to talk to the match officials to request rule interpretations or to make protests. In beach volleyball where the coach has no defined role within the match, he can make no communications of any kind with either officials or players. If they do so the coach can be removed from the court area under the direction of the tournament director. However, it is worth noting that some competitions in Australia, including the Australian Beach Volleyball Tour at the time of production of this resource, do allow coaching. Therefore coaches should always be familiar with the specific regulations applied to competitions and utilise these to their advantage.

In indoor volleyball, the coach is allowed to move along the sideline in the free space outside the court. However, the coach is not allowed to move behind the court, to enter an area 1.8m wide measured from the 3m line to the end of the court or to enter the area between the 3m line and net.

The protocols for making substitutions have changed but for the coach several points still hold. If the substitute is not ready in an orderly manner in the substitution zone then the coach risks a delay of game warning. Coaches should always be prepared for possible substitutions and have practiced appropriate communication with the players in the warmup area so that the players can be substituted correctly. They also need to ensure there is an appropriate system for the players to receive the correct numbered paddle. The assistant coach who is sitting on the bench is often given the responsibility to organise the paddles when required.

The coach must verbally call AND signal timeout for the request to be valid. To ensure there are no potential communication problems in a noisy gym the coach should not rely on the second referee to hear the request. The coach can easily move to a position from which the second referee can see them and then call and signal the timeout as required.

**Outside the match**

It is critical to the skill development of athletes that they understand the rules of the sport so that they can perform to their potential within these rules. For this reason it is recommended that drills used in training sessions require adherence to the rules. This will not only reinforce the athletes’ understanding of the rules, but can impart knowledge to athletes of rules of which they were unaware. It can also be beneficial to the
development of both individual players and the team to invite a referee to training sessions. Having training scrimmages refereed using official rules and protocols helps provide experience for the players of playing in an environment that will simulate the standard of officiating they will experience in competition.

Always be prepared to discuss rules and rule interpretations with referees after or before a match. This goes a long way towards preventing misunderstandings and can also clarify situations where the actual rule and the ‘common’ interpretation of the rule are different.
PERFORMANCE ANALYSIS

The principles of performance analysis are essentially the same in indoor and beach volleyball and as such the disciplines are covered together in this chapter. There are some small areas of difference that are noted where they occur.

What is performance analysis?

In the informal sense, performance analysis is any analysis that a coach undertakes with the view to improving the performance of their team. Coaches do this constantly, through every training session, friendly match and competition (and probably half of their spare time). This informal process, while valuable, is flawed in that it is completely subjective. The good coach will seek to objectify as much of their work as possible which leads to the formal discipline of performance analysis. This chapter focuses on the formal process.

Performance analysis is four step process, each of which are useful in themselves, but the aim is always to incorporate all aspects into the planning process:

1. Systematic observation in training and competition.
2. Record and store data collected through systematic observation.

Areas of analysis can include all technical areas, tactics, conditioning, sport science and sports medicine, in fact literally anything that can impact on performance. However, as the vast majority of coaches have limited resources and limited access to sport science and sports medicine, this chapter will focus primarily on specific technical and tactical performance analysis.

What performance analysis is NOT?

Performance analysis is NOT technology. Performance analysis does not require enormous resources and has nothing to do with computers or technology. Performance analysis is the process of looking at a variety of data and using that data to draw conclusions about performance with the view to impacting on future performance. Computers and videos (just like pencils and paper) are merely tools that assist in the data collection and processing. While, technology does provide the coach with more opportunities for collecting, sorting and presenting information than was possible in the past, the quality of the analysis is dependant solely on the quality of the analyst, usually the coach. A good coach with a pen and scrap of paper will impact performance more than a bad coach with tens of thousands of dollars' worth of computer and video equipment.

When do I analyse performance?

There are two main areas in which performance analysis is widely used.

- Training
  - Collecting data on athlete / team performance;
  - Goal Setting;
  - Technique development;
  - Tactical development.

- Competition
  - Pre match scouting, opponent analysis and game plan preparation;
  - During match performance data to assist in player substitutions, rotational changes, and other tactical decisions (in indoor volleyball);
  - Post-match analysis and review.
It is important to note that the flow of analysis between training and competition is a two-way process. The information that is collected during matches is used to develop effective training plans and the information that is collected during practice is to assist in making decisions before the match on such things as the starting positions of players or the starting rotation for matches.

**TRAINING**

**VIDEO**

Video is a much underutilised tool for learning and ongoing technical and tactical development. There are many ways to classify learning but the three most commonly described learning styles are:

- **Visual**, a player who understands best by seeing,
- **Verbal**, a player who understands best by hearing a description, and
- **Kinaesthetic**, a player who learns best by feeling the movement.

Approximately 80% of people fall in the category of visual learners. Therefore, for the vast majority of people video feedback is a strong learning tool. A coach who has access to a video camera can greatly accelerate the learning process of his players and consequently their performance if the video is used effectively. Most video cameras allow video to be reviewed instantly via the LCD screen and so can be used effectively during training. Video taken during competition can be reviewed prior to the next training. Alternatively, current computer technology allows for easy video editing (via a number of home video editing software packages) and individual videos for players can be relatively easily produced. Developing Web technologies also provide video editing and sharing facilities.

Video must be used for both positive and negative feedback. It is very easy to identify negative situations when viewing video. All coaches and athletes will tend to do this. Coaches should use the same techniques with video feedback as with verbal feedback. For example, by choosing an instance when a player does something ‘perfectly’ and replaying this, the player will receive positive visual and verbal feedback and these images will reinforce this positive performance. Using examples of excellent performers is a valuable tool. It is also necessary to identify negative actions as part of the learning process and video has the great advantage of being able to depersonalise feedback. It also turns the focus on desired future performance rather than criticism of past performance. When past performances are critiqued, criticism is less personal because the player can see what is actually occurring rather than taking the coach’s word for it. The coach skilled in using video for feedback and feedforward is always attempting to show the least amount of footage to make any given point.

With most players now having their own portable video players, many coaches are now building ‘libraries’ of positive actions which players can keep for themselves and use for positive reinforcement and learning.

**STATISTICS**

Statistics collected during practice can help determine starting positions. For example, tracking who wins in training drills can give an insight into which players will be most effective during matches. Or if two players are of a similar standard the coach can create competitive situations in practice to determine objectively which player should be the starter.

Statistics collected during competition can be used to determine what to practice and can allow the coach to set appropriate individual and team goals during training which also provide natural scoring systems for drills. For example, if the current team performance in reception is 50% perfect receptions, then the coach might design a training drill that requires 6 out of 10 perfect receptions. This target provides a realistic and attainable improvement, will help motivate the players and allow them to measure their improvement. If the current performance is 30% perfect receptions, then the same scoring
system could prove to be a demotivator for the players as it is so far above current performance. This is less likely to lead to improved performance. Similar training goals can also be developed by using the statistics of the best teams in the same competition to emphasise the standards that must be reached.

**COMPETITION**

Match analysis typically refers to two different areas.

- Statistics are quantitative, objective records of the actions of the players and teams in specific technical and tactical areas. That is, ‘How successful a player / team is in...?’ Using statistics is most often how a coach will analyse the competition performance of their team. No matter how objective statistics are, it is always important to be aware that they are still dependant on context, for example, while they give an objective measurement of the receive or the spike, they don’t take into account the quality of the serve or set respectively.

- Scouting is most often a qualitative record of the performance of an opponent. That is, ‘What does a player / team do when...?’ Scouting is most often how a coach will analyse an upcoming opponent. The coach can also take into account quantitative factors, but qualitative factors are normally more important.

**STATISTICS**

Before statistics are discussed in detail, it is important to expose any misconceptions there may be.

- Statistics will NOT make you win.
- Statistics will NOT make your players more skilful.
- Statistics do NOT give you answers, however, they will help you ask the right questions.
- Statistics are NOT a waste of time although they can be.

What statistics ARE, is a version of the truth. When collected accurately, they are an objective record of the match or practice from which they are taken - nothing more, but certainly nothing less. This objectivity can be extremely important as most people, coaches and players alike, are influenced by their emotional response to a situation or by the most recent actions in the match. Statistics plays a major role in providing that balance.

Statistics provide the information required for the development of benchmarks and performance goals. Benchmark performances of your team and other teams in your competition to work out what performance goals you will need to achieve, in order to win and achieve your ultimate result goals. For example, by collecting statistics over time it may become evident that certain levels of success in the different skill areas lead to success. It may be that at some level of competition 40% spike efficiency or 60% reception efficiency 10 consecutive sideouts or 3 block points usually leads to success in a match. It is important that all goals are specific and measurable. Statistics provides that specificity and measurability. This information can also be used in the development of effective training plans.

Performance goals should also be provided for individuals. These may be position specific or individual specific or both. For example, the libero may have a different reception goal than a passer hitter, and a non-starter may have different performance goals than a starter.

**DEFINING GENERALLY USED TERMS**
Percentage is number of actions rated as point, positive etc. considered against the total number of attempted actions.

Efficiency is the number of successful actions minus the number of errors considered against the total number of attempted actions.

Proficiency is used where there is a scale of quality. For example, using the four-point scale for reception described below, the proficiency is the average result.

WHICH STATISTICS?
The coach must decide which statistics will be useful to them. Which areas of the game are important? Which statistics can tell them what they want to know or wants to confirm? And also very importantly, what resources (people, equipment) do they have at their disposal to collect the statistics?

The most important statistics to collect are probably the statistics that the coach has most emphasised with their team (e.g. that show how a particular technique or tactic is being performed), the statistics from the areas in which there are established benchmarks, and the statistics that might be used to decide between which players to include in the starting line-up.

KEY SKILL AREAS

Serve
The serve is rated on the basis of the quality of the ensuing reception. It makes no distinction between a ‘good’ serve and a ‘bad’ serve. Therefore, it can often be a reflection of the quality of the opponent’s reception and should be analysed accordingly.

- Percentages. The most common serving statistics are simple percentages.
  - Ace % = number of aces / total number of serves * 100
  - Error % = number of service errors / total number of serves * 100
  - Positive Serve % = number of positive serves / total number of serves * 100
    - a positive serve is defined as a serve that is an ace, results in a reception error or prevents the opposition from using their desired offence.

In the rally point scoring system the actual number of aces has become important, therefore the ace percentage is an important figure. The error percentage should reflect the risk involved in the serve. For example, a float serve has a lower ‘allowed’ error percentage than a powerful jump serve.

The positive serve percentage can be used to further rate a server with a relatively low ace percentage or high error percentage. For example, if the ace percentage is low and / or the error percentage is high, then the coach would look at the positive serve percentage to help determine whether the serve is a weak serve or whether the serve still applies pressure on the opponent.

- Proficiency. There is usually a five-point scale that rates a serve:
  - 5 - ace
  - 3 - free ball to serving team
  - 2 - 1 or 2 attack options for the opposing setter (indoor), less than optimal setting position (beach)
  - 1 - 3 attack options for the opposing setter (indoor), optimal setting position (beach)
  - 0 - service error.
The value given to the descriptions can vary with the relative worth each coach places on an ace or an error. Another set of values using the same ratings is 10, 8, 7, 4, 0.

- Ace: Error Ratio

The ace to error ratio is normally expressed as the average number of errors to each service ace, e.g. 1:3, 1:2. This measure can be misleading as it does not reflect how often aces or errors occur. For example, 10% aces: 20% errors and 1% aces: 2% errors have the same ace: error ratio but they are completely different types of serving and it is up to the individual coach to put into perspective which is most beneficial.

Reception

The reception is normally rated on the quality of the offence that ensues. The quality of the attack is related to the ability of the setter and the spikers (particularly the quick attackers in indoor volleyball). A team with a good setter and quick attackers who can effectively attack from a range of different reception positions (e.g. from off the net) has a greater range of ‘excellent’ reception. This should be considered in the analysis.

As with serving statistics, reception statistics normally make no distinction as to the quality of the serve. However, it is increasingly common that there is a distinction made between types of serve. For example, receiving a jump serve and a float serve require different technical qualities and are often separated in the presentation of statistics.

- Percentages

  - Perfect % = number of perfect receptions / number of receptions * 100
    - Perfect reception allows the setter to set the optimal offence.
  - Positive % = number of positive and perfect receptions / number of receptions * 100
    - Positive reception allows the setter to set most positions, normally two (indoor), a good set without potential variation (beach).
  - Error % = number of reception errors / number of receptions * 100
    - Overpasses that cause the loss of a point as well as direct reception errors are normally included amongst the number of errors.

This provides a simple description of the quality of the reception. In the analysis, consider the difference between the perfect and positive percentages. A big difference could indicate technical deficiencies. A small difference could indicate lack of concentration when the serve is not very difficult.

- Proficiency. Proficiency is the most commonly used statistical measure for reception in Australia and is described by the number of options (spikers) the setter has available.
  - 3 - 3 attacking options (indoor), all variations are possible (beach)
  - 2 - 2 attacking options (indoor), good spike possible but without variation (beach)
  - 1 - 1 or 0 attacking options (indoor), free ball or easy attack (beach)
  - 0 - reception error (or overpass leading to the direct loss of a point)

The value given to the descriptions can vary with the relative worth each coach places on an ace or an error. Another set of values using the same ratings is 10, 7, -1, -3.

Attack

The attack is rated firstly by whether it is a point or not. There is no distinction made between a spike that hits the floor untouched by an opponent or one that is deflected out of court by the block or defence or one that ‘should’ have been defended. There is often
debate about whether a net infringement by the blocking team should count as a point to the spiker, given that it is a spike directly leading to a point. This is a decision for the coach.

- **Percentages**
  - Kill % = number of attack points (kills) / number of attacks * 100
  - Error % = number of attack errors / number of attacks * 100
    - Direct errors and blocks are often, but not always, included together in this figure.
  - Block % = number of attacks blocked for a point / number of attacks * 100
  - Efficiency = (kills - errors) / number of attacks * 100
    - When calculating efficiency direct errors and blocks are both included.

Many coaches will consider the kill percentage and the efficiency as being the most important statistics. Other coaches will consider the kill percentage along with the error percentage and the block percentage separately. These coaches will look at whether the block percentage is higher than the error percentage. A relatively higher error percentage should be addressed by the coach.

- **Proficiency.**

The spiking proficiency is used less often.

- 5 - point
- 3 - spike to the advantage of the attacking team
  - the attacking team will have the next attack
- 2 - spike to the advantage of the opposing team
  - the opposing team will have the next attack
- 1 - direct block point
  - a block point is distinguished from a direct error because if the ball is blocked at least the attacking team has a chance to play the ball again
- 0 - spike error.

The value given to the descriptions can vary with the relative worth each coach places on an ace or an error. Another set of values using the same ratings is 10, 5, 5, 0, 0.

- **Phases of the Game**

There are important differences in spiking in the different phases of the game and therefore spiking statistics are often given as the total spiking, then split into spiking from service reception and transition attack (i.e. three different figures). The transition spiking statistics can be further split into transition spiking for sideout and transition spiking for break point (NOTE: Although under the rally point system the ‘sideout’ no longer exists, the word is still used to describe actions that win a point following reception, i.e. the opponent’s serve. The term ‘break point’ is used to identify points that are won when serving).

Spiking from service reception should be mostly a controlled situation with attack following from a good set. Spiking from transition is much less controlled. Often the quality of the reception after defence is worse and so the spiker will most likely be spiking from a poorer set and against a well organised block and defence.

The rationale behind splitting transition spiking for sideout and transition spiking for break point is twofold.
The number of break points (points won on serve) in a set is decisive; therefore transition for break point is more important than transition for sideout.

Transition opportunities for sideout tend to be more controlled. They are often overpasses, free balls or down balls from the opponent that they have not been able to control following the first sideout attempt. Statistical values for sideout transition are typically better than overall transition attack.

**Block**

Blocking statistics are usually expressed as totals (i.e. total points, total touches etc.) or as totals per set played (e.g. 0.7 points per set, 1.2 touches per set etc.).

- **Totals**
  - stuff blocks - a block that is a direct point
  - positive touch, positive block - a block that deflects the ball to the advantage of the blocking team (i.e. the blocking team has the next attack)
  - negative touch, negative block - a block that deflects the ball to the advantage of the attacking team (i.e. the attacking has the next attack)
  - error - net fault
  - ‘tooled’ - some coaches count the number of times the block deflects the ball away from the court (i.e. leading to a spike point). This can be an indication of technical deficiencies or poor positioning.

**Defence**

Defensive statistics are difficult to define and difficult to collect. Whenever defensive statistics are taken they are normally simply a total number of successful defensive actions (digs). If the coach chooses to use defensive statistics, they must decide how they want to define a dig. It may be a defensive action against a hard spike or include spikes deflected by the block or even free and down balls.

Defence can also be rated using the same scale as reception. However, remember that the values for defence will be much lower than reception.

**Setting**

Setting statistics are rarely taken as it is very difficult to develop an objective scale for sets. NCAA (United States college system) uses a simple ratio of the number of sets that are killed per set played. However, the coach may wish to measure the quality of the sets or the decisions made. In this case, simple percentages are probably the most appropriate but the coach must be careful to define what they want to measure.

**OTHER TECHNICAL AREAS**

**Sideout and point scoring percentages**

The most common team statistics kept are the sideout and point scoring percentages for the team.

- Effective Sideout percentage = (successful sideouts - opponent service errors) / number of receptions * 100
  - This shows the effectiveness of the team’s sideout offence (i.e. discounting the effect of service errors).

- Sideout percentage = number of successful sideouts / number of opponent serves * 100
  - This is the actual sideout percentage including opponent service errors.

- Point percentage = number of break points won / number of serves * 100

At most levels, the sideout percentage is higher than the point percentage and for this reason the team winning the toss will choose to receive. However, if the team is better at
scoring when serving, then it should choose to serve. This is key statistical area in which most coaches will define benchmarks.

Team Statistics

Team statistics in all the relevant categories can give a picture of the performance of the whole team. There may also be a breakdown by position. For example, middle blockers and passer hitters will normally have different spiking profiles.

Rotational Statistics

For indoor volleyball, team or individual statistics can be broken down by rotation, defined by the position of the setter. The sideout and point scoring percentages are the statistics most often broken down by rotational position. This information is important in order to determine the starting position for each match / set and can be used by the coach when deciding whether to use a balanced or stacked rotation (see chapter ‘COACHING THE GAME’). Rotational information can also reveal individual technical characteristics. For example, differences in reception statistics in different rotational positions can reveal strength or weakness in receiving in each of the different positions or a difficulty in receiving AND attacking. Information revealed in this analysis can be used to design and implement appropriate training drills.

For beach volleyball, there is no direct equivalent of rotational statistics. However, breaking down the statistics on the basis of which player receives or serves may provide useful information. For the various skill areas there is no breakdown as the players are always in the same positions. Analysing sideout and point scoring percentages on this basis can help reveal the whole picture of a team’s performance. For example, point scoring percentages per server can determine which player should serve first in a given match and help develop training plans. For example, perhaps the ‘blocker’ needs practice getting to the net in a balanced position after serving. Or the coach must review the type of serve to make, in order to increase point scoring efficiency when serving.

Set Statistics

As a volleyball match is decided by the number of sets won and not the number of points won, a breakdown of team and individual statistics by set can often provide more useful information than match statistics. For example, if the team’s kill percentage in attack is 50% and yet the team lost 1-3, the coach might be tempted to think that the team played well. However, if they break down the set by set figures and discover that kill percentages were 65% in the set won, and 45%, 47% and 38% in the sets lost the match analysis will be very different.

Within Set Statistics

Statistics are sometimes grouped by the score within the set. In indoor volleyball this is usually beginning (1 - 8), middle (9-16) and end (17 +). In beach volleyball the breakdowns are done in relation to the ‘ends’ (i.e. the first, second, etc time the teams change ends). This can determine relative strengths at different times of the set and indicate technical, psychological or conditioning issues. ‘Ends analysis’ is the most common secondary analysis in beach volleyball.

COLLECTION METHODS

Pen and paper statistical collection is the method most readily available to most coaches. With practice, individual player statistics can be easily collected by one recorder. There are several examples of collection sheets in the appendix. Each coach can easily develop their own recording sheet using virtually any spreadsheet software that will record exactly what they want. Important points to consider when designing a recording sheet include:

- Ease of recording
  - The recording sheet should logically follow the game flow to aid in recording the data. This can be different for different coaches.
It is very difficult for a ‘lone’ coach to collect detailed data during a match and also follow the flow of the game. In situations like this it is best to limit the data collection to key points or collect the data from video after the match.

- **Ease of instant analysis**
  - The recording sheet should be designed such that the coach can identify trends from a quick observation. Using a different colour pen for each set is one method that allows for quick identification of trends.

- **Ease of consolidation**
  - The data should be collected in a way that makes it easy to transfer the data to a computer program (usually a spreadsheet) for consolidation.

**Computer or Personal Digital Assistant (PDA) based data collection** can be undertaken using any of a large number of specialised statistical software packages available for all coaches. Specialised software for PC’s is typically expensive and out of the reach of most coaches. However, specialised software designed specifically for PDA’s is more affordable.

**ANALYSIS**

Statistics by themselves do not mean anything. It is the analysis that provides statistics with meaning and is part of the art of coaching.

The analysis could be as simple as providing performance feedback to the players for motivational purposes. The next step would be to assist in determining the reasons for success or failure. For this the coach should develop benchmarks. Benchmarks are statistical figures that indicate success (i.e. when the team achieves that particular figure it wins). For example, the coach may find that over time the team benchmark of success is a kill percentage of 45%. That means when they reach 45% kill percentage, then they win most of their matches and if they fail to reach 45% they lose most of their matches. These figures should be developed for each skill and possibly each specific position within the team. Depending on the level there may be existing information that provides the coach with benchmarks for performance, but most of the time they should keep records over time to develop a database of information that is relevant to their team and their players. This information can be used in training to develop drills and decide the most appropriate scoring systems for drills.

Rotational analysis in indoor volleyball can provide valuable information about strengths and weaknesses in different positions - which players should be where in the rotational order and also reveal weaknesses in individual players. This information can be important both during the match and post-match. For example, if the coach knows during the match that there is one rotation that is poorer than the others in either point scoring or sideout percentage it may be desirable to start the next set in another position. Post-match analysis can reveal specific training drills that may be indicated. Rotational analysis of reception can indicate a player who receives worse (or better) in position I than position V, or a player who receives better (or worse) when in the front row than in the backrow. In this example, statistics help the coach ask the right question. If a player is relatively weak receiving in position V, it could reveal a weakness in receiving on the left side of the court OR a weakness in receiving and then spiking OR possibly BOTH. In beach volleyball rotational analysis can reveal a player who blocks poorly after serving, or that one receiver should cover more of the court to balance a relative sideout deficiency. The problem identified through performance analysis can then be addressed at training.

Set and Within Set analysis can provide feedback on physical conditioning and concentration levels. For example, lack of success in later sets could indicate poor conditioning. It could also indicate a lack of concentration over time. In either of those two situations, look at the structure of the training sessions to determine how those issues could be addressed. It could also indicate a weakness of the coach in making appropriate and necessary adjustments during the course of the match. Conversely, if a team is
relatively poor in the first set it could indicate poor warmup routines or a poorly communicating game plan. If a team is good at the start of the set but less good later on, it could indicate that the team is only able to concentrate for short periods of time. This can be addressed in training by making drills longer. It could also indicate poor performance under pressure that can be addressed during training or outside of training if necessary.

**SCOUTING**

Scouting refers to the collection and analysis of information about the opposing team with a view to developing strategies and tactics and creating benchmarks. It is completed pre-match to determine the appropriate tactics to start the match and during the match to enable ongoing objective decision making. Scouting is carried out primarily against a team’s offence, but is used in all technical and tactical areas. The coach will look for ‘tendencies’ of the opponent that are both identifiable AND can be countered. Many coaches collect and present the team large amounts of information and tactics for every conceivable situation. However, a coach must always remember that the information must be *useful* and be presented in a useful manner. A combination of written and video information is the best method. Importantly, the team must have the technical capacity to carry out any tactics that are suggested, otherwise it is just an intellectual exercise by the coach.

Areas that the coach can scout are:

**Reception**

- Who is/are the weakest receiver(s)?
- In which positions do particular receivers have difficulty?
  - Position V, VI, I
- In which situations do particular receivers have difficulty?
  - With jump serves, jump float serves, float serves.
  - Moving forwards, moving backwards, on the left side of the body, high and direct to the body etc.
- Where are relatively unprotected areas of the court?
- Does the setter have problems or tendencies setting a reception from particular positions?
- Is the setter predictable when the reception comes from a particular position (indoor volleyball)?
- Does the receiver have offensive tendencies related to the type and position of the reception?

**Spiking**

- What are the spikers’ favourite shots?
- What do the spikers do when the block is positioned line / cross / neutral / retreats?
- What do the spikers do when the reception is poor?
  - This is very important because it is usually a situation that is predictable and the defensive team will have more time to set up the optimal defence.
- What do spikers do under pressure
  - E.g. when the score is close, end of sets, after making an error.

**Setting**

- What does the setter like to do in each rotation?
• Does the setter make the majority of their offensive decisions based on the opponent’s block or based on his spikers?
• What does the setter do after the team has made an error?
  o E.g. do they set the same spiker again or so they set another spiker or do they set a particular spiker?
• Does the setter have favourite spikers (e.g. the opposite) or favourite sets (e.g. first tempo, position IV) in pressure situations?
  o E.g. when the score is close or at end of sets.
• What does the setter do when the reception is not perfect?
  o E.g. do they try to set first tempo when the reception is off the net, do they always set to position IV, etc.
• Does the setter have a preference after defensive actions?
• Does the setter tip or play over on 2?

Transition Offence / Offence After Poor Reception
Care must be taken not to focus solely on an opponent’s sideout offence from good reception. It can be more difficult to prepare analysis on transition or poor reception offence, but as a significant percentage of points are won in this phase of the game it should not be ignored. More importantly, the offence after poor reception or defence tends to be more predictable and these situations allow the defensive team to better prepare their block and defence. A well prepared team can significantly improve their chances of winning a point in these situations.

Serving
▪ Does the server float serve / jump serve / jump float serve?
▪ From which positions do the servers serve?
▪ Which direction do the servers serve?
  o This is normally more prevalent for jump servers as float servers will be more variable. However, all players have favourite shots.
▪ Which variations do the servers like?
  o E.g. a server servers mostly deep to position V but likes to change up by serving short to position II.
▪ Does the team use serving substitutions?

Blocking and Defence
▪ Do the middle blockers tend to jump with or read against the first tempo attack?
▪ Do the middle blockers have relative problems moving to the left or the right?
▪ Are there weaker outside blockers?
  o Beware that ‘short’ does not necessarily mean ‘weak’. Many tall players are poor blockers and shorter players can often be tactically good.
▪ What do the blockers do after poor reception or defence?
  o Does the team like to triple block?
▪ What do the blockers do in one on one situations?
▪ Does the team have a weak area in defence?
▪ Does the team play with a dedicated tip cover?
▪ Does the blocker like the retreat in certain situations?
• Does the blocker commit to a position early or use one of the technical blocking variations to hide their intentions?
• Does the defender hide in the shadow of the block?
• Does the opponent ‘Give and Take’ in defence? If so, which are the open areas of the court?

COLLECTION METHODS

Pen and Paper

Even now, the majority of qualitative scouting is done with a pen and paper. Pen and paper allows greater flexibility in detailing the direction of the attack, as well as different types of attacks (e.g. tooling, tips, shots). For example, most computer software packages don’t easily allow recording of spikes that are toolled off the block. Using pen and paper, specific situations can be recorded separately and subtle variations can easily be noted in the margins. For example, pen and paper recording can easily be set up to note the differences in the overall offence depending on the type of first attack that is run.

![Pen and Paper Diagram]

Video – Rotational Video

Video can be an excellent tool for presenting scouting information to the team. The most common form of video presentation is the ‘Rotational Analysis Video’. This is a breakdown of the opponents sideout offence with examples of each rotation grouped together, for indoor volleyball, or each player’s receptions grouped together, for beach volleyball. For example, 10 examples of sideout actions in each situation.

Any video edited to group actions together (e.g. sideout offence, spiker’s attacks, serves etc.) will improve understanding by the players and will reinforce the points the coach wants to make.

Volleyball statistical software packages will create these movies very easily and effectively, but at great cost. For most coaches, simple generic video editing suites can effectively produce the kind of video that will greater impact on performance for a fraction of the cost of dedicated packages.
RESOURCES

All coaches are limited in their performance analysis capabilities by the resources with which they have to work and sometimes by their imaginations. Indeed, managing available resources is probably much more important in optimising the performance analysis outcomes than in finding or developing new resources or outlaying great amounts of money on technological assistance.

What resources do you have?

Human resources:

- Assistant coaches should always be utilised.
- Parents can be valuable, particularly if they have some experience in volleyball.
- Injured players can be used in a similar role to an assistant coach. Asking an injured player to perform some extra function encourages team building as they remain a part of the team and promotes continued learning through being asked to observe the game in a different way. The coach must be careful that using a player in this way is not viewed as ‘punishment’ for being injured.
- Bench players can be coupled with the players with a similar role and collect appropriate information and provide feedback to their partner. For example, the second setter can track the distribution and set selection of the setter. This is important for the starting setter in competition and also as a learning process for the second setter.
- Players should be involved in scouting future opponents during a tournament.

Hardware resources:

- Pens / paper - a multi-coloured pen is a very valuable tool!
- Clipboards.
- Data Collection sheets that have been developed specifically or generic sheets that can be used for a variety of purposes, particularly when using injured or bench players to assist.
- Video Camera - every coach should have access to a video camera.
- Computer
- Personal Digital Assistant (PDA)

Software resources:

- Using spreadsheet software is a simple method of keeping and consolidating statistics over time. It can also be easily individualised. On the down side it can be time consuming and unwieldy when attempting to consolidate data.
- Volleyball specific software. One of a number of volleyball specific programs can be used either for computer or PDA. Remember that these aid in the collection, consolidation and presentation of data but conduct NO analysis.
- Video editing software. Generic programs are simple yet cost effective and easy to use for the next level of presentation. General sport or volleyball specific programs are more expensive but allow the coach to present yet more information.

Training Data Collectors

Whenever data is collected by someone other than the coach, it is important that the data is consistent among all collectors. It is the coach’s responsibility to ensure that their specific definitions for each of event that must be recorded are clearly explained to each relevant person. If the statistics are to be collected at an important event, then practice is important. Each collector should be clearly briefed and should have the opportunity to
practice BEFORE the event. Training sessions can be useful in providing opportunities for data collectors to practice and have the added benefit of allowing the coach to supervise and of providing what could also be useful information.

**ANALYSIS**

The most powerful analysis is conducted by using video and statistics together. If the possibility exists, possible trends or problems identified by statistics should be verified by video review. This is another step in objectifying performance, remembering that even the best and most accurate statistics are only a version of the truth.

However, coaches are always limited by time. There is a tendency for coaches to spend time on analysis to the detriment of time spent on other aspects of coaching. As a rule of thumb, when a coach is determining how to increase the use of analysis for their team, they must first decide, ‘what will I stop doing so that I can spend that time on analysis?’ To provide the coach with more time, the following TROUBLESHOOTING GUIDE provides a simple guide for analysis of some of the most commonly identified problems.

**TROUBLESHOOTING GUIDE**

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>CAUSE</th>
<th>SOLUTION</th>
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<tbody>
<tr>
<td>Poor attacking statistics</td>
<td>Poor quality setting</td>
<td>Technical training for the setter</td>
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<td></td>
<td>Poor set distribution</td>
<td>Video and statistical review of set distribution with the setter</td>
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<tr>
<td></td>
<td>Lack of rhythm and timing between the setter and spikers</td>
<td>Train setting and spiking in game like situations. Pay attention to all of the relevant ball and player movements and positions</td>
</tr>
<tr>
<td>Poor reception leading to poor setting</td>
<td></td>
<td>Further analysis to determine the cause, then reception and setting practice</td>
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<tr>
<td>Poor spiking</td>
<td></td>
<td>Spiking practice</td>
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<tr>
<td>Poor spiking in one phase of the game</td>
<td></td>
<td>Breakdown the attack statistics to identify which area</td>
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<tr>
<td>Good opposition block and defence</td>
<td></td>
<td>Practice the offence!!</td>
</tr>
<tr>
<td>Poor transition attacking statistics</td>
<td>Poor block and defence leading to poor attacking opportunities</td>
<td>Practice block and defence</td>
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<tr>
<td></td>
<td>Poor transition setting</td>
<td>Practice transition setting by setters and non-setters</td>
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<td></td>
<td>Poor organisation in transition</td>
<td>Clarify roles and practice poor situations, e.g. using wash drills</td>
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<tr>
<td>Poor reception statistics</td>
<td>Poor court positioning</td>
<td>Video review of player positioning</td>
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<tr>
<td>Poor communication and organisation of receivers</td>
<td>Practice reception in game specific positions and situations</td>
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<td>--------------------------------------------------</td>
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<tr>
<td>Technical difficulties</td>
<td>Practice reception</td>
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<tr>
<td>Poor blocking statistics</td>
<td>Opponent are excellent attackers</td>
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<tr>
<td>Quality of the block is poor</td>
<td>Technical block training</td>
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<tr>
<td>Middle blockers do not and reach the outsides</td>
<td>Technical block training for middle blockers reading and movement</td>
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<tr>
<td>Tactics are poor</td>
<td>Review block tactics</td>
<td></td>
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<tr>
<td>Relatively high number for service errors</td>
<td>Technical difficulties</td>
<td></td>
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<tr>
<td>Relatively low number of aces</td>
<td>Technical serving practice</td>
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<tr>
<td>Players unable to execute under pressure situations</td>
<td>Consolidate the service routine, technical serving training</td>
<td></td>
</tr>
<tr>
<td>Players too tentative or conservative under pressure situations</td>
<td>Consolidate the service routine, technical serving training</td>
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Offensive Scouting Sheet

___________________ v __________________ on __/__/___

Fig 1 - An example of a simple scouting record sheet.
Fig 2 - An example of a complex scouting record sheet
Fig 3 - An example of a simple statistics record sheet

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*MY TEAM*
PHYSICAL DEVELOPMENT IN VOLLEYBALL

Volleyball is a highly athletic sport. It requires ability in wide range of physical areas as well as the technical demands.

COMMON MOVEMENT PATTERNS

Volleyball has a range of different movements that are commonly used. These movement patterns must be considered when developing a conditioning program.

The most common movement patterns are:

- Spiking
- Jumping
- Running
  - Forwards
  - Lateral
  - Backwards
- Diving / Rolling
- Lunging / Squatting (Bending of the knees)
- Swinging (of the arms at the shoulders)
- Pushing (Extension of the arms).

Different skills use these movements in different combinations and with different frequencies.

- Spiking - spiking and running
- Serving - spiking, jumping and running
- Passing - squatting, lunging, rolling, swinging and forward and lateral running
- Setting - pushing, jumping and running in all directions
- Blocking - jumping, lateral running and pushing.

Knowledge of these requirements assists the coach and conditioning coach in developing individual and position specific programs.

COMPONENTS OF PHYSICAL FITNESS

Coordination refers to sequential movement of different body parts to achieve a technical outcome. A high degree of coordination allows the efficiency of movement that is essential for powerful and fast actions as well as the control of the core and extremities to perform the fine technical movements. Volleyball requires a high degree of coordination above the head (with feet fixed and while jumping), around the midline and low to the ground.

Strength refers to the ability of the body to exert force. Strength can be either absolute or relative. ‘Absolute strength’ is the total amount of force a person can exert (e.g. a bench press of 100kgs). ‘Relative strength’ is the total strength relative to body weight (e.g. leg strength converted to jump height). Volleyball players are required to work against gravity and so relative strength is more important than specific strength.

‘Core strength’ is a commonly used term and refers to the functional strength of the musculature of the trunk and hips working in unison to initiate and stabilise movement. Core strength is vital in volleyball for performing actions at the extremes of the player’s reach.
Power is the ability to exert force in a given period of time. The more force that can be exerted in a given amount of time, the greater the power. Volleyball is a power sport. Jumping and spiking are actions that require power.

Muscular Endurance is the ability of the muscle to repeat actions. Volleyball is a sport that requires its participants to jump maximally up to 120 times in a match. Therefore, muscular endurance is at least as important as power. It must be the goal to be able to perform close to maximum even after two hours or more of playing time.

Aerobic Endurance is what is most commonly known as ‘fitness’. It refers to the ability of an athlete to perform over a long period of time. For endurance athletes (runners, cyclists, swimmers), aerobic endurance is an indicator of performance. Volleyball is sport of repeated short, actions and aerobic endurance is not directly required for performance. However, good aerobic endurance improves recovery between actions. Volleyball players need to have a good level of aerobic endurance to maintain a high level of performance over the course of a long match.

Speed is simply ‘how fast’ the body moves. Speed is a major determinant of volleyball performance especially at the net. Spikers and blockers are required to move at high speed to get into position to play the ball, and their actions must be fast once they are in position (e.g. spike armswing, block penetration). Different roles require different kinds of speed. For example, middle blockers require lateral speed, while passer hitters require more mostly speed moving forwards and setters require speed in all directions.

Flexibility is the range of motion in a joint. Flexibility affects speed of movement in a joint and plays a role in injury prevention.

Balance refers to the ability to create a stable base of support. A ‘balanced position’ is a prerequisite of skills such as setting and receiving where the base of support is the legs. However, volleyballers also require ‘balance’ in the air when spiking or blocking or ‘balance’ when playing the ball while diving and sprawling. In these examples, balance is related to core strength and control.

Reaction Time is how fast a player responds to a given stimulus. In volleyball the stimulus is a game action that requires movement to position to perform a skill. Reaction time is affected by cognitive skills such as the ability to recognise the right cues (and is influenced by experience) and by physical skills such as balance, agility and speed.

Agility is the ability of the body to change direction and move effectively in a variety of body positions, especially close to the ground in the backrow. Agility requires a combination of other components of physical fitness such as core strength, speed, flexibility, balance and reaction time.

PHYSICAL TRAINING PROGRAMS

To compete at higher levels, players must develop not only their technical skills but also their physical capabilities. An appropriate conditioning program also plays a major role in improving performance and in reducing the likelihood and effect of injuries.

Physical training programs have two major objectives.

1. Injury prevention. If a player is injured they cannot improve their technical level and cannot participate in competition. Prevention of injury is also a duty of care issue for coaches at all levels. There are three main areas of injury prevention;
   a. Screening players before they begin a training program to identify their injury history and potential concerns.
   b. Training program. The training program should be designed and planned with appropriate exercises that develop players’ technique (an important factor in injury prevention) and do not place them at adverse risk (through the use of overtraining or potentially dangerous exercises).
i. Training should be sequenced so that there is a progression in the intensity of activities so that the players are effectively prepared for each level of intensity.

c. Injury prevention training to address common problem areas, together with specific areas identified during the screening process.

d. Stretching. It is important to note that research shows that static stretching before performance plays NO role in injury prevention (Thacker, 2004). Time spent stretching before training is essentially wasted time.

2. Conditioning. That is training in which the objective is the development and optimisation of the required physical characteristics of the volleyball. Again there are two main areas of conditioning training:

a. On court training (i.e. conditioning training during volleyball specific training sessions)

b. Off court training (i.e. specific conditioning training separate from technical training sessions).

INJURY PREVENTION

There are two main kinds of injury that a coach should be concerned with - acute and chronic.

An acute injury is an injury that occurs through a single action. The most common acute injuries are muscles strains and tears and ligament (joint) sprains. Muscle strains are not typically common in volleyball players. Sprains of the ankle and fingers are the most common acute injuries.

The most effective prevention technique for acute injuries is effective practice preparation and planning. The coach must prepare the court so that potential obstacles are removed, the floor is clean and appropriate protection equipment (e.g. net post padding) is present. The coach must design drills so that danger is minimised (e.g. beware of movement paths of players if there is more than one ball involved on one court). If a drill will put the players in a danger area (e.g. a defensive drill near a wall) then the coach must be prepared to modify the session at short notice. Ankle sprains can also be prevented or minimised by an injury prevention program targeting the ankles and knees (described below) and by wearing ankle braces. Finger sprains are less easily prevented but taping can be effective at least in preventing reinjuring of a joint.

A chronic injury, or overuse injury, is an injury that develops over time. The warning signs for chronic injuries may not be obvious until it is too late and they typically take significant time and treatment to heal. Chronic injuries are particularly prevalent in volleyball due to the repetitive nature of the sport. The actions low to the floor, jumping and spiking can cause overuse problems in ankles (Achilles tendinitis), shins (shin splints, stress reactions, stress fractures), knees (patella tendinitis), backs (stress fractures) and shoulders (tendinitis). Chronic injuries can be prevented or minimised by an effective training program (described below). Education of the players is also an important factor. Players should learn to report all small injuries to the coach so that potential problems can be identified early and any required interventions can be made in a timely manner.

Athlete Screening

Players will often have musculoskeletal imbalances that will make them susceptible to particular types of injuries. Screening is a vital tool in identifying these potential problem areas and providing the opportunity of addressing them through an individualised training plan. The coach should encourage all of their players to visit a health professional, either a doctor or physiotherapist and preferably with volleyball experience, and undergo a musculoskeletal screening. The screening will look for possible areas of weakness that could lead to injury. As part of the coach’s ongoing responsibility to the fitness and health
of each player under their care they must ensure that the physiotherapist’s recommendations are carried out.

**Training Program**

The coach plays a role in reducing the number and extent of chronic injuries through the training program they implement. The coach must consider the frequency, duration and intensity of the training program and the amount of recovery allowed in order to prevent overload. Spiking places demands on all of the joints of the body and is the most intense (and therefore stressful) action that a volleyball player will be required to perform. The easiest measure of the overall load of a training program is the number of spikes that players must complete on a training to training basis. For non-professional players the overload factor is equally important, but more complicated. Factors other than training that affect overload include school and work commitments. The coach must be aware of all things that could affect the performance of a player and be prepared to adjust the volleyball training load where necessary.

The second major input in developing chronic injury is change. Any change in the training program that is designed to produce a positive training effect can also have a negative impact. The most common change is an increase in the training load. This must always be managed carefully. Consider that if a player increases their training load from one training per week to two, they are *doubling* their training load. However, a change from well sprung court surface to a harder floor can cause problems or even changing the kinds of drills. Old shoes (or inappropriate shoes) that no longer provide sufficient cushioning can lead to leg pain. In some cases, even a new pair of shoes can lead to aches and pains that indicate the onset of a chronic injury. If a player reports pain, the first consideration is ‘what has changed’.

**Injury prevention Training**

Injury prevention exercises should be a normal part of the training program. Many of these exercises are excellent for the warmup as they are functional for preparation.

Proprioception exercises work the muscles, tendons and nervous system around the ankles and knees and help minimise the effects of ankle injuries (the most common volleyball injuries). There are many simple proprioception exercises. Any exercise where a player must control their balance can be used for this purpose. For the jumping exercises, the keys are to regain balance after being in the air. It is important to allow time between repetitions of an exercise to allow the body must find its balance. This is where the work is done. Examples of proprioception exercises include:

- Stand on one leg
- One leg half squats
- One leg rotations (jump and rotate in the air, 90° or 180°)
- One legged setting in pairs
- Hopping along a line, forwards, backwards, sideways (ensuring landing and taking off exactly on the line)

Perform simple sets of 15 or 20, with the eyes closed to add difficulty. Static exercises (such as one legged standing and half squats) can also be done standing on a tennis ball to more accurately replicate the position in which ankles sprains occur. Note that even experienced players will feel uncomfortable doing these exercises for the first time.
The shoulder is an area that must perform a large amount of work in volleyball and is the site of many chronic injuries. This is especially the case with beach volleyball. Beach volleyball is played with a heavier ball and contact is often not perfect. Both of these factors result in even greater stress on the structures around the shoulder than in indoor volleyball. These structures must be trained.
There are a range of simple exercises that are useful in strengthening the stabilising muscles around the shoulder area that can be relevant in preventing injury. Large elastic bands or tubing can be used for a variety of strength exercises. There are many products available, most of which are available in different strengths for different levels and different exercises. All volleyball players should have regular access to this type of equipment. Those exercises shown below are just a few examples.
CONDITIONING

Conditioning training targeting the specific requirements of volleyball can be undertaken on the court during normal training sessions and off the court in conditioning sessions in a weights gym.

On Court Physical Training

Most coaches have limited court time for training and should use as much of that time as possible for technical training. Further they are unlikely to have easy access gymnasiums with weight training facilities, or have the expertise to write programs. The coach should remember that specificity is of vital importance in any conditioning program and so exercises that can be done on the court, during training are likely to be the most effective, as well as the most time efficient.

With good planning, including careful selection of exercises and drills and efficient use of time, most areas of conditioning can be easily trained within the normal practice session with minimal equipment.

Strength exercises can be included during the training session, in the warmup or at the end of the session. Strength exercises are often used as consequences in drills. Core strength exercises such as push-ups and sit-ups can be done off the court and so do not necessarily impact on the organisation of training. Ensure that all exercises are done with good technique and posture to optimise effectiveness.

- Push-ups must move the whole body. The trunk must stay stable and strong.
- Use a range of abdominal exercises, including sit-ups with twists for oblique muscles, leg raises for lower abdomen and crunches for upper abdomen. Medicine ball exercises can be used to provide extra load.
- Exercises for the legs or upper body can be done against partner resistance or by using elastic bands or tubing.

Power exercises using medicine balls can be done as part of the warmup or included in technical drills. Medicine balls of one (1) or two (2) kilograms are sufficient for most levels. When in doubt use a lighter ball.

- Setting with a medicine ball strengthens hands, fingers, shoulders and improves technique.
- Throwing a medicine ball with one or two hands increases power in the shoulders, back and trunk. For lower levels throw only with two hands due to the danger of shoulder injuries. Use medicine ball throws directly before spiking drills to optimise transfer.
- Catching a medicine ball above the net improves strength in the shoulders and core, balance in the air and improves blocking technique but should only be done with players who already have a measure of strength.

TWO HAND MEDICINE BALL THROWS
Muscular and Aerobic Endurance can be improved in the normal training session. The training principles of specificity and overload (Coaching Principles Unit 2.4: Principles of Training) are relevant in designing training drills that will improve muscular and aerobic endurance. Applying the principle of overload, training at a greater intensity than volleyball will improve endurance. Specifically, performing drills with relatively short recovery periods will stress both muscular and aerobic endurance. Applying the principle of specificity, playing volleyball will improve the specific conditioning requirements of volleyball. Wash drills were developed partly to provide this conditioning impulse within the training session. Wash drills improve conditioning by shortening the normal rest periods between rallies and individual actions (i.e. playing MORE volleyball in the same time period). In this way the body is stressed and will produce a training response. The key consideration is the work to rest ratio. The more work compared to rest, the greater the physical demands and therefore the greater the conditioning benefit. Any drill where the rest period is shorter than a normal volleyball game, producing a positive and specific conditioning effect.

Simply by having a number of balls ready for the server can shorten the rest period between rallies. However, normally this overload is achieved by putting an extra ball (or two or three or more) into play as soon as one rally is finished. How the coach puts the ball into play (free ball, down ball, toss for spiker, etc.), how many balls are played and how the drill is scored will be determined by both the technical and conditioning imperatives the coach has determined for the training session.

The coach should not neglect the training principles of progression (start with one extra ball and build up endurance) and recovery (ensure adequate rest between sets during a single session and between training sessions).

Flexibility training should include a range of static and ballistic exercises to improve the range of motion of the important joints and muscles. Ballistic exercises can be done in the warmup and first part of the training and limited to the specific movements required for volleyball, perhaps using the movement patterns described above as a guide. Static stretching should be limited in this time as it plays no role in preventing injury or preparing muscles and can actually be a detriment to performance.

NOTES:
Whenever doing any kind of physical conditioning exercise ensure that attention is paid to the execution of the exercise, no matter how simple or commonplace. Correct execution ensures that the exercise will be effective and reduces unnecessary risk of injury.

Common sense will be a valuable guide in programming conditioning exercises. For example, using a 5kg medicine ball with a beginner would not be helpful or appropriate.
Off Court Physical Training

Off court training refers to the strength training done outside of the normal court sessions, most likely strength training in a weights gym.

This section is not intended to provide the skills for a coach to develop a strength program, but rather the background information to assist a strength and conditioning coach to create a volleyball specific strength development program.

Issues Affecting Program Design

- Availability of equipment
  - Different gyms will have different equipment and may not have exactly the equipment required. Be prepared to modify exercises when necessary or seek alternatives.

- Age of participants
  - For athletes who have not reached physical maturity, training with weights can cause problems. SEEK ADVICE before beginning any program.

- Injury status
  - Injuries may require modification of exercises and training load.

Program Variables

General program variables include:

- Development state of the athlete
- Stage of the season
  - E.g. preseason requires a different type of program from the playoffs
- Variation
  - If the training impulse remains the same, the body will accommodate it and will stop adapting. Players also get bored if they do the same exercises over a long period.

The strength coach has a number of specific areas in which the training program can be manipulated to ensure that each athlete has the constant opportunity to improve.

- Intensity
  - The amount of weight lifted
- Sets
  - The number of sets of an exercise
- Repetitions
  - The number of repetitions per set
- Frequency
  - The number of training sessions per week
- Progressive Overload
  - The load should be slowly increased so the body must continue to adapt and improve.
- Exercises
  - The exercises used should be chosen carefully to include the optimal number of core exercises with appropriate non-core exercises. For example, squats are a core exercise and should be coupled with a non-core exercise such as hamstring curls.
Important Exercises

As much as possible, the weight training program should include exercises that have similar movement patterns and use the same primary muscle groups as volleyball. Free weight exercises (i.e. using barbells and dumbbells) are preferred as they use a broader range of muscles and generally work the stabilising muscles as well as the prime movers (muscles that do the work). Machine exercises are useful to target small muscles groups, such as those involved in injury prevention, and during injury rehabilitation. Most volleyball weight training programs will include many of these exercises:

- **Squats** strengthen the muscles of the core, back and legs (quadriceps and hamstrings). It is the most basic volleyball weight training exercise and should be central to all volleyball weight training programs. As the squat requires a heavy weight to be placed on the back of a player it must be executed with extreme care. Emphasis must always be on correct technique and an appropriate progression of the load. Squats must ALWAYS be supervised by a qualified instructor.

- **Power clean** is a weightlifting exercise that trains power through the whole body, especially the legs. This exercise requires a complex technique that should be taught by an appropriately qualified coach. Cleans must ALWAYS be closely supervised by a qualified instructor.

- **Snatch** is another weightlifting exercise used for volleyball training. It is more difficult than the power clean and is used less frequently. This exercise requires a complex technique that should be taught by an appropriately qualified coach. Snatch must ALWAYS be closely supervised by a qualified instructor.

- **Push press or jerk** is the second part of the clean and jerk technique from weightlifting. When done with speed it is a power exercise for the shoulders and for the legs. When done slowly, often without using the legs or with a machine, it is called the shoulder press and is another useful exercise but focusing on strength rather than power.

- **Leg press** has only a small role in a volleyball weight training program as it trains only the quadriceps and none of the stabilising muscle groups around the legs and core. Normally it is preferable to squat with a low load than to leg press with a large load. However, for short periods it can be used for variation within the training plan. Its major role is in injury rehabilitation for players with knee problems and for maintaining leg strength in players with back problems who cannot carry a weight on their back.

- **Lunges** strengthen the muscles of the legs and core and are a specific movement for volleyball. Training for liberos will sometimes focus on this exercise executed in laterally.

- **Bench press** is the most common upper body exercise. It does not replicate volleyball specific movements but works all the muscles of the chest and shoulder region, including the muscles at the front of the shoulder which are used in spiking.

- ‘**Rowing**’ exercises (there are a range of these using machines, dumbbells and barbells) are important to balance the bench press and also to train the muscles of the upper back that stabilise the shoulder blades. The ability to stabilise the shoulder blade plays a major role in preventing shoulder problems.

- **Bench pulls** involve lying face down on a bench and pulling up a weight from the floor. This is an excellent exercise from the ‘rowing’ group that train the muscles in the upper back.

- **Pulldowns** using a machine have a similar role in the training program to the various rowing exercises described above. Executed behind the head they work the muscles of the upper back and the back of the shoulders. Executed in front of the head they work the muscles of the upper back and front of the shoulders.
• Pullovers work a similar range of motion to, and most of the muscles of, the spiking action. They can be performed using a barbell or dumbbells and can work the shoulders with or without action of the triceps.

• Tricep extensions using a machine

NOTE: When using exercises with free weights the coach must ensure that the area in which the players are working is free of obstacles and that appropriate procedures are in place should a player encounter difficulty with the exercise. For example, whenever working with free weights it is advisable to always work in pairs. In pairs, one player will be working and the other will act as the ‘spotter’. The responsibility of the ‘spotter’ is to assist the player to start and finish the exercise (often removing the weight from the rack is more dangerous than the exercise) and in case the load is difficult. If the load is at the limit of the player’s capabilities the spotter will assist in keeping the weight moving to allow them to complete the required number of repetitions.

SUMMARY

Many coaches will contend that they do not have time for conditioning within their training program. While it may be true that the coach often does not have extra time outside the normal sessions to allow for systematic conditioning training (and that such sessions may not be appropriate for the level of the athlete), with careful planning most conditioning issues can be adequately addressed within normal training sessions.

Injury prevention is one area that the coach has an obligation to address as it directly affects the health of their players and falls within the coach’s duty of care to their players.
SPIKING

Spiking is one of the most dynamic and exciting actions in all of sport. Moreover, it is the single most important skill in volleyball due to the simple fact that most points in a game of volleyball are won from spiking. The object of the spike is to make the ball land in the opponent’s court or force the opponent into error by not being able to keep the ball under control.

SPIKING IN VOLLEYBALL

SPIKING PRIORITIES

- CONTROL
- POWER
- SPEED
- HEIGHT
- VISION

The ability to control the spike allows the spiker a greater opportunity to attack the weakest parts of the opponent’s block and defence, to reduce errors and to play with tactics and intelligence. The control of the spiker is determined by the technical efficiency of the spiker, particularly the consistency of the armswing and of contact with the hand.

The greater the power generated by the spiker the less chance that the block and defence will be able to control the ball. However, there is no place in volleyball for blind power. Power must always be tempered with control. Power is generated by the technical efficiency (including maximum arm extension) and individual power of the spiker.

Speed has evolved into the dominant characteristic of modern volleyball. The faster the attack (i.e. either the speed of the set or of the individual spiker), the greater the chance of attacking before the block and defence have reached their optimal position and therefore finding an empty area of the court or forcing the opponent into error. Speed of armswing is one of the major determinants of success at high levels as it allows the spiker to successfully attack very fast sets and to watch the block for longer. Speed of armswing is also a component of power. Speed is generated by technical efficiency and the natural characteristics of the spiker (e.g. muscle fibre type).

Height above the net reduces the impact of the block against the spiker and increases the range of angles the spiker can attack. However, height above the net alone is not a predetermining factor of success. Good spikers are able to attack over the net at varying heights to take advantage of weaknesses in the block. For example, if the block does not penetrate over the net then there is a gap between the block and the net. In this case the weakest point of the block is just above the net because the spiker can spike a ball that will rebound off the blocker between the blocker and the net. The height of the spike contact is determined by physical characteristics, technical efficiency and the jumping ability of the spiker.

Vision refers to the ability of the spiker to see and understand the movements and position of the block and to a lesser extent the defence. What is often considered as vision is actually vision AND decision making. Without good decision making, vision and control cannot be optimised. The ability to identify weaknesses in the block and defence and take advantage of what is presented is a major determinant of success and is influenced by experience, timing of approach, and contact point with the ball relative to the body. Vision and decision making can be trained.
These priorities are not ‘all or nothing’, there are many trade-offs involved. For example, contacting the ball further in front of the body than normal compromises height but potentially improves vision and control. To some extent, power can compensate for control just as speed can partially compensate for lack of height. Alternatively, vision and control can help to compensate for a relative lack of height or power. How the spiker uses their own characteristics to their advantage is most important.

**TECHNICAL REVIEW**

**APPROACH**

- The approach should be rhythmic and dynamic.
- The approach should take the spiker to the optimal spiking position efficiently and contribute to jump height.
- There should be acceleration through the approach so that the last, closing step is the fastest.
- The closing step should be right foot first then left foot for right handed spikers (left – right for left handers). This creates better conditions for the rotation of the upper body and reduces stress on the lower back. The last step can be ‘open’ (especially for backrow attacks), or a ‘hop’ with left and right foot contacting the ground almost simultaneously.

- No matter what the circumstances, the closing step should always be the same speed to maximise the possibility of an explosive jump and high contact. Any adjustments for the speed or position of the set should therefore be made before the closing step.
- The faster the set the shorter the approach. For a quick attack, a dynamic closing step may be enough, and in some cases that is all that is possible.
• The starting position for the approach for a right handed spiker is normally outside the court from position IV and along the sideline from position II (reversed for left handers). However, depending on their individual characteristics, some spikers may find more success in approaching the opposite way.

• For the quick attacker, the approach should be directly towards the net to enable the spiker to attack in all directions. If the initial position of the quick attacker is near the sidelines, then they should first shuffle towards the middle then approach directly to the net.

JUMP AND PREPARATION

• In the closing step both arms should be forcefully swung, finishing in extension above the head. A forceful and full armswing is required to maximise jump height.

• For a front row attack, the approach speed is converted to jump height with little or no forward momentum carried through. Maximising jump height also maximises contact height above the net which is one of the spiking priorities previously identified. For a backrow attack, forward momentum is carried through from the approach to allow the spiker to attack close to the net.

• The upper body rotates. Upper body rotation is essential to optimise final hand velocity at contact.

• The back and hips extend.

• The non-spiking arm reaches toward the preferred contact point and the spiking arm is drawn behind the head into the ‘bow and arrow’ position.
  o The timing of this movement is very important when spiking first tempo or second tempo (see ‘Attack Tempo and Individual Tactics’) sets. For these fast sets the arm preparation, especially drawing back the spiking arm, must be early enough to ensure a full armswing.

ATTACK

• There is a sequential action of
  o Hip flexion and forward rotation
  o Trunk flexion and forward rotation
  o Upper body forward rotation
Shoulder forward rotation
Elbow extension close to the head
Wrist flexion
  - Due to the physical principles of summation of forces, each successive component adds speed so that the contribution of wrist flexion to overall power is negligible. Wrist flexion does however play an important role in controlling the direction of the spike.

- The focus should be on the speed of the armswing.
- The ball is contacted slightly in front of the body as high as possible above the hitting shoulder. The position should be close to the maximum reach, but in front of the body to allow the spiker to see the block effectively with their peripheral vision.

Contact on the ball is with the palm of the hand at, or just above, the centre of the ball. The fingers may be spread for extra control.

- The spiking arm should follow through in the intended direction of the spike.
- The non-spiking arm is brought down forcefully, close to the body to promote the torque in the upper body that optimises power generation.
- Topspin is imparted on the ball by the duel actions of the armswing and wrist action.
- Direction of the spike is determined by the combination of orientation of the body, direction of the armswing, wrist action, and contact position on the ball.

**NOTE:** There are several variations of armswing each with its own advantages and disadvantages. For example, some Europeans teach limited upper body rotation, while the Brazilian men’s team use a longer, windmill style, armswing. However, the ‘bow and arrow’ technique is the preferred swing of Australian national teams.

**LANDING**

The landing after the spike is a very important consideration that is often ignored. A poor landing can be a major cause of knee and back injuries in volleyball players.

A two-foot landing is desirable but is not possible under all circumstances. For example, using an inside-out approach or a one-foot take-off will most often lead to landing on one foot. Whether landing on one or two feet, the key is that the spiker should control their deceleration to reduce shock. Essentially the landing is the take-off in reverse. The forefoot touches the ground first, followed by the heels. The knees flex to slow the descent of the body and the final weight is controlled by the firing of the strong muscles of the gluteus.
THE ONE-FOOT TAKEOFF

The one-foot take-off is used primarily in women’s volleyball and is used either as a first tempo attack directly behind the setter or as a second tempo ‘slide attack’ to the antenna. (see ‘Attack Tempo and Individual Tactics’ for further discussion on first tempo attack and second tempo attack). The two main objectives of the one-foot takeout are to create uncertainty in the block by varying the attack position of the first tempo attacker and by utilising the whole width of the net for the second tempo attacker.

• For the first tempo:
  o The spiker begins to approach in front of the setter as for an ‘a quick’ attack (see ‘Attack Tempo and Individual Tactics’ for a description of the terminology).
  o The approach is fast and dynamic (rather than accelerating) with the last step taking the spiker behind the setter.
  o The arm action during the approach is similar to the running motion.
  o Take-off is off the left foot. NOTE: This form of attack is used solely by right handed spikers.

• For the ‘slide’:
  o the spiker begins to approach as for first tempo attack described above,
  o instead of taking off for the first tempo, the spiker adds two steps laterally, taking off with the left foot and flying into the attack. This lateral jump makes the attack difficult for blockers to read and the spiker can contact the ball from a variety of positions.
  o This attack is often used as an individual time differential attack. That is, the spiker fakes the first tempo, then proceeds to the antenna for the slide.
ATTACK TEMPO AND INDIVIDUAL TACTICS

NOTE: All the specific terminology regarding the different attacks is the current terminology of the Australian Men’s national team. The terminology itself is not important, (there are many different terminologies in use throughout the world), but this particular one is used for consistency. To distinguish between first tempo and backrow attacks, lower case letters are used for first tempo attacks and upper case for backrow attacks.

The systems used to describe the various attacks are normally defined first by their ‘tempo’, or speed, and secondly by their position along the net. There are four primary tempos:

FIRST TEMPO
- First tempo is defined as an attack where the spiker is in the air as the setter contacts the ball. This is normally only near the middle of the court by the middle blockers.
The basic variations of the first tempo attack are shown in the diagram. The ‘b quick’ is typically about two metres from the setter, while the ‘a quick’ and ‘c quick’ are directly in front of, and behind the setter respectively. The direction of the approach may vary depending on the starting position of the quick attacker and tactical imperatives. In women’s volleyball, the ‘c quick’ can be with a traditional two-foot take-off or a one-foot take-off.

There are several other variations that are used less frequently, most often depending on the relationship between the setter and the spiker. The most common are variations of the ‘a quick’. The spiker approaches and jumps as if for a normal ‘a quick’ and the setter then sets the balls either:

- directly above their own head so the spiker can easily attack towards position V/VI; or
- slightly past the spiker so they can easily attack towards position I.

These different contact positions are normally achieved by an upper body rotation of the spiker. They are extremely useful variations if the opposing middle blocker is skilled at making good position and challenging the quick attack.

Good middle blockers are also able to effectively attack from poor reception. The key points are:

- After seeing the reception, quickly determine the appropriate take-off point and be prepared to adjust the approach accordingly. In some situations, the middle blocker will only have time for a single step, in others they will have to run a long way to make themselves available to the setter.

- When the reception is off the net the middle blocker must change their approach and attack position. There are two common solutions:
  - Jump in the same position relative to the setter. Therefore, if the setter contacts the ball two metres from the net, then the middle blocker must jump 2.5 metres from the net. This solution is normally only applied for a planned ‘a quick’ attack.
  - Jump at the net, at a position away from the setter to open up the angles. This solution is used for both planned ‘a quick’ and ‘b quick’ attacks.
  - The position of the middle blocker after poor reception is predetermined by the coach.
• Communicate to the setter if the original call must be changed.

• Always approach ready to spike. The approach and jump should not merely be a decoy. If the spiker does not approach with full intention to spike the opponent will soon realise this and focus attention on the other spikers.

• In the last step orient the body to allow the setter to see the hitting arm, (i.e. ‘open up’).

• The setter must always ensure that the set is in front of the spiker, i.e. between the spiker and net.

SECOND TEMPO is a fast set that is designed to minimise the time the blocker has to react and move after the first tempo attack. The first and second tempo sets can be played close to each other (combination or time differential attack as described below) or away from each other (spread attack as described below). The timing is normally that the spiker begins their closing step as the setter touches the ball (i.e. one step slower than the first tempo). Second tempo attacks are played in all areas of the court, front row and backrow, from excellent or good reception.

NOTE: The numbering system of the front row second tempo attacks refers to the position along the net. In this numbering system, the starting position of the spiker is not relevant nor is the quick attack. The number refers only to the attacking position. For example, a ‘3’ can be played by either the position II or position IV spiker and can be played either outside an ‘a quick’ attack or inside a ‘b quick’ attack.

The combination attack is a second tempo attack (2, 3, 4 from the front row; C, Pipe, B from the backrow) where two spikers attack the same area of the net at slightly different times and is therefore sometimes known as a ‘time differential’ attack. It is most effective when there is very little difference between the timing and positions of the quick hitter and the combination hitter. The combination hitter should begin their approach the same as for an outside attack and change direction at the last moment. The combination attack is most effective when it is unexpected or disguised.
The spread attack aims to use the greatest area of the net at the highest possible tempo. Typically, there will be a first tempo attack in the middle of the court and second (or third) tempo attacks at each antenna. By attacking the whole width of the net at high speed, the offence aims to prevent the block making effective position and therefore increases the opportunity for success. This offensive principle requires that the right side of the net can be attacked when the setter in the 5-1 system is also in the front row. In men’s volleyball, the backrow attack from position 1 was developed to solve this problem. In women’s volleyball the slide attack is the solution.

- The backrow attack can be also be a third or fourth tempo attack (see below) is also an important variation (especially the ‘Pipe’), when using speed as the primary offensive principle. The major difference between front row and backrow spiking is that ‘broad jumping’ into the ball is required. Broad jumping allows the spiker to attack the ball closer to the net, which increases its effectiveness. It also adds to the forward momentum of the body that is transferred to the power of the spike. To broad jump into the spike the last right - left step (for the right hander) is more open than for a normal approach. This transfers more of the momentum of the approach forward rather than up. It is still important to contact the ball at the highest possible point as the ball must still clear the net and go past the block. The set must ‘lead’ the spiker in front of the 3m line, without the requiring a take-off from in front of the 3m line, to ensure that the attack is as close to a front row attack as possible, and that the spiker can see the block.

- The slide is an essential second tempo attack in women’s volleyball. The object of the ‘slide’ is to allow a team using a 5-1 system to attack along the whole width of the net. It is uncommon in men’s volleyball due to the success of the backrow attack. The slide is utilised in a variety of positions along the net. To prevent the block from making position early very good players will fake the first tempo and instead run the slide.

THIRD TEMPO is normally called a medium ball. The object of this ball is to provide the spiker with the best opportunity to attack and therefore precision is of paramount importance. Medium sets are played from all areas of the court after good to poor reception depending on the level of the team. A team with very good spikers or a relatively weak setter may choose to use this play from excellent reception rather than a riskier offence relying more on speed. Medium tempo sets are played to the outsides and all the back row positions.

The FOURTH TEMPO is a high ball. The main difference between this ball and the balls of other tempos is that the ball will fall into the attacking zone, whereas in first, second and third tempos the ball will fly through the attacking zone. High balls are played in desperation situations after poor reception or defence or when a non-specialist setter must set. All players must be proficient in setting a high ball and all outside spikers must be proficient in spiking them.
The high ball is the most difficult type of attack to master due to the importance of the timing of the approach. It is also normally the first type of attack that intermediate players learn as it teaches the importance of timing and allows the spiker to concentrate on their own activity rather than rely on the quality of the set.

**IMPORTANT SKILLS**

It is important for the spiker to be able to identify and attack various parts of the block. Typically, the weakest parts of the block are the outside hand of the outside blocker and the seam between the blockers.

‘Hitting the seam’ between the blockers is the most common attack as it is normally directly in line with the approach of the spiker. It has the advantage that the spiker attacks the biggest part of the court and is therefore a low risk shot. To successfully hit the seam, the spiker must take into account the movement of the block and adjust the speed and timing of the armswing accordingly. For example, if the middle blocker is late closing the block then the spiker must not spike low over the net into the seam as this is the area that will most likely be covered.

The advantage of ‘tooling the block’ (i.e. attacking the ball off the block and out, typically off the outside hand or arm) is that the ball will rebound out of court where there is no defence. If the spiker sees the blocker moving late into position or moving their hands, then the spiker may make small adjustments with the wrist to direct the ball. The ball should be directed at the edge of the hands or arms rather than directly into the hands. The fine timing using the wrist is very important as often the difference between a successful ‘tool’ and being blocked is a matter of centimetres.

When spiking a high ball, a useful area to tool is the top of the outside blocker. To hit the top of the middle blocker often results in an easy ball to the defence. A spike off the top of the outside blocker is more likely to be a winner as this is the shorter area of the court and the defence has less room to chase after the ball.

Tall or athletic spikers may also have the ability to spike ‘over the block’. This has the obvious advantage of taking the block completely out of play. To successfully hit over the block requires excellent technique and a high contact point. The spiker normally aims for the area between position VI and V as this is the longest area of the court. He does not direct the ball ‘down’ as he does when trying to spike cross court or down the line. Spiking over the block is easiest when the set is relatively close to the net.

High level spikers often have the ability to spike not only a variety of the angles and shots, but also with a variety of tempos. That is, they have the ability to win points, not only with power but also with tips and off speed (i.e. roll) shots. Spikers who are proficient at these types of attacks are able to attack areas of the court that would not be possible with a powerful spike. They can also take advantage of a defence that is prepared for a powerful spike. The open handed tip is played directly behind the block or over the block into the middle of the court. It can also be played to deep areas of the court if the spiker sees the defence advancing. The roll shot can be played past the block in front of the defence, through the block that is not correctly formed, or over the block into the middle of the court. To successfully tip or roll, the spiker must be sure that the approach and jump are the same as for a spike, that is the spiker must ‘sell’ the shot. A rule of thumb is to only tip on a perfect set as this is when the defence will least expect it.
Outside spikers must be proficient in two different approaches. If they receive they will often utilise an inside–out approach. The inside–out approach allows the spiker to receive a greater area of the court and still be available to attack. The spiker is also able to see the block very well and is often more successful hitting the seam. The approach is almost directly towards the net and the spiker must pay special attention that the last step of the approach allows the spiker to have the correct orientation to the court. The inside–out approach is also common in transition, when a player must move from a defensive position directly to attack.

If the spiker does not receive and has more time to prepare to spike, then they will use an outside–in approach. As soon as the receiver sees they will not be required to receive they will immediately release to a position outside the court using shuffle steps. The outside–in approach allows for a more dynamic approach and jump and opens up a greater range of angles. For example, to spike sharp cross court with power is very difficult when approaching inside–out.
Spikers must also be proficient in spiking in a variety of game situations, from the easiest (i.e. free ball or perfect reception) to the most difficult (i.e. after transition from block to attack). Attacks after block and defence are often the key situations in a match as they occur relatively infrequently and are normally break point attempts. It is VITAL to be ready for these opportunities and spikers must retreat (or ‘transition’) as close to the optimal starting position as possible. Middle blockers have the least time to transition and must often approach using only the closing step. The footwork for transitioning off the net is normally a step - cross move similar to a middle blocker’s footwork as this is the fastest and most balanced. The keys points are that the spiker can clearly see the ball and the setter and must stop before the setter contacts the ball. This footwork sequence can be seen in the chapter ‘BLOCKING’.

Good outside hitters and opposites learn when to attack for a point and when it is better to attack with relatively low risk. For example, when the set is high and the block is very good or when the set is too close to the net, the intelligent spiker can play the ball into the block to allow their team to cover the ball and set up a new offence. For this tactic to be successful it is important for the spiker to jump maximally and give the impression that a powerful spike will follow. The spike must be hard enough that the ball rebounds back from the block but not too hard that the blocked ball will go straight down. This tactic requires great individual and team skill. The cover players must always be prepared for this possibility.

TACTICAL REVIEW

ROLE OF THE OUTSIDE SPIKER (PASSER HITTER) IN ATTACK

In modern volleyball, the two outside spikers are also the primary receivers (along with the libero) and attack primarily in position IV. Many coaches choose to have one outside spiker who is more skilled at receiving and one who is more skilled at spiking. The ‘attacking’ outside spiker is sometimes referred to as the ‘second opposite’. In this situation the ‘attacking’ passer hitter will receive less of the court (and in fewer situations), than the libero and ‘passing’ hitter.

Whatever the specific roles within the team all outside spikers must be skilled at attacking a variety of sets from position IV. These include a fast set from perfect reception, medium speed set from less optimal positions and a high ball from a range of poor game situations. One of the outside spikers must also spike in position II in one rotation. All outside spikers should also be proficient at spiking higher balls from position II in transition situations. If the outside spikers can attack from position II, a greater variety of blocking tactics are possible, e.g. match up blocking (see BLOCKING).

At higher levels the outside spiker is also called upon to attack from the backrow in position VI (pipe).
ROLE OF THE MIDDLE BLOCKER IN ATTACK

The role of the middle blocker in attack varies significantly between men’s and women’s volleyball.

In men’s volleyball, their role is to keep the opposing middle blocker in the centre of the court to reduce the likelihood of multiple blockers reaching the outsides. To achieve this goal they MUST jump before the setter touches the ball. This timing is an essential component of the overall offensive system.

In women’s volleyball the middle blocker has a broader attacking role. In addition to quick attacks, the middle blocker has a role in keeping the entire width of the net open to the offensive team. This is achieved by being proficient in the ‘slide’ attack, preferably to different positions along the net.

THE ROLE OF THE OPPOSITE IN ATTACK

In men’s volleyball the opposite is the primary attacker and attacks in every rotation. They must be skilled in attacking from the outsides, especially position II, and from the backrow in position I. They normally have the responsibility to score points from the worst situations (i.e. after defence) and so have a very important role in break point scoring and therefore the final success of the team.

In women’s volleyball the backrow attack is not as dominant as in men’s volleyball. While some teams may use the opposite in a similar way, in many teams the opposite is the spiker with the most variation. They may spike a variety of slides and outside attacks as well as from the backrow in position VI and I. However, they are less frequently called upon to dominate point scoring situations in the same way. In some women’s teams, the opposite can be the primary receiver (along with the libero).
COACHING SPIKING

TEACHING POINTS

A TEACHING PROGRESSION FOR BEGINNERS

- armswing from self toss
  - focus on high contact and loose swing
  - two handed toss can promote focus on the ‘bow and arrow’ position and on early preparation as it results in both hands above the head in a similar position to the hand position after the spike jump

- armswing from partner toss (to develop upper body rotation)
  - all players are standing
  - partner tosses from slightly behind the ‘spiker’ on the dominant side
  - the spiker spikes to a third player
    - the tosser can stand on the other side of the spiker to replicate an attack from position II.
    - This drill can become continuous, with the ‘tosser’ becoming setter.

- Self-toss attack to long corner
  - focus on high contact to keep the ball in court

- coach toss with one step approach
  - the spiker approaches and the coach tosses the ball at the appropriate time so the player focuses solely on the approach and need not focus on timing. The spiker must have the confidence that the ball will be in the hitting zone at the right moment.
• coach toss with full approach (the coach’s toss is more consistent than a live set and player can focus mostly on the approach.)
• spike from set
• spike from set, after own reception

TRAINING IDEAS
GENERAL TRAINING
The relationship between the spiker and the setter is a very important relationship. The only way to develop this is through practice. The coach must give setters and spikers quality opportunities in game like situations. As in all training drills, attention must be paid to the structure of each drill to ensure that the training goals are being met. For example, ‘free hitting’ is a particularly poor drill to practice spiking. The major reasons for this being that:
  ▪ the setter is not in the setting position, so the spiker does not practice the type of set they will be required to hit in a match
  ▪ the spiker’s movement are unspecific
  ▪ the spiker does not have a full court to attack.
It is also a missed training opportunity for the libero.
A more effective spiking warmup / drill is:
1. Coach (A) serves / free balls to the Libero (L), or spiker (S),
   ▪ This puts the coach in the optimal position to observe and provide feedback
2. setter (P) penetrates and sets to a spiker,
3. spiker spikes, then collects the ball and returns it to coach

Variations of this drill include:
• spiking several consecutive balls
• spiking to targets
• spiking v. block
• spiking v. defence
• + / - drills (i.e. point for good action, minus point for error) can also be used effectively in this drill to promote concentration on every single action.

**HIGH CONTACT POINT**

Maximising the height of the contact point allows a spiker to generate power, minimise the impact of the block and open the greatest area of the court to attack. Drills to improve the contact point include anything that raises the height of the net, including the use of elastic stretched between the antennae.

**‘LOOK AWAY’ SHOTS**

At higher levels spikers need to become less predictable in the direction of their attack. Good blockers will quickly be able to learn the cues from the spiker and block appropriately. Spiking against the direction of the approach (i.e. swinging across the body either line or sharp cross court) is a valuable skill. Coaches can specifically train this even with juniors.

• Have the spikers deliberately look one way and spike the other (e.g. approach facing cross court and then spike down the line). This can be done as a variation of any general spiking drill.

Have the spikers always spike away from the direction they are facing. This can be done as a variation of any general spiking drill or in any scrimmage.

**TEACHING VISION AND DECISION MAKING**

Developing the spiker’s vision can be done in any general spiking drill. Instruct the blockers to block in either an exaggerated line position OR exaggerated cross court position. The spiker must spike in the free area.

If the spiker already has some skill and / or there are not enough players to block, have a ‘blocker’ standing on a chair with arms in a blocking position. At the last moment the ‘blocker’ moves one arm away and the spiker spikes in the free area. For advanced spikers, have the blocker hold up one arm and show one or two fingers to indicate the direction of the spike.

Teaching or encouraging spikers to be more aware of the block can also be done in team drills. Simple rules for team drills could be:

- the spiker MUST ‘tool’ the block to win the point
- the spiker gets a bonus point for ‘tooling’ the block (and conversely the block gets a bonus point for a kill block).

**TRANSITION ATTACK**

**Block to spike**

Player simulates block, retreats off the net, attacks a ball passed to the setter.

**Progression** - player simulates block as the coach spikes a ball at a defender, then transitions off the net and attacks the same ball.

For players with difficulty retreating the correct distance off net, place cone or witches hat or chair outside the court for the spiker to run around.

This form of drill can be done for individual spikers with targets on the court, against a block or against a full defence. It can also be used to initiate any game play exercise.
Defence to spike
Coach hits a ball to a player who must defend the ball, move to attacking position, attack the ball set from their own defensive action.

This form of drill can be done for individual spikers with targets on the court, against a block or against a full defence. It can also be used to initiate any game play exercise.

Multiple attacks
A spiker may be required to spike more than one ball consecutively - the first from service reception, the second (and subsequent balls) from a simulated defence thrown directly to the setter, or from a simulated cover situation or from a free ball that the spiker must pass to the setter themselves.

This form of drill can be done for individual spikers with targets on the court, against a block or against a full defence. It can also be used to initiate any game play exercise.

GAME PLAY
An understanding of the training principles of repetition and specificity makes it clear that all training for volleyball is a trade-off between providing the required number of repetitions for learning and making these repetitions game-like. In general, the more game-like the repetitions (e.g. a game), the fewer actions are performed. Two types of drills can balance this equation.

- **Wash Drills** are any game-like drills that involve multiple rallies in a reduced period of time. This is normally achieved by throwing a free ball into court immediately after one rally is finished. There can be any number of extra balls thrown in and in a variety of ways. The ball can be a free ball, down ball or thrown directly to a setter or a spiker.

- **One v One Drills** are team drills where one or more actions are specified by the coach. For example, the first attack must be from position IV. In this way the coach can control the number of repetitions, develop the specific relationships between the setter and spikers and make all repetitions game-like. These drills can be conducted as single rally drills or as a variation of any wash drill (e.g. reception to position IV, first extra ball to middle, second extra ball to position II)

### TROUBLESHOOTING GUIDE

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<td>Ensure correct body position at take-off</td>
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SPIKING IN BEACH VOLLEYBALL

SPIKING PRIORITIES

- CONTROL
- VISION
- HEIGHT
- POWER
- SPEED

The ability to control the spike or shot allows the spiker a greater opportunity to attack empty areas of the court with minimum risk. The control of the spiker is determined by the technical efficiency of the spiker, particularly the consistency of contact with the hand.

Vision refers to the ability of the spiker to see and understand the movements and position of the block and defence. What is often considered as vision is actually vision AND decision making. Without good decision making, vision and control cannot be optimised. The ability to identify weaknesses in the block and defence and take advantage of what is presented is extremely important. It is influenced by experience, timing of approach, and contact point of the ball. Vision and decision making can be trained.

Attacking the ball at the maximum height above the net reduces the impact of the block against the spiker and increases the range of angles the spiker can attack. In particular, it opens up the sharp cross court spike or shot that is the most difficult for the defence to play. The height of the spike contact is determined by physical characteristics (i.e. reach), technical efficiency and the jumping ability of the spiker.

The greater the power generated by the spiker the less chance that the block and defence will be able to control the ball. Power is generated by the technical efficiency (including maximum arm extension) and individual power of the spiker.

Speed of movement allows the spiker to more easily reach the point of attack and is therefore an important characteristic of good spikers. Speed of armswing allows the spiker to reduce the effects of the environmental conditions, particularly the wind, and is also a component of power. Speed is generated by technical efficiency and the natural characteristics of the spiker (e.g. muscle fibre type).

There are some trade-offs involved in utilising these priorities. For example, contacting the ball further in front of the body than normal compromises height but potentially improves vision and control. To some extent, power can compensate for control. Speed, particularly of the armswing, can partially compensate for lack of height. Alternatively, vision and control can help to compensate for a relative lack of height or power. How the spiker uses their own characteristics to their advantage is most important.

TECHNICAL REVIEW

APPROACH

In beach volleyball, an outside - in approach is favoured in order to allow the spiker to more easily attack sharp angles.

- Shuffle from reception position to start of approach.
- Stop or at least slow down before starting the approach.
  - That is, there should be a distinct phase between the movement to the approach and the start of the start of the approach itself.
- The goal for the spiker should be to use only one approach for different outcomes to aid deception and hold the defender in position for as long as possible. (i.e. always approach the same way.)
- Take short steps then a big closing step to the take-off point.
- The closing step should be right foot then left foot (left - right for left handers). This creates better conditions for the rotation of the upper body and reduces stress on the lower back.
- The left foot (for right handed spikers) should be forward in the take-off.
- Power for the jump is generated through the last step and through an extended eccentric phase of the jump.
- During this eccentric phase (‘the plant’), the spiker will quickly look at the positions of the block and defence, either with peripheral vision or with a short head movement.
- The spiker must be always be prepared for different kinds of sets and the effects of the environment. A good closing step allows the spiker to always be in a good position to optimise the range of attacking options.

**JUMP AND PREPARATION**

- In the closing step both arms should be forcefully swung, finishing in extension above the head. A forceful and full armswing is required to maximise jump height.
- The upper body rotates as the spiking arm is drawn behind the head into the ‘bow and arrow’ position.
• The non-spiking arm reaches towards the contact point. This cue helps in holding the body upright and balanced and aids in deception.

• The back and hips extend.

• NOTE: The preparation of the armswing is a key point in beach volleyball. Due to the impact of the wind, position of the ball before contact can be unpredictable. A simple, short preparation phase as described above will prepare the arm early and allow the spiker to take into account anything that may occur at the last moment. Longer armswings, as sometimes seen in indoor volleyball can create extra power, but the timing is more difficult and control can be compromised.

ATTACK

• There is a sequential action of
  o Hip flexion and forward rotation
  o Trunk flexion and forward rotation
  o Upper body forward rotation
  o Shoulder forward rotation
  o Elbow extension close to the head
  o Wrist flexion
    ▪ Due to the physical principles of summation of forces, each successive component will add speed so the contribution of wrist flexion to overall power is negligible.

• The ball is contacted slightly in front of the body as high as possible above the hitting shoulder. The position should be close to the maximum reach, but in front of the body to allow the spiker to see the block and defence.

• The elbow of the spiking hand should be high at contact to maximise height above the net.

• The non-spiking arm is brought down forcefully, close to the body to promote the torque in the upper body that optimises power generation.

• Contact on the ball is with the palm of the hand at, or just above, the centre of the ball. The fingers may be spread for extra control especially when playing shots.

• Topspin is imparted on the ball by the duel actions of the armswing and wrist action.
Direction of the spike is determined by a combination of orientation of the body, direction of the armswing, wrist action, and contact position on the ball.

An important component of the attack phase in beach volleyball is balance in the air. To be in an upright, balanced position when spiking creates the best conditions for seeing the block effectively and aids in deception, particularly in playing shots.

**ATTACK ZONES**

Spikers in beach volleyball should always seek to attack the perimeter of the court. Balls played into the areas around the sidelines create the greatest difficulties to defend. Firstly, the areas around the sidelines are most likely to be outside the block and away from the defender. Secondly, if the attack does not win the point directly, forcing the defender into the perimeter of the court to play the ball also creates the most difficulties to subsequently attack in transition. Even in the attacking team does not win the rally at the first attempt, they will most likely maintain control of the rally and therefore the chance to win at the second or third attempt.
At high levels the attack zone is approximately 1m from the lines in all directions. At lower levels, the zones can be wider. The attacking zone deep in the middle of the court is especially effective area to target if there is no block. As well as being an area from where it is difficult to mount a transition attack as the defender will then be forced to run nearly 8 metres in order to attack at the net. A ball directed to the deep, middle also creates communication difficulties between the defenders.

**IMPORTANT SKILLS**

The rules for beach volleyball do not allow the attacking player to tip with an open hand. This means that the ‘flat shot’, the ‘roll’ or ‘cut’ shot and also the ‘pokie’ must be considered as important as the power spike.

The flat shot is simply a spike with less power. It should be struck with enough power that the defensive player does not have enough time to move, but without the risk of a full power spike. The flat shot requires good shoulder and wrist control for direction. It is mostly used when there is no block, especially in women’s beach volleyball, or when the blocker drops off the net (known as ‘dropping’ see ‘BLOCKING’). When the blocker ‘drops’ a common tactic is to play a flat shot directly at the retreating blocker to force a poor defensive action. A high flat shot high to the retreating blocker can also force a ball handling error as this type of attack is not considered a hard driven spike and may not be defended with open hands.

The roll and cut shots are also off speed shots designed to take advantage of open areas of the court and keep the ball out of the reach of the blocker and direct the ball into an area of the court away from the defender. The normal beach volleyball terminology is the roll shot is the shot played down the line and the cut shot is the shot played cross court. As the roll or cut travels so much slower than a spike (or even a flat shot), it is vital that the spiker disguise it as much as possible. The approach and jump should be the same as for a spike and the arm should slow only at the last moment. Roll and cut shots can be played with a variety of trajectories. They can be played relatively flat and low over the net past the blocker, or with a high trajectory over the block. However, high contact allows the spiker to play all shots (including those over the blocker) with a flatter trajectory and thus make it more difficult for the defence. The ball is directed primarily by the action of the wrist but the arm must follow the wrist in the intended direction of the shot although the attacker may also contact different areas of the ball to provide direction.

The pokie is played with the knuckles from an extended arm position. It is often used as an emergency shot, but also has some advantages over other shots in general play. Firstly, a pokie allows the spiker to attack balls that are very close to the net that cannot be played with a topspin motion. Secondly, because the arm and hand are extended the spiker can reach balls before the blocker and from this high point play angles closer to the net, especially in the area of confusion directly behind the blocker.
CUT SHOT - RIGHT HANDER, RIGHT SIDE
(LEFT HANDER, LEFT SIDE)

CUT SHOT - LEFT HANDER, RIGHT SIDE
(RIGHT HANDER, LEFT SIDE)

ROLL SHOT - HIGH CONTACT

ROLL SHOT - HIGH CONTACT
ABOVE THE HEAD
Tooling the block (i.e. spiking off the block and out of court), is another important skill to master. Tooling allows the spiker to take advantage of a poorly formed or positioned block and by deflecting out of court, will bypass the defence. Due to the difficulty in moving in the sand, the spiker will often be confronted by a poorly formed block and should take advantage of this as often as possible. An offence that allows for multiple attack points (see chapter OFFENSIVE SYSTEMS) will force the blocker to move and create conditions that allow for tooling the block to be a major weapon. In order to tool the block effectively, first the spiker must have good balance in the air in order to see the block. Aim at the edge of the block (either inside or outside). The hands or arms of the blocker are good targets. The attack (spike or shot) must be played fast enough that the blocker cannot move their arms and that the ball will deflect out of reach of the defender. When tooling off the top of the block (e.g. when the set is close to the net and the block is well formed, be sure to spike at the fingers NOT the hands and with enough power so that the ball will fly a long way behind the defender.

In addition to being able to spike a variety of shots, spikers must also be proficient in spiking in a variety of game situations, from the easiest (i.e. free ball or perfect reception) to the most difficult (i.e. after transition from defence to attack or transition from block to attack).

- In transition from defence to attack, the most important factor is timing. The defender must first analyse the situation (including the position of the ball and the movement of the setter).
  - After identifying the setting point, decide on the back attack point and COMMUNICATE this with the setter.
  - Move quickly into position to begin the approach using shuffle steps for lateral movement.
  - The approach should be as similar as possible to the approach used after normal service reception, leading to a balanced jump which optimises attacking options. The quality of the approach dictates the ability of the spiker to attack successfully.

- Transition from block to attack is a key situation in a match. A ball touched by the block is often a relatively easy ball to defend. However, as the block counts as the first contact, the team has only one more contact available to build an attack. This means that the defender will often be required to ‘set’ the ball directly to the blocker and ability of the blocker to transition directly into a spiking position is vital.
  - Be aware of where the ball goes after the block.
  - Move off the net (i.e. transition) fast using the turn and run technique. The transition move should take the blocker into a position where:
    - the greater part of the opposition’s court is open to attack,
    - the setter can set the ball between the spiker and the net.
    NOTE: This will normally result in a transition move at an angle from the original blocking position.
  - The approach should be as similar as possible to the spike approach after service reception but is often compromised. Ensure at least an effective closing step to optimise the number of attacking options.
COACHING SPIKING BEACH VOLLEYBALL

TRAINING IDEAS

Training Progression

- Coach toss to spiker who attacks using a single closing step.
  - The focus is on the speed and timing of the closing step.
  - Progressions can be to focus on looking at the defence or on spiking with an upright balanced position.

- Coach toss to spiker who attacks using full approach.
  - The focus is on the timing of the whole approach.
  - Toss a second ball very quickly after the first to encourage the player to focus quickly on the next play and develop the ability to attack with a shortened approach.

- Player must receive and then attack their own ball.
  - Focus is on the timing of the reception WITH the approach and spike.

NOTE: Spiking is nearly always trained with targets on the court. Often there can be two targets for a single action. For example, a hard spike to one position and a shot to a different position.

Training Attacking Variation

Players should be able to attack using more than one shot in each situation. To train this variation place a defender in a cross court position and mark a sand line in a line position. Emphasis to the spiker is using power to the cross court angle and playing a shot to the line. Then move the defender to different positions so that the spiker will then power down the line and play the shot cross court. If there is no defender available, mark lines in the sand or use another object as the target.

Block Rebound Drill

Coach tosses the ball close to the net. The spiker must either try to score a point by tooling the block or play the ball into the block and back so as to get another attacking chance. The block can be a blocking player, a player standing on a table or bench, or any other rebounding surface.
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Setting is the action of playing the ball in the optimal position for one of the team’s spikers to attack. While there are many technical and tactical components this is the essence of setting for both indoor and beach volleyball. In indoor volleyball, setting is a specialist position but in beach volleyball both players must be proficient in the techniques and principles of setting.

The term setting is also often used to refer to the technique of playing the ball with open hands above the head. However, in this chapter the primary focus will be the techniques and roles of the setter rather than the technique of setting for all players.

**SETTING IN VOLLEYBALL**

**SETTING PRIORITIES**

- Accuracy
- Consistency
- Selection
- Deception

The first priority of the setter is accuracy. The setter must set to the spiker in a way that allows a successful spike. This means the set must be at the required speed, trajectory and in the rhythm of the spiker. A good set that the spiker must attack against a good block is better than a bad set the spiker can attack against a poor block.

Very closely related to accuracy is the consistency of the ball in each position. The set must not only be accurate, it must also have a consistent rhythm and timing. The spiker must have confidence that the set will be in the right position with the right timing EVERY time. With this confidence the spiker is able to approach each spike with the mindset of winning the point.

Beyond accuracy and consistency, the setter must learn the importance of set selection. Set selection refers to the role of the setter to choose where, when and how to set to each of spiker and / or each position. It is perhaps the most difficult of the setting skills to learn as there are often no right or wrong answers. Considerations in set selection include:

- Qualities of the spikers
- Qualities of the opposition block
- Quality of the reception
- Time of the set / match
- Results of previous actions.

Deception has two components: consistency of contact (both of ball position and body position) when setting different balls (to prevent the opposing blockers ‘reading’ the set too early) and consciously attempting to trick the opposing block. Consistency of contact is a basic fundamental technique while active deception is an advanced skill.

Consistency of contact is the setter’s goal from the very beginning of the learning process. The preferred contact point is discussed later but the goal is that it should be as close as possible to being identical for all sets.

Attempting to trick the opposing block is an advanced skill that should only be taught after the other setting skills have been learnt but once mastered allows the setter to play at a tactically more advanced level.
TECHNICAL REVIEW

MOVEMENT

Highly developed movement skills are absolutely essential for the setter. By moving in a balanced and efficient way, the setter arrives will be capable of making position with adequate time to optimally execute the technique. This improves accuracy and consistency. Furthermore, good movement allows the setter to collect information about their own spikers and the opposition block, therefore improving decision making and set selection. Simply, good movement optimises the setter’s ability to apply the setting priorities.

There are two components to the setter’s movement;

- Movement to the ready position,
- Movement to the ball.

Movement to the net

The traditional ready position is with the setter at the net with one foot virtually on the centre line about 3 metres from the sideline between position II and III. However, in modern volleyball there are some situations that may dictate some variation in this position. If the serve is very fast the setter may not have time to reach the net so a position 1-2 metres off the net may be appropriate. The position off the net has the added advantage that it allows the setter to more easily reach some of the poor receptions that often occur with fast serves. Another situation could be when the setter must penetrate from position V. From here it is often difficult to move to position between II and III. In this case the ready position may be in the middle of the court. In all cases however, it is important that the receivers are fully aware of any variations and that the quality of the first tempo is not compromised.

- If the setter has time (e.g. against a normal float serve or a free ball situation), they should make their initial position at the ready position BEFORE the receiver contacts the ball. This is important for the setter and also for provides a visible target for the receivers.
- The body orientation should be with right foot slightly forward, facing the court so the setter has a good view of the receivers and the spikers. The body orientation is the same regardless of which position the setter takes.
- The setter can then move to play the ball in a balanced manner. If they are required to move towards the net to play the ball, they can do so without the danger of making a net fault.

Movement to the ball

When considering movement towards the ball, it must be remembered that the objective is for the setter to be in a stable, balanced and neutral position when playing the ball.
• WATCH the reception, decide on the appropriate position to contact the ball and THEN move to that position. All movement should be as efficient as possible.
  o The setter should NOT ‘anticipate’ the reception by moving away from the optimal ready position before knowing where the ball must be contacted. This can lead to the setter being late to the ball or unbalanced at contact, especially if the reception is close to the net.

• The footwork should be:
  o Shuffle steps for short distances (one step)
  o Long step - cross step for middle distances (inside the 3m area)
  o Turn and run for long distances (outside the 3m area)

• When moving longer distances, use the right foot as a braking step followed by left foot to acquire the optimal orientation. Using a braking step allows the setter to be more balanced, especially when jump setting.

  SINGLE SHUFFLE STEP FOR SHORT DISTANCES

  CROSS STEP FOR LONGER DISTANCES - RIGHT FOOT BRAKING STEP

• In some situations, where time is compromised it can be useful to jump from one foot (the right foot) in order to take the ball in a good position (ball and body) with the ability to set in all directions.
PLAYING THE BALL

Setting from standing

The movement is a highly coordinated action beginning with the feet in the balanced position before contact. Then:

- the legs push against the floor (‘energy comes from the floor’)
- the body extends through the ball towards the desired target
- the arms extend through the ball towards the desired target
- the hand movement is described in detail below.

NOTE: The setter should not ‘jump’ after contact as more power is generated if the feet remain on the floor throughout the movement. Pay particular attention to the setter who jumps backwards when trying to set. Jumping backwards causes the setter to lose the forward impulse on the ball which reduces the ability to set high balls and over long distances.

Jump setting

- Jump setting allows for higher contact point which increases the speed of all attacks by shortening the distance between the contact points of the set and the spiker. It is therefore desirable to jump set on all setting attempts in which speed can be a factor.
- The setter should jump and land on the same point - the jump is entirely vertical.
- Contact should ideally be above the head of the setter to optimise height and deception. However, there may be some variations. The key is that the contact point should be consistent to make reading the setter as difficult as possible for the opposition.
• The core must be firm to create balance in the air and to provide a platform against which the arms can push.
  o The upper body should remain still during the contact phase.
• The power for the set comes through the fine coordination of the entire movement and NOT through physical strength.

When jump setting from a one-foot take-off, the general principles are the same, however the setter will not land in the same position.

**Ball Contact**

• The fingers should be spread wide with tension through the joints.
• Contact is made primarily with the thumb and first two fingers. The other fingers may touch the ball for extra control.
• Energy is imparted on the ball through:
  o the tension of the fingers
  o a short movement of the wrist
  o extension of the elbows
  o if it is necessary to set a long distance, transfer of momentum gained through extension of other parts of the body (eg legs) described in detail above.

• The hands finish in an open position facing the target (i.e. there is no follow through with the wrists).
• Contact should be short to optimise the speed of the set, but must be consistent.
• The further the distance to be set, the shorter the contact on the ball.

BACK SETTING
• When back setting:
  o Contact should be directly above the forehead but MUST be in the same position as the front set,
  o push the thumbs through the intended direction of the set,
  o complete the follow through in the intended direction of the set,
  o pulling the shoulders back can add energy to the ball for speed and allows the setter to hold a neutral body position for longer, thus aiding deception,
  o contact is often slightly longer when back setting.
NOTE: The most common problem for the setter when setting back is moving the body too early in the intended direction of the set, thus tipping off the blockers. One teaching cue can be to keep the head still, while using only the shoulders and wrists to give impulse to the ball. This may not actually occur in competition but can effectively teach the required movements and be a useful cue.

**ATTACK TEMPO AND INDIVIDUAL TACTICS**

**NOTE:** All the specific terminology regarding the different attacks is the current terminology of the Australian Men’s national team. The terminology itself is not important, (there are many different terminologies in use throughout the world), but this particular one is used for consistency. To distinguish between first tempo and backrow attacks, lower case letters are used for first tempo attacks and upper case for backrow attacks.

The **FIRST TEMPO** (or quick attack) is the building block of offensive tactics. The quick attack, particularly in the middle of the net, is intended to create time pressure on the blockers and prevent the blocking team putting up a good block against all attackers. The speed of first tempo attack is the length of time between the contact of the setter and the spiker. Both players are responsible for reducing this time - the setter by jumping and contacting the ball as high and early as possible and the spiker by jumping before the setter contacts the ball. In addition, the contact time of the set should be short.

The setter attack is also a first tempo attack. When the setter is in the front row, they can either tip or spike the ball from above the height of the net. For the setter to successfully tip it must appear to the block and defence as if they will set. The key points for the tip are the hand position and timing of the attack. Both hands should remain high in the setting position for as long as possible before contact. Once the right hand is dropped the action of the left hand should be fast. It can be an advantage for the setter to be left handed, but it is not essential. In general, this form of attack is underused.
The ‘offence’ is essentially the relationship between the first and SECOND TEMPO. If the first tempo is sufficiently fast, then the blocker will not have time to block both the first and second tempo and must therefore choose between the two. The setter can then control the block by how and when they set each tempo. Second tempo attacks are either combination (close to the quick attack) or outside attacks.

When setting a combination ball, the setter has two possibilities. They can:

- try to set with exactly the same hand and body position so that the block cannot read the set early
- use deception to encourage the block to jump at the wrong time. The most common deceptions are to start with the hands in the normal position then lower them at the last moment, thus delaying contact slightly, or to hold the ball slightly longer than normal. These small timing changes often cause the block to jump with the first tempo attacker, leaving the combination attack with a weakened block.

When setting a second tempo ball to the outsides, the setter has the same possibilities. In this case the deception can be created between the two balls that are closest together. For example, ‘b quick’ and second tempo ball to position IV (the black), or ‘c quick’ and second tempo ball to position II (the ‘red’).

NOTE: The relationships between the various plays are discussed in more detail in ‘OFFENSIVE SYSTEMS’.
ADVANCED TECHNIQUES

Emergency Techniques

As outlined in the Setting Priorities, the setter’s first priority is accuracy. This is so regardless of the quality of the reception. This means the setter must also be proficient with a variety of emergency techniques. Emergency techniques include:

- one handed set for reception close to the net (i.e. if the reception is too high and the setter is only able to reach the ball with one hand)
  - the hand movement is similar as for a normal set with a greater movement of the wrist similar to shooting in basketball. The setter must pay particular care that contact is short to prevent making a ball handling error.

- Collapse set for low or wide receptions
  - Use the legs to get into a low position under the ball
  - hold the core firm to create balance and to provide a platform against which the arms can push
  - use the normal setting technique, including the legs where possible
  - fall to the ground in the most controlled way possible (normally onto the left knee and hip) after ball contact has been completed.

- Dig set for very low or wide receptions when setting from above the head is not possible,
  - use the legs to get into a low position under the ball
  - hold the core firm to create balance
  - maintain the integrity of the platform to optimise control
Seeing the block is a vital part of the decision making process for the setter and therefore a major determinant in optimising set selection. In order to make good decisions, the setter must collect information about the opposition block before and during the rally.

Before the rally, the setter checks the positions of the opposing blockers to see where the weaker blockers may be. This information can be used to choose which first and second tempo balls to play.

During the rally the setter can either use peripheral vision as they are moving to the ball or turn and look quickly just as they are reaching the contact position. If movement to the ball is efficient and balanced, then this is a relatively small movement and the setter should have time to take in some information about where the block is positioned.

Some setters do not see the block or look for it. Setters should always be analysing and noting the reactions of the blockers as there are many situations where setters will not be able to see the block even if they are looking for it. For example, if the setter moves towards position IV they know that the middle blocker will tend to follow them and so a set to position II will put the middle blocker out of position. By always noting and reviewing the actions of the blockers, the setter will also learn some simple deception methods.

**TACTICAL REVIEW**

**ROLE OF THE SETTER**

The setter is the centre of the team. This is true in the technical and tactical sense as the setter is the only player who contacts the ball in each rally as well as linking the backrow with the front row and the receivers with the spikers. In many ways the setter is also the link between the coach and the team and is often considered to be a coach on the court. In the technical and tactical areas, the setter must have:
• excellent technical abilities
  o it can also be helpful, but not necessary, if the setter is a good blocker, server and defender.
• very good physical abilities, especially speed and agility
• excellent ability to carry out a match plan
• excellent tactical awareness and understanding of the game
• excellent decision making skills
The setter is also the centre of the team in a non-technical sense. They are in the unique position that each player must make eye contact with them between each rally. Therefore their personal qualities are also important. They must;
• possess excellent communication skills
• possess good leadership qualities, be supportive yet demanding
• be calm under pressure
• display an air of confidence within the team, particularly through body language
• be able to convey the coach’s instructions to the team through words and actions.
As can be imagined from the above list, communication skills are of particular importance in the role of the setter. Communication during the match must be instantaneous and clear, using all communication methods, including verbal, signals and eye contact.
It is not necessary that the setter possess all of these qualities in the beginning as many of these are learned qualities or can be significantly improved by training. Some setters will be obvious through their technical abilities and must improve their personal qualities. Others start out as leaders who must improve in technical areas. There are no recipes, but obviously more of the qualities a potential setter begins with the better.

SET SELECTION
Set selection is one of the most important skills for the setter to master.

Prior Knowledge. The setter must have good prior knowledge of their team. Among other things they should have a good understanding of:
• the personalities of the spikers and how they respond to certain situations (i.e. do they like a lot of the ball or a little or only in certain situations).
  o Most spikers gain confidence from receiving balls in good situations but some spikers do not need this and are equally comfortable with only a few balls. This is important information to know.
• the individual preferences of the spikers (i.e. what is the spiker’s favourite spike)
  o this can be useful to know if a spiker is low on confidence
• the individual strengths and weaknesses of each spiker.

During the Match. One example of a process that setters can follow during a match is;
• Keep all spikers involved in the match, giving more or less even distribution, taking into account prior knowledge
• Set the ‘hot’ spiker 2 or 3 balls to everyone else’s 1
• If the situation requires, set the best hitter or the hottest hitter whatever defence is presented and no matter how obvious it is

• Continually encourage all spikers

Tactics. The setter must have a tactical plan before the game, including such information as how to use the strengths of the team’s spikers against the weaknesses of the opposition defence. For example, if there is a weaker blocker, one possibility is to have the quick attacker run away from this direction. If the opponent tries to cover the weaker blocker, then the quick attacker will be open. If not the weaker blocker could be isolated.

General. The setter must also be aware of general situations that occur in the game. For example;

• Receiver is out of position to spike a fast set after a difficult reception or in transition. In this case the setter must set at the appropriate speed or to another attacker.

• Quick attacker is not on time. This will occur often in the learning stages and in this case, the setter should not force the set to the spiker who is not in a position to attack effectively.

• Quick attacker has their approach compromised and cannot attack effectively. This could happen if the middle blocker must receive or in transition attack. In this case the setter should not force the set to the spiker who is not in a position to attack effectively.

Between Rallies each setter should have a routine that allows them to very quickly;

• Review the previous rally - considering any variations from the given match plan, the actual setup of the block and the attack of their team,

• Note the rotation of their team and the blocking line-up of the opponent

• Consider the match plan and / or specific instructions from the coach

• Decide and communicate to the spikers the individual components of the offence, with preferences for the actual set and contingencies for poor reception.

After the Match. Statistics and video review can be very useful tools in developing a setter’s set selection skills. Statistics can show which spikers have been set and how successful they have been. The setter should be quizzed about how the statistics reflect their own feeling during the match. Video analysis can also allow the coach and setter to review and correct the decision making process.

The setter must always remember that they are playing first WITH the team. Only then, should they consider that they are playing AGAINST the opponent.
COACHING SETTING

TEACHING POINTS

A TEACHING PROGRESSION FOR BEGINNERS

- exercises for contact
  - weighted volleyballs (less than 1kg) are very effective for developing the correct contact.

- setting to self, using correct footwork, across the court
  - the timing of the footwork is important. The player should always set in a stationary position (i.e. between steps)
  - forwards, backwards, sideways

- repetitions to a target from setting position (coach toss)
  - with penetration from relevant starting positions
  - use a target in the spiker’s position.
    - This can be a stationary target (such as a ring or net) or a player / coach standing on a box. The player / coach can be a good target as then the setter has feedback from a hand.

- repetitions to a target from bad reception positions (coach toss)
  - repetitions of specific situations, e.g. moving backwards, forwards, off the net etc.
  - then random
  - using a target in the spiker’s position
• repetitions to a target from reception

TRAINING IDEAS

TECHNICAL

Setters Rules (rules that apply during practice in all situations)

o The SETTER sets every second ball (improves understanding of different roles)

o The setter SETS every second ball (the setter learns to move fast into position)

o The setter JUMPSETS every second ball (the setter must move fast, and the receivers learn the optimal trajectory for the pass)

Using a Stopwatch to time the speed of the set to the outsides can be a very useful training tool for learning the consistency and timing of the different sets. The coach should determine the exact timing for each of the sets for the spikers in the team.

Repetitions

As the setter is such a central figure in the game, and accuracy is such an important factor, setters should be given as many opportunities to practice as possible. Simple exercises, such as described above, are always valuable for the setter and can be done for at least a few minutes at virtually every practice.

GAME PLAY

During game play at practice, setters should be:

• given opportunities to develop observational and decision making skills. The coach should provide feedback on specific decisions.

• required to practice using the game plan / tactics they will be required to use during the game.

NON-SETTERS

Non-setters must also be proficient at setting when the occasion requires and must be given the opportunity to systematically practice setting. Several drills that practice
setting are very useful to use in the warmup phase of practice as they are low impact and controlled.

**Triangles**

- Player at the net, player in the backrow, player in position IV (or II), one or more players ready to enter the court
- Pass or set the ball to the net, player at net sets high ball to position IV (or II).
- Player setting to the net must move before contact
- Drill is continuous, players may rotate after every contact or remain in place depending on the number of players available and the required intensity of the drill.
- Variations can have the passer and / or setter required to move before playing the ball, but every set MUST be good.

**Corners**

- Two or more players in position I (or V) and two or more players in IV (or II).
- Set and change positions, or simply alternate depending on the number of players available and the required intensity of the drill.
- Player to the net must move before contact.
- Every set to the net MUST be good.
- This is a good variation to the triangle exercise, but is not a volleyball specific action due to the flight path of the ball coming from the net.
### TROUBLESHOOTING GUIDE

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<thead>
<tr>
<th>PROBLEM</th>
<th>CAUSE</th>
<th>SOLUTION</th>
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</thead>
<tbody>
<tr>
<td>Moving off the net before the reception</td>
<td>Normally this is a reflexive movement when the reception is from deep in the court</td>
<td>Focus on watching the reception and moving only after deciding where the ball must be played from. WAIT</td>
</tr>
<tr>
<td>‘Flintstone running’ (i.e. taking several steps in place before beginning to move)</td>
<td>Inefficient movement skills</td>
<td>Practice footwork in controlled situations</td>
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<td></td>
<td>Not being balanced at the net</td>
<td>Practice footwork without the ball</td>
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<tr>
<td>Setter and middle blocker have timing difficulties</td>
<td>Middle blocker is late</td>
<td>Focus on jumping before the setter contacts the ball</td>
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<tr>
<td></td>
<td>Middle blocker is too early</td>
<td>Focus on the trajectory of the reception and jumping at the correct moment</td>
</tr>
<tr>
<td></td>
<td>Middle blocker does not watch trajectory of the reception</td>
<td>Focus on the trajectory of the reception</td>
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<tr>
<td></td>
<td>Contact point of the setter is too low</td>
<td>Focus on a high contact point and jump setting every time</td>
</tr>
<tr>
<td></td>
<td>Release of the set is too slow</td>
<td>Encourage a shorter ball contact</td>
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<tr>
<td>Back sets have no control and tend to go too wide</td>
<td>Setter does not follow through in the direction of the target</td>
<td>Focus on full follow through to the target</td>
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<tr>
<td></td>
<td>Setter does not use thumbs</td>
<td>Focus on ball being in the hands and completing the movement slowly</td>
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<tr>
<td></td>
<td>Setter moves too far under the ball and ball is behind the head</td>
<td>Focus on ball contact above the forehead</td>
</tr>
<tr>
<td>Accuracy is poor when the reception is good</td>
<td>Contact is uneven, e.g. one hand pushes more than the other</td>
<td>Focus on even contact, finishing with hands open to the target</td>
</tr>
<tr>
<td></td>
<td>Contact is inconsistent, i.e. sometimes fast, sometimes slow etc.</td>
<td>Focus on consistent EVERY time</td>
</tr>
<tr>
<td>Accuracy is poor when the reception is away from the net</td>
<td>Body orientation is poor at contact</td>
<td>Focus on the position of the feet and shoulders at contact</td>
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<tr>
<td>The setter cannot set long distances</td>
<td>The setter jumps backwards as he extends</td>
<td>Ensure the feet remain on the floor through the whole movement</td>
</tr>
<tr>
<td>Issue</td>
<td>Solution</td>
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<tr>
<td>----------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>The ball release is too slow</td>
<td>The longer the distance to be set, the shorter the ball contact</td>
<td></td>
</tr>
<tr>
<td>Setter touches the net when the reception is close to the net</td>
<td>Focus on making position at the net before the reception</td>
<td></td>
</tr>
<tr>
<td>Setter does not make position before reception</td>
<td>Focus on making stationary position before the reception</td>
<td></td>
</tr>
<tr>
<td>Setter does not move with control when moving towards the net</td>
<td>Use the right foot as a braking step when moving towards the net</td>
<td></td>
</tr>
<tr>
<td>Setter steps away from the net before the reception and must jump towards the net</td>
<td>WAIT to see the reception before moving</td>
<td></td>
</tr>
<tr>
<td>Sets to position IV are away from the net, especially if reception is not perfect</td>
<td>Focus on rotating left shoulder towards to target</td>
<td></td>
</tr>
<tr>
<td>Setter does not square their shoulders towards position IV</td>
<td>Ensure all players setting high balls to the outside positions</td>
<td></td>
</tr>
<tr>
<td>Non setter does not set accurately to position when required</td>
<td>Focus on readiness and movement after block / defence to set</td>
<td></td>
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<tr>
<td>Player does not have enough practice setting</td>
<td></td>
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<tr>
<td>Player is not ready to set</td>
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SETTING IN BEACH VOLLEYBALL

SETTING PRIORITIES

- ACCURACY
- CONSISTENCY
- (DECEPTION)

In beach volleyball, the offence is limited by the simple fact that there is only one spiker available to attack. Therefore, the setting priorities in beach volleyball are clearly accuracy and consistency.

Very simply, the setter must set accurately to the spiker in a way that allows the spiker to attack with a variety of options, including spiking with power or playing a shot. The timing and speed of the set must be in the natural rhythm of the spiker. The setter must make adjustments in the position and timing of the set as the spiker is not always readily able to make their own adjustments due to the conditions.

The set must not only be accurate; it must also be consistent. The spiker must be able to make their approach with confidence EVERY time particularly as the spiker cannot readily make adjustments with their approach due to the nature of the sand. With this confidence the spiker is able to approach each attack with the mindset of winning the point.

If the team’s offence utilises multiple tempos and positions along the net (see the chapter OFFENSIVE SYSTEMS) there may be an element of deception required at times. This is an advanced skill.

TECHNICAL REVIEW

MOVEMENT

Due to the relative difficulties of moving due to the surface in of the sand (particularly in changing direction) and the effects of environmental conditions the timing of the setter’s movement is very important. The setter should reach the final setting position only just before the ball arrives.

- Prepare to move as soon as the player sees the serve directed to their partner,
- Start to move towards the expected reception target as the receiver contacts the ball being careful not to fully commit to a direction too soon.
- When moving to the setting position use long steps and then small shuffle steps into the final position.
  - The more extreme the conditions, the more small steps there may be and the later the setter should make final position.
- Make position under the ball with the foot closest to the net forward.
  - Avoid having the feet parallel.
- As much as possible be facing the direction of the set,
  - This is important for ensuring accuracy of the set as well as reducing the number of ball handling errors.
- Keep the ball in front while moving. This aids in the performance of the set and maintains the option of hitting over on 2.
SEE THE SPIKER

The setter must always remember that they are setting FOR the spiker. In most situations the setter in beach volleyball can watch the timing, direction and position of the spiker’s approach. On this basis, the setter can make final adjustments to the position and timing of the set.

PLAYING THE BALL

There is a significant difference in the ball handling interpretations between indoor and beach volleyball. In beach volleyball the setter is required to contact and release the ball with both hands simultaneously. Often spin on the ball is used as an indicator of a ball handling error, although this does not actually signify that an error has been committed. To ensure the required ‘clean’ contact, the ball is in the setter’s hands for longer than is typical in indoor volleyball. The important rule interpretation for this is that the ball must not come to rest at any point.

- Legs are flexed as the setter arrives in position to set
- Contact the ball above and slightly in front of the head
  - High contact aids in deception if the team’s offensive system uses a variety of attack positions and tempos.
- Fingers and wrists should be slightly relaxed in the shape of the ball
- The ball contacts both hands simultaneously
- The hands, wrists and arms take the ball in slightly
- The movement is initiated by the legs followed by a smooth movement of the arms, then wrists, then hands, the ball is released high (i.e. when the arms are almost extended)
- Follow through with full elbow extension
Due to the ball handling rules and the unpredictable environmental conditions, bump setting is an important skill to master in beach volleyball. As well as an emergency technique, the bump set is used in situations when:

- there may be danger of a ball handling fault,
- a player lacks confidence in their hand setting technique,
- the ball must be set a relatively long distance,
- conditions are extreme, e.g. wind and / or rain.

Movement is essentially the same as for hand setting. In the contact phase:

- face the target for good ball control (i.e. body behind the ball)
- stop before contact
- hold the core firm to create balance
- use the legs to work through the ball while keeping the arms still
- elbows follow through to target
- maintain the integrity of the platform to optimise control (i.e. straight arms before and after contact).
In windy conditions, a bump set played with topspin is easier to attack. Topspin on the ball reduces the effect of the wind and therefore makes the flight path more predictable for the spiker. Topspin is applied to the ball by the action of the platform during the contact phase. It is sometimes described as ‘scooping’ the ball. The scooping movement is an arm movement rather than a leg movement.

AFTER THE SET

The role of the setter in beach volleyball also includes providing information to the spiker about the position of the block and defence. After the ball is released the setter should direct their attention to the block and defence of the opponent. The call will be short and loud. It must be late enough that the defence is close to its final position, but not too late so that the spiker cannot make any adjustments. It is normal that the call will identify the area of the court that is free from the defence, for example ‘line’ or ‘cross’.

As the setter is watching the opponent’s court they must also move towards the attacking position to cover the block. This is a vital part of the setter’s role.
ADVANCED TECHNIQUES

SETTING THE FROM DIFFICULT SITUATIONS

The players will often be required to make good sets from difficult situations. These could be extreme conditions or non-standard situations during rallies. The specific techniques are largely the same as described above. Some further points of emphasis:

- ensure early preparation of the hands (i.e. hands high)
- stop before contact and extend the elbows through to the target point (to improve accuracy and to avoid ball handling faults if hand setting)
- move the body weight through the ball towards the target

When the reception is off the net, the set is typically pushed towards the antenna to create extra width for the attack.

BACK SETTING

Back setting is used in two main situations:

- as an emergency technique when the ball is not in the optimal position. For example, in transition there will be situations where the setter must move away from the net and must back set to the spiker. The ability to back set will optimise the ability to attack from a range of sub optimal game situations.
- as an advanced skill when a team’s offensive system aims to use a greater degree of variation. The ability to back set allows the spiker to run plays that are behind the setter. This optimises the chances of spiking against a poorly formed block or poorly positioned defence.

The key technical points for back setting are:

- follow the flight of the ball while moving
- ensure shoulders are square to the desired target
- watch the ball closely before and after contact
  - this encourages the hips and shoulders to travel through the flightpath of the ball
- follow through to full elbow extension
- complete the follow through in the intended direction of the set
UNDERSTANDING ENVIRONMENTAL CONDITIONS

The players must be able to recognise environmental conditions that can cause problems in the execution of the skill of setting and know how to make the relevant adjustments. Adverse conditions can affect the ability of the setter to set within the rules of Beach Volleyball (i.e. without making a ball handling error) and to set a ball that can be effectively attacked by a spiker.

High winds can make it more difficult to make correct position to play the ball. As mentioned above, smaller steps can be taken when moving to the ball to allow for better and later adjustment. The setter may also slightly lengthen the ball contact to increase the chances of a simultaneous contact. In extreme cases, the players must recognise the high danger of ball handling mistakes and choose to bump set more regularly or even exclusively. The same applies to rainy conditions, or when the ball may be wet for some other reason.

From an attacking point of view, players may set the ball with topspin to make it easier for the spiker (see above ‘Bump Setting’) or may choose to play shorter, faster sets that can minimise the effects of wind. ‘Playing Small’ (see ‘OFFENSIVE SYSTEMS’) is a specific tactical solution to the problem of playing in windy conditions.
COACHING SETTING IN BEACH VOLLEYBALL

TRAINING IDEAS

SETTING ZONES

The court is split into four zones and further zones can also be defined off the court. The coach tosses the ball into one the zones, the player must then set to the optimal attacking position.

- Emphasise movement to and from the net.
- Emphasise the optimal attacking position for the set from each of the zones. This gives clarity to the setter on what is required in each situation. For example, if the reception is perfect the set can be fast to a variety of positions along the net. However, if the reception is off the net (i.e. in the ‘right back’ or ‘left back’ zones) the set should be higher and towards the antenna.
- Emphasise specific technique in each situation.
- The same exercise can be done with the setter first required to block, then transition to set.

REPETITIONS

In repetition setting drills;

- have the setter set the first ball to himself, and the second to the optimal attacking position. Emphasise movement and technique on both sets. This drill provides extra contacts, which may be desirable especially if there is a large group practicing on a single court.
- have the setter catch the set ball, if the movement is good, the set is to the correct position and the setter follows through in the correct manner, it should be easy to catch the set ball. This can also emphasise block cover.

MULTIPLE CONTACTS

Practice setting in a game like way by including either the previous or the next contact in the drill. That is;

- practice setting from live reception (catching the set is very effective in this drill), or
- practice setting to live spiker.
- Practice setting in different specific reception situations.
GAMEPLAY

Particularly if there are an odd number of players at practice, have one player set for both sides of the net in any kind of ball control or gameplay drill. This emphasises movement to the ball and is a good, specific conditioning exercise.

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>CAUSE</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy is poor when the reception is good</td>
<td>Contact is uneven</td>
<td>Check that contact is even with both hands</td>
</tr>
<tr>
<td></td>
<td>Body orientation is poor at contact</td>
<td>Focus on keeping the ball in front</td>
</tr>
<tr>
<td></td>
<td>Follow through is not in the direction of the required attacking point</td>
<td>Focus on full follow through</td>
</tr>
<tr>
<td>Accuracy is poor when the reception is away from the net</td>
<td>Body orientation is poor at contact</td>
<td>Focus on body orientation at contact</td>
</tr>
<tr>
<td>Setter sets out of tempo for the spiker</td>
<td>Setter is not watching the spiker</td>
<td>Watch the approach and timing of the spiker while moving to the setting position</td>
</tr>
<tr>
<td></td>
<td>Setter takes the ball too early (i.e. slaps at it)</td>
<td>Wait for the ball</td>
</tr>
<tr>
<td>Set is inaccurate, either off or too tight to the net</td>
<td>Setter not square to the target at contact</td>
<td>Focus on body orientation at contact</td>
</tr>
<tr>
<td></td>
<td>Contact is not good</td>
<td>Focus on early hand preparation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Focus on making simultaneous ball contact with both hands</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Focus on follow through to the target</td>
</tr>
<tr>
<td>Ball handling error called, either carried ball or double contact</td>
<td>Setter keeps ball in the hands too long</td>
<td>Focus on faster release</td>
</tr>
<tr>
<td></td>
<td>Setter does not contact the ball with both hands simultaneously</td>
<td>Focus on simultaneous contact and follow through</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Go back to simple technical drills to practice the appropriate technique</td>
</tr>
<tr>
<td></td>
<td>Setter not in good position at contact</td>
<td>Focus on being square to the target</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Focus on taking short steps before arriving at</td>
</tr>
<tr>
<td>Issue</td>
<td>Solution</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>Player chooses to hand set in windy conditions</td>
<td>When in doubt bump set</td>
<td></td>
</tr>
<tr>
<td>Bump set is inaccurate</td>
<td>Platform is poor</td>
<td>Focus on integrity of the platform</td>
</tr>
<tr>
<td>Platform does not follow through to the target</td>
<td>Ensure platform is open to and moves to the target</td>
<td></td>
</tr>
<tr>
<td>Setter is not in a good position at contact</td>
<td>Focus on facing the target at contact</td>
<td></td>
</tr>
<tr>
<td>Bump set is affected by the wind</td>
<td>Ball is played with ‘float’</td>
<td>Focus on applying topspin to the ball by using the ‘scooping’ technique</td>
</tr>
<tr>
<td>Ball is played too high</td>
<td>Set the ball with a lower trajectory</td>
<td></td>
</tr>
</tbody>
</table>
SERVICE RECEPTION

Service reception is one of the most difficult skills in volleyball to master as it is such an unusual movement. Volleyball is the only sport that requires of its participants’ eye - forearm coordination. Service reception is literally the platform upon which the offence is built. Good service reception puts the setter in the best possible position to create the offence of the team. Without good reception the pressure on the setter and spikers to beat the block and defence of the opponent increases greatly.

Service reception is often referred to as passing, the service reception as the pass and the receiver as the passer.

SERVICE RECEPTION IN VOLLEYBALL

RECEPTION PRIORITIES

- PLATFORM
- MOVEMENT TO THE BALL
- BODY POSITION
- ACCURACY AND TRAJECTORY

The quality of the contact with the platform is the most important element of the technique. The platform must be strong and maintain its integrity throughout the contact phase (i.e. ‘no bending the elbows’ and keep hands locked together at the wrists).

Good service reception also requires the receiver to optimise the efficiency of their movement to the ball. The important elements are; a stable starting position, effective tracking of the flight path of the ball and excellent footwork.

Good movement enables the body position at contact to optimise the chances of an excellent reception. The body must be stable, and strong through the core with as little extraneous movement as possible.

The objective of the reception is to create good conditions for the setter. Therefore, the receiver must consider the accuracy and trajectory of the pass. The ball must be played accurately to the preferred target and with a trajectory that allows the setter to jump set. Jump setting allows the setter to optimise the speed and variability of the offence.

TECHNICAL REVIEW

THE PLATFORM

Due to the simple fact that the platform is the body part that makes actual contact with the ball, it is the single most important component of service reception. Forming a good platform and being able to control that platform from a variety of body positions is the mark of good receiver.

- The forearms must be open, forming a ‘flat’ area.
- The most common hand position is formed by placing one open hand on top of the other and closing them so that the wrists are together and the thumbs are together and pointing forwards.

NOTE: The optimal hand position may vary from player to player due to anatomical differences. The coach must always remember that the most important part of the skill is not the hand position but the quality of the platform. Experiment with different hand positions to optimise the platform.

- Push the wrists down to help keep the elbows extended, i.e. to ‘lock’ the elbows.
‘Shrugging’ at the shoulders allows the receiver to bring their arms closer together and so improve their platform.

Contact is on the forearm above the wrists.

The platform should NEVER be compromised. Bending the elbows during the action of playing the ball compromises the platform surface and decreases the chances of controlling the ball.

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**BASIC POSTURE AND POSITION**

- The ready position is a stable and low position with the head as still as possible.
- The feet are flat on the ground, with the weight on the front of the feet.
- Receivers face the server, that is the body is square to the server.
- The arms are relaxed, in front of the body and low to allow them to move through the ball to the target. For the jump serve, the arms can be a little further in front of the body to ensure early contact. Beginning with the arms already open (i.e. with the forearms facing out) can reduce the time required to form the platform.
- Starting position is shallower for float serves than for jump serves because of the difference in power of the serve, and because of the possibility of playing the ball overhead.
- Taller players and passer hitters tend to start shallower in the court.

**NOTE:** Always pay attention to rotational rules.
MOVEMENT

- The receiver must track (i.e. follow closely) the ball from the server’s hand, including cues that can be picked up before the actual contact.
- Movement is most efficient when the distance travelled is minimised. Therefore, the receiver must ‘wait’ to see exactly where the ball will go before commencing movement.
- Shuffle steps should be used when moving laterally.
- Always step to the ball when possible, even on jump serves when time is limited.
- Movement should be fast and aim to arrive in the contact position BEFORE the ball.
- The head should stay in the same plane throughout the movement. If the head remains still the receiver can track the ball more efficiently (i.e. START LOW, STAY LOW).
- Prepare the platform during movement. Move the arms behind the ball and rotate the shoulders towards the target.
PLAYING THE BALL

The arms and hands are the body parts that best respond to unusual situations. Therefore, the arms and hands (through the platform) should provide the force and direction for the reception. Using the legs and / or body to provide force and direction unnecessarily complicates the movement and makes reception more difficult.

- Whenever possible the ball should be played from a stationary position. However, the ball must ALWAYS be played from a stable position (i.e. with the legs far enough apart to allow the body to be balanced).
- The ball can be played from either side of the body or from the midline, but it is preferable to play the ball from the either the midline or the left side of the side of the body.
- Playing the ball is ACTIVE with the arms (i.e. the platform must move ‘through’ the ball).
- The receiver must never forget the objective is for the ball to be played to the advantage of their team in general and the setter in particular. Therefore, the ball must be high enough that the setter has time to make position and to jump set. In general, the more difficult the serve, the higher the reception should be.

IMPORTANT NOTE: Service reception is an extremely difficult skill and one that can be very complex. It is important for the coach to simplify the keys as much as possible. For example, the key ‘face the platform to the target’ is the single most important key. Virtually every other component of service reception can follow from that simple instruction.
ADVANCED TECHNIQUES

LATERAL RECEPTION

Lateral reception refers to a reception to either side of the receiver. This particular variation of the technique is important when the receiver is required to receive a deep serve or for passer hitters who must receive then spike.

For the deep serve the receiver may not have time to move completely behind the ball and by using this technique can gain time. The passer hitter must be mindful of the fact that after the reception they must also be available to attack so should not receive from a very deep position. If the ball must be received deep in the court, the spike approach can be compromised and therefore also the ability to participate in the attack.

- The head remains still as the receiver shuffles backwards to a point at which contact will be made.
- During the movement, the receiver ‘opens up’ (steps backwards) with their right foot if the ball is to their right (and vice versa).
- Weight moves onto the back foot as the receiver ‘opens up’.
- Shoulders rotate with the ‘opening up’ step so that they are almost at 90° to the net, i.e. side on to the net.
- Platform is open to the ball and in a position that it will move through the ball towards the optimal reception target.
  - The key cue is that the back shoulder is high and the front shoulder is low.
- Contact is always in front of the body.
- Playing the ball is active as the weight transfers from the back to the front foot and the arms follow through in the direction of the target.
OVERHEAD RECEPTION

In many situations the overhead reception has taken the place of the lateral reception for deep float serves and for passer hitters. Receivers who are proficient at overhead reception are able to stand closer to the net when waiting to receive. This improves the attacking possibilities for passer hitters and increases the difficulty for the float server to attack certain areas of the court.

- Ready position and movement are the same as for underarm passing.
- Receivers decide as early as possible to play the ball overhead or with the arms.
- Maintain a low position so the ball can be contacted above the head.
- Ball is contacted as close to the midline as possible.
- Aim to ‘catch’ the ball to optimise control. (NOTE: A double contact is allowed when receiving overhead but a carried, or held, ball is NOT. The word ‘catch’ is a teaching tool rather than a literal description.)
- Follow through up and to the target.

NOTE: Jump serves and fast jump float serves require the use of the underarm passing technique, so players should learn traditional underarm reception first, then overhead reception as an advanced skill, NOT vice versa.

IMPORTANT SKILLS

JUMP SERVE RECEPTION

In receiving a jump serve the speed of the ball is normally more than enough to provide the impulse to allow the ball to reach the setter. Therefore, controlling the direction of the pass and its speed is important. The position of the platform must be in front of the body at contact and facing in the direction of the target.

The speed of the serve is controlled in one of two ways.

- The first method is for the receiver to absorb the speed of the ball. The ball must be contacted well in front of the body with the body in a balanced position. As the ball contacts the forearms, the arms ‘give’, resulting in a long contact while maintaining the appropriate angle to the target. At no stage during the contact phase should the quality of the platform be compromised.
- Alternatively, by directing the ball high, the receiver does not need to absorb much of the speed of the ball. This method will result in an active contact on even the hardest jump serves. However, in many gyms there is the danger that a very high pass can
touch the roof. The very high pass can also be difficult for the setter to play. The coach and receiver must remain mindful of these facts.

As a jump serve travels faster it is normal to use three or even four players for reception. Therefore, the area that each player has to cover is less and each player’s movement is restricted to one or perhaps two steps. It is still however vital to be able to attain a balanced position and in a wider range of body positions. Many serves will be received in ‘unorthodox’ body positions (e.g. with one knee on the ground or sprawling). With the sprawl the receiver will first lower one knee to the floor and then the wrists (similar to a defensive sprawl). Contact should still be in front of the body and with an excellent platform to optimise control. Use of the knee for balance is vital in this situation. A player who avoids using their knee and falls backwards instead will have great difficulty controlling the platform towards the target.

The platform should always be directed to the target.

**RECEIVING THEN SPIKING**

In most instances, the receivers are major attackers and so reception should not be considered in isolation, but rather as part of the spike. The receiver must move seamlessly between the phases of reception and attack. The footwork is described in detail in the chapter on ‘SPIKING’. Practice drills for reception should also address the actions before and after the reception.

**NOTE:** Many receivers will try to begin their approach even as they are completing the reception, more often than not, at the expense of the quality of the reception. However, it must always be remembered that the receiver’s FIRST priority is reception. Only after the reception is completed should the focus of the receiver be turned to attack. One good cue is ‘Receive first, then spike’. If the receiver still does not have time to approach correctly, then this must be addressed through changing the trajectory of the reception, or by improving the footwork from reception to attack.
 CURRENT VOLLEYBALL RULES STATE THAT THE SERVE THAT TOUCHES THE TAPE AND GOES OVER THE NET IS STILL IN PLAY. THIS AFFECTS THE WAY THE TEAM MUST RECEIVE. ALL PLAYERS, INCLUDING THE SETTER, OPPOSITE AND MIDDLE BLOCKER, MUST BE READY TO RECEIVE IN ALL SITUATIONS. EACH PLAYER MUST:

- **Watch the serve,**
- **If the serve is going close to the top of the net, keep watching the serve and prepare to play the ball if necessary,**
- **If the serve touches the top of the net, move to position and play the ball to the reception target.**

The majority of serves that touch the net can be played. If they are not, it is because of lack of attention on the part of the receiving team NOT ‘bad luck’.

**TACTICAL REVIEW**

**TEAM RECEPTION**

Most teams use some form of specialised system with two or three players designated as receivers. The various common reception formations are shown in detail in the chapter ‘OFFENSIVE SYSTEMS’.

**ROLE OF THE LIBERO**

The major role of the libero is in optimising team reception. This is achieved through their own skill and as ‘captain’ of the reception. Ideally, the libero should cover the greatest area of the court to optimise the attacking opportunities of the other receivers. They should have good observational skills to identify serving tendencies and be empowered to make adjustments on the basis of their observations.

In general, proficiency in service reception is a more important skill for the libero than defensive skill.

**ROLE OF THE PASSER HITTER**

The passer hitters are, along with the libero, responsible for providing the reception upon which the offence of the team is based. Normally the libero will ‘captain’ the reception, but on occasions an experienced passer hitter will fulfil that role. It is common that among the passer hitters there are split roles. One has greater responsibility for reception and one has greater responsibility for attack, as outlined in the chapter ‘SPIKING’. It may well be that roles change depending on the group of passer hitters. For example, one passer hitter may be a primary ‘passer’ when playing with one player and a primary ‘spiker’ when playing with another. Receivers should practice in all the combinations they may be required to play as communication is vital in all directions and with all teammates.

**ROLE OF THE MIDDLE BLOCKER**

The middle blocker does not have a major role in service reception, but they must be ready to receive in several situations. Normally the middle blocker will be responsible for some short serves in their area, especially short serves deliberately targeting a passer hitter who is weak receiving underarm or where the attack of the passer hitter may be compromised. Secondly, they are responsible for serves that touch the net and drop short inside the 3m area.

**ROLE OF THE SETTER**

The setter must ensure that they do not interfere with the main receivers as they move to the net and must be ready to receive serves that hit the net and drop short out of reach of the other players.
COMMUNICATION RULES

Each coach should be clear about the communication rules between the receivers, particularly for the serves in the seam between the receivers. Some examples of communication rules are:

- Cross court player takes the ball in the seams
- All receivers have priority to their right
- All receivers have priority to their left
- Specified receiver (e.g. libero or best receiver has priority for all seams)
- Backrow receiver has priority

The most important thing is that the players know and understand the role of each player within the system. In some cases, there may be a mixture of rules implemented depending on each player’s specific strengths and weaknesses. It is important that players have adequate opportunities to practice in the situations they will be required to play.

When calling for the ball, the first call should always be ‘mine’. Only after deciding which player will pass the ball does attention turn to the ‘in / out’ decision.
COACHING SERVICE RECEPTION

TEACHING POINTS

A TEACHING PROGRESSION FOR BEGINNERS

In the initial stages of learning, the ability of the player to create and replicate the platform under different conditions must be the focus of training and feedback from the coach.

- Drills to focus on the platform
  - Digging to self
  - Digging against a wall
  - Digging in pairs
  - Drills in pairs
    - E.g. variations of two-person pepper such as dig to self, set to partner
- Introduce movement while playing the ball from;
  - The same side of the net
  - Over the net
  - From serve

TRAINING IDEAS

TECHNICAL TRAINING

Technical drills should remain part of practice at all levels.

- Footwork drills
  - Receive consecutive serves, the first short on the 3m line, the second then long to 7-8m.
    - This drill works best with 2 servers, to decrease the time between serves
    - Include the setter.
    - The receiver may be required to use only an underarm pass.
  - Receive consecutive serves, the first on the sideline, the second on the midline of the court. Complete the drill from both the left and right sides.
    - This drill works best with 2 servers, to decrease the time between serves
    - Include the setter.
    - The receiver may be required to use only an underarm pass.
Half court reception (free serves)
Whole court reception (free serves)
- The for servers in this drill is that the receivers should have just enough time to reach the ball and play with their feet on the ground.

TEAM RECEPTION
Players should practice reception in the positions and in the groups in which they will be required to receive. For example, which players play next to each other in each of the rotational possibilities.

Practice reception with middle blockers on the court to train readiness for short serve and net tape situations and communication between all the receivers. One player (or coach) may be designated to serve short so the middle blocker is guaranteed to receive some serves. If the setter is also on court practicing setting, then he must also be prepared to receive. All players must be ready to receive, not just the designated receivers even in practice.

TEAM RECEPTION DRILLS
- 10 v 3
  - receivers must pass 10 perfect balls before the servers make 3 aces
  - receivers and servers on both sides of the net. One side of the net (servers and receivers) competes against the other. Perfect reception or service ace scores +1, a service error scores -1.
- Repetitions
  - Achieve a nominated number (e.g. 10, 15, 25) of perfect receptions
  - Achieve a nominated reception score; +1 for perfect reception, -1 for reception errors (i.e. ‘plus / minus’ drill)
- Achieve a nominated reception score; +1 for perfect reception but only two attempts for perfect reception, -1 for multiple average receptions, return to 0 for errors;
- Achieve a nominated number of consecutive perfect receptions (disregarding errors). This scoring system can be used when time is short.

### TROUBLESHOOTING GUIDE

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>CAUSE</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Player has trouble making platform</td>
<td>----</td>
<td>Check: shoulder shrug, elbows locked, wrists down, hand position</td>
</tr>
<tr>
<td>Receiver has weight forward but is unbalanced</td>
<td>Heels are off the ground</td>
<td>Weight should be forward, but to be balanced on the whole foot</td>
</tr>
<tr>
<td>Contact is too close to the body</td>
<td>Receiver moves to the ball too early or reacts too late</td>
<td>Track the ball first, THEN move the final position</td>
</tr>
<tr>
<td>Contact is chest high and close to the body</td>
<td>Receiver moves forward as the ball is being served</td>
<td>Track the ball first, THEN moving to the final position</td>
</tr>
<tr>
<td>Receiver can’t control the ball on a lateral reception</td>
<td>Platform control is poor</td>
<td>Focus on keeping outside shoulder high</td>
</tr>
<tr>
<td>Ball flies off the arms away from the target</td>
<td>Platform is not good</td>
<td>Focus on platform and keeping elbows locked</td>
</tr>
<tr>
<td>Reception is good but doesn’t reach the setter</td>
<td>Contact is not active</td>
<td>The receiver must follow through to the target</td>
</tr>
<tr>
<td>Receiver makes good contact but ball is directly poorly</td>
<td>Platform is not active in the direction of the target</td>
<td>Focus on getting the shoulders facing the target</td>
</tr>
<tr>
<td>Player is aiming for the wrong target</td>
<td></td>
<td>Explain target</td>
</tr>
<tr>
<td>Reception with hands goes low or through the hands</td>
<td>Receiver stands up too early</td>
<td>Maintain low position throughout the movement</td>
</tr>
<tr>
<td>Receiver is ‘caught’ trying to set the serve at chest height</td>
<td>Receiver in the wrong starting position (e.g. too deep to receive overhead)</td>
<td>Check starting position.</td>
</tr>
<tr>
<td>Receiver makes poor decision whether to pass the ball underarm or overhead</td>
<td></td>
<td>Focus on tracking the ball and making a good decision</td>
</tr>
<tr>
<td>Receiver swings the arms</td>
<td>Platform is not behind</td>
<td>Focus on early platform</td>
</tr>
<tr>
<td>back during contact</td>
<td>the ball</td>
<td>preparation</td>
</tr>
<tr>
<td>---------------------</td>
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</tr>
<tr>
<td>Receiver jumps or is moving during contact</td>
<td>Receiver is late in getting to position</td>
<td>Focus on tracking the ball</td>
</tr>
<tr>
<td>Jump serve reception goes over the net</td>
<td>Receiver doesn’t control speed of the rebound</td>
<td>Focus on contacting the ball with the arms away from the body</td>
</tr>
<tr>
<td>Receiver has poor control when they must receive and then attack</td>
<td>Receiver is moving to attack before he completes the pass</td>
<td>FIRST pass, THEN spike</td>
</tr>
<tr>
<td>Serve hits the net and drops untouched</td>
<td>‘Non receivers’ are not ready to receive</td>
<td>The first job of ALL players is reception</td>
</tr>
<tr>
<td>Receiver overpasses</td>
<td>Receiver is too upright in their initial posture</td>
<td>Focus on maintaining a low position</td>
</tr>
<tr>
<td></td>
<td>Arms are too close to the body, i.e. facing over the net instead of up</td>
<td>Focus on arms away from the body to direct the ball high</td>
</tr>
</tbody>
</table>
SERVICE RECEPTION IN BEACH VOLLEYBALL

RECEPTION PRIORITIES

- PLATFORM
- MOVEMENT TO THE BALL
- BODY POSITION
- ACCURACY AND TRAJECTORY

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Good service reception also requires the receiver to optimise the efficiency of their movement to the ball. The important elements are; a stable starting position, effective tracking of the flight path of the ball and excellent footwork.

Good movement enables the body position at contact to optimise the chances of an excellent reception. The body must be stable, and strong through the core with as little extraneous movement as possible.

The receiver must always remember that the objective of the reception is to create good conditions for the setter. Therefore, they must consider the accuracy and trajectory of the pass. The ball must be played accurately to the preferred target and with a trajectory that allows the setter to effectively set. The preferred target is different for the respective players and may also vary on the type of serve or type of attack planned.

NOTE: The specific characteristics of beach volleyball are that external factors play a large role in the player’s ability to play the ball. In the case of service reception, the receiver must be proficient in playing the ball in a range of body positions (high, low and lateral) due to the uncertainty in the flight path of the ball and the difficulties in making fine adjustments to the ball. The rules of beach volleyball also dictate that the serve cannot be received with open hands above the head.

TECHNICAL REVIEW

THE PLATFORM

Forming a good platform and being able to control that platform from a variety of body positions is the mark of good receiver.

- The forearms must be open, forming a ‘flat’ area.

- The most common hand position is formed by placing one open hand on top of the other and closing them so that the wrists are together and the thumbs are together and pointing forwards.

  NOTE: The optimal hand position may vary from player to player due to anatomical differences. The coach must always remember that the most important part of the skill is not the hand position but the quality of the platform. Experiment with different hand positions to optimise the platform.

- Push the wrists down to help ‘lock’ the elbows.

- ‘Shrugging’ of the shoulders allows the arms to come closer together and so improves the platform.

- Contact is on the forearm above the wrists.

- The platform should NEVER be compromised. Bending the elbows during the action of playing the ball compromises the platform surface and decreases the chances of controlling the ball.
BASIC POSTURE AND POSITION

- The basic posture is stable and low.
  - Legs slightly wider than shoulder width apart in a comfortable position,
    - If the legs are too far apart the receiver loses mobility.
  - Legs are slightly bent with the outside foot slightly forward
  - The trunk is bent at an angle of about 45 degrees from the hips.
  - The head remains still to enable optimal tracking of the ball.
  - The arms are relaxed in front of the body.

- The starting position is relatively deep in the court, in a position that enables the receiver to play all balls with the arms.
  - Taller players can start in a shorter position in the court due to the advantage they have in receiving laterally.
MOVEMENT

- The receiver must track (i.e. follow closely) the ball from the server’s hand, including cues that can be picked up before the actual contact.
- Movement is most efficient when the distance travelled is minimised. Therefore, move only when it is known where the ball is going.
- Shuffle steps should be used when moving laterally. Shuffle steps should be short and fast.
- Shoulders stay parallel to the sand throughout the movement
  - That is the head should stay in the same plane throughout the movement allowing the receiver to track the ball more efficiently.
- Prepare the platform during movement.

![MOVEMENT: SHUFFLE, HEAD STILL 1](image)

![MOVEMENT: SHUFFLE, HEAD STILL 2](image)

PLAYING THE BALL

- The receivers must be competent in receiving from a variety of body positions.
- The most important cue is to ensure the hips are behind the ball. From this position any ball can be played to a good position.
- Use lateral reception for float serves. Lateral reception optimises the conditions for the movement from reception to attack. For lateral reception:
  - The head remains still.
  - The key cue is that the back shoulder is high and the front shoulder is low.
  - The receiver ‘opens up’ (steps backwards) with their right foot if the ball is to their right (and vice versa).
  - Shoulders rotate with the ‘opening up’ step so that they are almost at 90° to the net, i.e. a side on position.
  - Platform is open to the ball and in a position that it will move through the ball towards the optimal reception target.
  - Weight is on the back foot
  - Contact is in front of the body
  - Body weight moves through the ball towards the target.
- While playing the ball, hold position (i.e. stay over the ball).
- Always keep the platform stable.
- Aim for a long contact time between the arms and the ball. That is, keep that ball on the arms for as long as possible.
• When the receiver moves towards the sidelines, they must ensure that the outside foot is forward to turn the hips and platform towards the target.

• In an emergency situation it may be required to receive the ball overhead. In this situation, the ball can be played with either one or two hands, with the firmly held palm of one or both hands, or with the forearms if the hands are clasped. However, this technique is NOT encouraged. The receivers should always aim to receive the ball with the arms.
• The emphasis must always be on receiving first, THEN moving fast in position to attack.
• After receiving the ball, the receiver shuffles quickly to position for the preferred outside - in approach (see SPIKING).

CONSIDERATIONS
In beach volleyball the players must always give consideration to the current environmental conditions and attempt to reduce their effects. Wind and sun affect a player’s ability to play the ball and depth of sand affects a player’s ability to move efficiently. All must be considered.

‘Playing the ball small’ is a specific tactic that allows teams to reduce the impact of adverse conditions. Using this tactic, the target for the receiver is not a fixed position relative the net, but rather a fixed position relative to the receiver. The receiver plays the ball forwards, relatively low, keeping the ball in their own half of the court (effectively playing the ball almost directly to the net). This will draw the setter towards the desired setting position.

The target area is one or two metres from the net. The optimal height of the pass should be high enough to allow the setter to get to the ball comfortably, but not too high that the wind can greatly affect the flight path.

ADVANCED SKILLS
In good conditions and at advanced levels the reception can be used to create more variation in the offence. By passing towards the middle of the court, the receiving player can create more width. That is, the spiker can attack anywhere from directly in front of
the setter as far as the antenna. This makes it more difficult for the blocker as they must then be prepared for a set in all positions in front of the setting player and there is therefore a greater chance the spiker will have the opportunity to attack against a moving or poorly formed block. From this position crossing plays, where the spiker attacks a set behind the setter, are possible. (see chapter ‘ATTACK SYSTEMS).

Another reception strategy is to play the ball towards the middle of the court while keeping the angle between the receiver and target relatively small. As the receiver plays the ball closer and closer to the sideline, the target will always be TOWARDS the middle, but not TO the middle. The key cues are to keep the ball in the receiver’s half of the court and never to pass the ball towards the antenna regardless of the position of the receiver.
COACHING SERVICE RECEPTION IN BEACH VOLLEYBALL

TRAINING IDEAS

FOOTWORK DRILLS

Place three cones in one half of the court. Player starts behind the middle cone and receives, then moves to the left and receives, then middle, then right. He receives four balls in total. Emphasis is on shuffle steps and having the outside foot forward on each reception.

- Variation 1; serves are either short or deep.
- Variation 2; serves are deep to one side and short to the other. That is the receiver must practice moving diagonally.
- Variation 3; serve to each direction in order (i.e. ‘clock face’).
- Variation 4; serve to any position at random.

RECEIVE AND SPIKE

As reception in beach volleyball never happens in isolation, practice reception as much as possible with the spike. This provides the best possible feedback on the quality of the reception and allows for practice of all the specific movements that are part of reception and spiking.

INDIVIDUAL TRAINING

If there is only one player at practice and receive to spike is not possible;

- practice simple repetitions for technique development,
- practice specific situations, e.g. short or long or right or left.
- Practice the required footwork to move from the reception position to the beginning of the spike approach.

Serving from a raised platform can increase the difficulty and accuracy of the serve by the coach.

GAME PLAY

Make an area in the sand around the desired reception area. This area can be relatively big or small depending on the level of the teams. Play a normal game. If the reception is outside the marked area, then the receiving team cannot win a sideout point. If they win the rally, no point is given to either team. This focuses the attention firstly on the quality of the reception.
<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>CAUSE</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Player has trouble making platform</td>
<td>----</td>
<td>Check: shoulder shrug, elbows locked, wrists down, hand position</td>
</tr>
<tr>
<td>Contact is too close to the body</td>
<td>Receiver moves to the ball too early</td>
<td>Track the ball first, THEN move the final position</td>
</tr>
<tr>
<td>Contact is chest high and close to the body</td>
<td>Receiver moves forward as the ball is being served</td>
<td>Track the ball first, THEN move the final position</td>
</tr>
<tr>
<td>Receiver can not control the ball on a lateral reception</td>
<td>Platform control is poor</td>
<td>Focus on keeping outside shoulder high</td>
</tr>
<tr>
<td>Ball flies off the arms away from the target</td>
<td>Platform is not good</td>
<td>Focus on platform and keeping elbows locked</td>
</tr>
<tr>
<td>Receiver makes good contact but ball does not go to the target</td>
<td>Platform is not active in the direction of the target</td>
<td>Focus on getting shoulders facing the target</td>
</tr>
<tr>
<td>Reciever swings the arms back during contact</td>
<td>Platform is not behind the ball</td>
<td>Focus on early platform preparation</td>
</tr>
<tr>
<td>Receiver jumps or moves during contact</td>
<td>Receiver is late in getting to position</td>
<td>Focus on tracking the ball</td>
</tr>
<tr>
<td>Jump serve reception goes over the net</td>
<td>Receiver does not control speed of the rebound</td>
<td>Focus on contacting the ball with the arms away from the body</td>
</tr>
<tr>
<td>Receiver has poor control when he must receive and then attack</td>
<td>Receiver is moving to attack before he completes the pass</td>
<td>FIRST pass, THEN spike</td>
</tr>
</tbody>
</table>
SERVING
The serve is unique in the sport of volleyball as it is the only closed skill. That is, it is completely under the control of the server. The serve is not only a means of beginning a rally, it is a means of scoring a point and it is the first part of the defensive complex. The quality of the serve is a major determinant of a team’s ability to score points when it is serving (i.e. break points).

SERVING IN VOLLEYBALL

SERVING PRIORITIES

| • CONSISTENCY |
| • ACCURACY |
| • AGGRESSION |

The server must have the consistency to be able to serve the ball into court. The first priority is to force the opposition to play the ball. Whatever the type of serve and the serving tactics a relatively low error rate puts pressure on the opponent to win a point.

As the skill of the player progresses, the ability to serve with accuracy to any part of the court becomes increasingly important. At this point the serve becomes not just the means of commencing the rally, but also first part of the defensive complex. Accurate serving into the appropriate position greatly improves a team’s blocking and defensive capabilities.

Aggression is a key component of serving at higher levels. Aggressive serves are not only jump serves with power and speed but can also be very flat jump float serves that are difficult to receive. It is important to understand that aggression can also be tactical aggression. Tactical aggression means serving to an area with a good serve rather than an easy serve or serving in such a way that the target receiver is put under pressure. This can be very effective and does not involve the high risk of the powerful jump serve. Aggressive serving may also be a player serving his best serve.

TECHNICAL REVIEW
ROUTINE
As serving is completely under the control of the server, servers can benefit from the use of routines. Simply, a routine is a physical process that concentrates the mind on the action that must be performed. The most obvious examples are the fidgets and bounces of the server in tennis or the football player who throws a piece of grass in the air before kicking for goal.

The routine should have a series of elements that the server will ALWAYS perform. Each server should have a recognisable routine. An example of simple service routine is:

- Step out four steps from the baseline
- Turn and face the desired target
- Set feet, right foot just in front of the left
- Bounce the ball three times
- Review the serving tactics
- Review technical sequence
- Take a deep breath
- Start serving motion
Each player will have their own routine, but this simple process will go a long way towards effective serving. The key is not what the routine is but that it is consistent and that it helps focus a player for a good quality serve.

**FLOAT SERVE**

- feet staggered, opposite foot forward,
- one hand toss, with non-serving arm,
- begin in ‘bow and arrow’ position, with the ball held high in front of the body and contact arm high behind the head,
- the toss is straight up, above the hitting shoulder, not too high, so the server contacts the ball just as it is on its downward path,
- rotate the upper body to generate power,
- contact high, in front and above hitting shoulder,
- contact is with the palm of the hand and a fixed wrist,
- the shorter the contact, the more the ball will float,

**NOTE:** Practice serving from different zones.

  - The ability to serve from multiple locations along the baseline, increases tactical options and aggression.

**JUMP FLOAT SERVE**

The jump float is a derivation of the float serve and is used widely. It has the advantage that it can be more aggressive than the standing float serve while maintaining a relatively low risk. Because of the extra height from the jump and contact point inside the court, a good jump float server can serve with a flatter trajectory and also shorter into the opponent’s court. An excellent jump float serve can be at least as effective as a jump serve; however, few servers take full advantage of the opportunities this technique provides.

- Start in balanced position,
- approach can be two or three steps,
- toss after the approach has begun,
two handed toss is preferable for control, as the server will be moving as the toss is made,
  o a one handed toss, with the non-contact arm, may allow the server to have a faster and more natural approach although possibly at the expense of control,

- toss should be slightly above the contact point,
- rotate the upper body to generate power,
- contact is similar to the standing float serve and always in front of the body,
- contact should be above or slightly in front of the baseline,
- the trajectory of the serve should be flat, below the top of the antenna,

**NOTE:** Practice serving from different zones.
  o The ability to serve from multiple locations along the baseline, increases tactical options and aggression.

---

**JUMP SERVE**

The jump serve has become the most common serve in high level volleyball. When struck with power, the jump serve is very difficult to receive and leads to aces and poor receptions that create opportunities for the block and defence. The added ability to jump serve with placement increases the effectiveness of the serve greatly. However, it should be remembered that a jump serve without power and/or placement can be easier to receive than a good float serve because it has a predictable flight path. Players without the ability to jump serve with power may be better off using other serving variations.

- Start in a balanced position,
- Toss should be with the spiking hand;
  o for extra control as the dominant hand has better control,
  o to more easily align the ball on the hitting shoulder,
  o to better initiate the approach,
- The toss is high,
- The server tosses the ball as they make the first step of the normal spike approach,
• The approach is three step and in the same rhythm as the spike approach,
• The preparation and attack phases of the technique are as described in the chapter ‘SPIKING’,
• As a result of the forward momentum of the jump, contact should occur inside the court to optimise power and reduce the time the receivers have available to react,
• Cross court serves, i.e. position V to opposition position V or position I to opposition position I, give the player a greater chance of success as the distance is longer and there is a greater area of the court to hit. A cross court serve can therefore be hit with more power and a reduced risk of error. This may be especially useful for players in the early stages of learning.

The most important part of the jump serve is the toss. The toss must be;
• consistent,
accurate in its position in front of the spiking shoulder,
inside the court,
high enough for maximal jump and power generation.
The toss can be practiced without serving by using a target in the area the ball would land.

IMPORTANT CONSIDERATIONS
After the serve is completed, the player must immediately enter the court and move to the primary defensive position. The position of the server and their final defensive position should be considered together. For example, it is very difficult for the setter to serve from position V and get into a good position to defend in position I and most players who defend in position I will serve from position VI or I. Similarly, most players who defend in position V, will serve from position V or VI.

In practice, serves should be practiced from the correct game position and as often as possible followed by defence, or simulated defence.

TACTICAL PRIORITIES
Due to the unique position of serving in volleyball, it is of considered alone. As a result, its tactical significance is often downplayed or ignored. The serve is part of the defence and must always be considered as such. The tactical priorities are:

<table>
<thead>
<tr>
<th>Priority</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ace</td>
<td></td>
</tr>
<tr>
<td>2. poor reception leading to free ball or high ball attack</td>
<td></td>
</tr>
<tr>
<td>3. average reception leading to predictable attack</td>
<td></td>
</tr>
<tr>
<td>4. putting pressure on receiver or setter</td>
<td></td>
</tr>
<tr>
<td>5. initiate the rally</td>
<td></td>
</tr>
</tbody>
</table>

The five factors identified above affect the overall serving strategy of the team as well as the individual tactics of each player. In a team strategy, it is common that different players will have different roles. For example, two players may be asked to serve for aces, two players may put pressure on a particular receiver and two others may put pressure on the setter by serving a particular court position. The variations are many.

One of the important roles of the coach in developing the serving strategy is choosing where the servers should serve, i.e. choosing the targets. Possible service targets can be:

- the zone of confusion between two receivers or between the receiver and the towards sidelines, i.e. the seams,

  ![SEAMS - THREE RECEIVERS](image1)

  ![SEAMS - TWO RECEIVERS](image2)

- weakest receiver (but never straight to them, identify a specific weakness, left, right, short etc.),
- receiver who has difficulty receiving and then spiking,
• non specialist receiver who may not be ready to receive or may be compromised in any subsequent attack (e.g. short to the middle blocker or sideline to the opposite),

• an area from where the setter has difficulty setting (normally position II or I, especially when they must penetrate from position V or IV),

• an area from where the setter is predictable (e.g. when the reception is from position x the set always goes to position y). This gives the block the possibility to prepare earlier and improves the chances of a successful block and defence,

• an area or player that creates difficulties for a certain type of attack (e.g. serving to the middle blocker may create difficulties for a quick attack or a short serve to position III may prevent an effective pipe attack),

• all short serves (i.e. around the 3m line) are relatively difficult to receive and often attack a weaker receiver who is only give responsibility of a small area of the court, e.g. a middle blocker or the weaker passer hitter. Furthermore, a short serve nearly always puts time pressure on the setter and spikers and increases the difficulty of setting up an effective offence using all possible spikers.

• ‘A good serve to a good receiver is better than a bad serve to a bad receiver’. Normally even a weaker receiver can successfully receive easy serves. It is a common mistake to focus solely on hitting a target and not paying sufficient attention to the quality of the serve.

NOTES:

You will note that few of the targets relate directly to an individual receiver. Most of the targets are defined to create improved conditions for block and defence. Considering serving only in terms of weak receivers is a superficial response that ignores many of the potential advantages to be gained from the serve.

The coach must also be attentive to how the opponent lines up its receivers. For example, some coaches will have their receivers change position after the server has initiated their routine, in order to cover a specific area or player. Or some players may stand in a receiving position although they are not actually receiving. For example, an opposite may stand inside the court as though ready to receive and then step away. The object of this reception tactic is to make it more difficult for the serving team to reach its desired target by making that player’s area of the court smaller. However, it also has the effect of opening another area of the court for an astute server or coach.

An important part of any serving strategy is variation. Good teams and players will be able to adapt their service reception and offence if serves remain similar. From a team perspective, that may mean different players having different targets. From an individual perspective, that means serving from different positions along the baseline. Float and jump float servers can very effectively change the angles that the receiver must deal with and thus maintain pressure without negating the team tactics.
COACHING SERVING

TEACHING POINTS

A TEACHING PROGRESSION FOR BEGINNERS

Develop a serving routine directly from the initial stages of learning!

- serving into the court, focusing on technique
- serving into one half of the court i.e. a big target
- serving to specific areas of the court
  - variation: put a target inside an area. The server must serve inside the area but NOT hit the target.
- serve and then defend
- serve from different positions and then defend

TRAINING IDEAS

TECHNICAL

- Use a whistle to initiate serving in all drills to simulate match conditions.
- A thin elastic strip extended between the two antennae can provide excellent feedback on the required trajectory of the serve.
- The server must make a good serve and then defend a ball spiked by the coach.
- To emphasise the team component of serving, repetition serving where the team must reach a specified target rather than individual players. If all players must work together to achieve a serving goal, they learn to better understand the implications of their actions within a team plan.
- To emphasise the team component of serving, every server must serve to a different area than the previous server or the servers are not allowed to make consecutive service errors. Servers must pay attention to other servers.
- Serve and reception drills normally only focus on the quality of the reception. For example, service errors are often counted as points for the reception team. In this case there is no particular motivation for the server to serve a good serve or to avoid making errors. Choose scoring systems that emphasise the serving component of the drill as well. For example,
  - Play the servers against the receivers.
  - Two service errors in a row = minus for the receivers.
  - Good reception counts only if the receiver must move.

GAME PLAY

- The server must hit a specific area to initiate the rally. Missing the target can be considered a direct error or a wash.
- Serving can be added to any wash drill if the team winning the initial wash portion (e.g. serve plus free ball) must serve and win the subsequent rally to win the big point.
  - To further increase pressure, the server MUST hit the required area as well as win the point.
## TROUBLESHOOTING GUIDE

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>CAUSE</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serve is always out over the baseline</td>
<td>Contact is behind the head</td>
<td>Focus on toss in front of the body</td>
</tr>
<tr>
<td>Serve goes in the net</td>
<td>Contact is too low</td>
<td>Focus on high toss and contact</td>
</tr>
<tr>
<td>Cannot hit the required area with a jump serve</td>
<td>Inconsistent toss</td>
<td>Practice toss without the serve</td>
</tr>
<tr>
<td>Cannot hit the required area</td>
<td>Lack of confidence in technique</td>
<td>More practice</td>
</tr>
<tr>
<td></td>
<td>Contact point on the ball is variable</td>
<td>Focus on the ball when serving</td>
</tr>
<tr>
<td>Float serve has no power</td>
<td>Wrist not fixed</td>
<td>Focus on firm wrist</td>
</tr>
<tr>
<td>Float serve has no float</td>
<td>Wrist not fixed</td>
<td>Focus on firm wrist</td>
</tr>
<tr>
<td></td>
<td>Follow through is too long</td>
<td>Focus on very short contact on the ball</td>
</tr>
<tr>
<td>Float serve not flat</td>
<td>Contact under the midline of the ball</td>
<td>Focus on contacting near the midline of the ball</td>
</tr>
<tr>
<td>Jump serve goes to the left or right or into the net</td>
<td>Toss is too far to one side</td>
<td>Use the spiking arm for toss to ensure toss in front of the hitting shoulder</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Focus on toss in front of the hitting shoulder</td>
</tr>
<tr>
<td>Jump serve has no power</td>
<td>Toss is behind the head</td>
<td>Practice and focus on toss</td>
</tr>
<tr>
<td></td>
<td>Toss is not inside the court</td>
<td>Practice and focus on toss</td>
</tr>
<tr>
<td></td>
<td>Toss is too low</td>
<td>Practice and focus on toss</td>
</tr>
<tr>
<td>Chosen service target passes successfully</td>
<td>Serve is too early</td>
<td>Serve must not only hit the target, but must also be difficult to receive</td>
</tr>
</tbody>
</table>
SERVING IN BEACH VOLLEYBALL

SERVING PRIORITIES

- CONSISTENCY
- ACCURACY
- AGGRESSION

One important distinction between serving in volleyball and beach volleyball is that due to the nature of beach volleyball, the receiver is also the attacker. Therefore, the serve will more directly control the offence of a team. However, the basic priorities remain the same.

The server must have the consistency to be able to serve the ball into court. The first priority is to force the opposition to play the ball. Whatever the type of serve and the serving tactics, a relatively low error rate puts pressure on the opponent to win a point. As the skill of the player progresses, the ability to serve with accuracy to any part of the court becomes increasingly important. In beach volleyball, an important role of the serve is to attempt to control the offence of the opponent. In achieving this objective, the ability of the server to serve very accurately, with few errors, to any area of the court is very important.

Aggression is a key component of serving at higher levels. Aggressive serves are not only jump serves with power and speed but can also be very flat jump float serves that are difficult to receive. It is important to understand that aggression can also be tactical. A serve could be relatively low risk, and even relatively easy to receive, and yet be aggressive if the attacker is subsequently put into a difficult position to attack. E.g., very short server, or very deep serve to the middle of the court.

TECHNICAL REVIEW

ROUTINE

As serving is completely under the control of the server, servers can benefit from the use of routines. Simply, a routine is a physical process that concentrates the mind on the action that must be performed. The most obvious examples are the fidgets and bounces of the server in tennis or the football player who throws a piece of grass in the air before kicking for goal.

The routine should have a series of elements that the server will ALWAYS perform. Each server should have a recognisable routine. An example of simple service routine is:

- Step out four steps from the baseline
- Turn and face the desired target
- Set feet, right foot just in front of the left
- Review the serving tactics
- Review technical sequence
- Take a deep breath
- Start serving motion

Each player will have their own routine, but this simple process will go a long way towards effective serving. The key is not what the routine is but that it is consistent and that it helps focus a player for a good quality serve.

FLOAT SERVE

- feet staggered, opposite foot forward,
- one hand toss with non-serving arm,
- begin in ‘bow and arrow’ position, with the ball held high in front of the body and contact arm high behind the head,
- the toss is straight up, above and in front of the hitting shoulder of the server, not too high to reduce the impact of environmental factors,
- rotate the upper body to generate power,
- contact high, in front and above hitting shoulder, just as the ball begins its downward path,
- contact is with the palm of the hand and a fixed wrist,

NOTE: Practice serving from different zones.
  - The ability to serve from multiple locations along the baseline,
    - increases tactical options and aggression.
    - Increases the ability to take advantage of environmental conditions

JUMP FLOAT SERVE
The jump float serve is preferable to the float serve as the ball travels faster and lower over the net. It is a very useful tactically aggressive serve.

- start in balanced position.
- approach can be two or three steps.
- toss after the approach has begun
- two handed toss is preferable for control, as the server will be moving as the toss is made.
- toss should be slightly above the contact point,
- rotate the upper body to generate power,
- contact is similar to the standing float serve and always in front of the body.
- contact should be above or slightly in front of the baseline.
- the trajectory of the serve should be flat, below the top of the antenna, to make it as difficult as possible for the receiver.
NOTE: Practice serving from different zones.

- The ability to serve from multiple locations along the baseline,
  - increases tactical options and aggression.
  - Increases the ability to take advantage of environmental conditions.

**JUMP SERVE**

- Start in a balanced position.

- Toss should be with the spiking hand to optimise the possibility that the ball will be in front of the hitting shoulder. A two hand toss may provide more control in adverse conditions, but care must be taken to ensure the ball is in front of the hitting shoulder.

- The toss is relatively low and initiates the approach,

- Toss the ball with top spin. This increases the amount of top spin that can be imparted on the ball at contact.

- The approach is three step (i.e. step – closing step) and in the same rhythm as the spike approach.

- The preparation and attack phases of the technique are as described in the chapter ‘SPIKING’, in the section ‘Spiking in Beach Volleyball’.

- Contact should be made from inside the court with the appropriate follow through to optimise power

- The ball is hit with a lot of top spin. Top spin is created by a combination of the toss (see above), contact with the midline of the ball and a full follow through with the arm and wrist.

**NOTE: Practice serving from different zones**

- The ability to serve from multiple locations along the baseline,
  - increases tactical options and aggression.
  - increases the ability to take advantage of environmental conditions.
SKY BALL SERVE

The ‘sky ball’ can be an effective serve, especially in windy conditions. There are two variations, the ‘backhand’ and ‘forehand’ sky balls.

The techniques are similar in that the server starts from a low position and contacts the underside of the ball. The differences are that for the forehand sky ball the contact is made such that the ball will float, while the backhand sky ball has top spin. The forehand serve will have an unpredictable flight path caused by the ball floating as it picks up speed plus the effects of any wind. The backhand serve will, as a result of the topspin applied, drop quickly and tend to spin towards the net and away from the receiver making it awkward to control the reception.

While the sky ball is not used often, it can be a very effective variation within a serving / defensive strategy. It can also allow the blocking player to make optimal position at the net.
IMPORTANT CONSIDERATIONS

The server must consider all the subsequent movements required to reach their defensive position after the serve. This is particularly the case if the server must block. The server-blocker should be in their neutral blocking position ready for an ‘over on 2’ attack, i.e. before the reception reaches the setter. When deciding which serve to use, the server-blocker must take into consideration how effectively they will be able get to reach this position. It is common to use tactical float or jump float serves to give the server extra time to reach this position and therefore optimise blocking and defence opportunities.

The server must always be aware of how the wind can affect the serve and how they can take advantage of the wind conditions. Whenever possible the server should serve ‘into the wind’. A head wind effectively makes the court bigger. That is, the server can serve with more power, higher over the net and can therefore take greater risks. The wind, coupled with heavy topspin, will keep the ball in the court.

When serving with the wind, the opposite holds. The serve is more difficult to control and risks may not be rewarded. The key to serving with the wind is to keep the technique (i.e. approach, toss, jump) consistent and change only the speed of the armswing.

When the wind is not directly a head or tail wind one solution is to serve from a position along the baseline and with an orientation so that the serve will be against the direction of
the wind. For example, if the wind is coming from behind and to the right of the server, they should serve from the left of the court towards the long corner. Tactical considerations may prevent a server from taking advantage of this. In the given example if the server wishes to serve to the left side player, then starting on the left of the court will still reduce the effects of the wind. Therefore, it is essential that servers are not only able to serve different types of serves, but also from all different areas.

**TACTICAL PRIORITIES**

It must be noted that there is a significant difference between indoor and beach volleyball in serving. In indoor volleyball it is the setter who controls which spiker will attack and the block and defence must respond. In beach volleyball it is the SERVER who controls who will attack. Therefore, the serve can have a greater impact on the offence of the opponent and therefore the defensive tactics of the team. Accurate serving is of paramount importance to successful block and defence.

| 1. ace | 2. poor reception leading to free ball |
| 3. reception (good or bad) that leads to a predictable attack | 4. prevent the opponent finding a rhythm on sideout |
| 5. initiate the rally |

The first general considerations of the server are:

- **location**
  - there are six primary serving zones, the four corners of the court, the deep seam between the receivers and the short serve in the middle of the court.
  - any serve along the sideline can also be effective due to the difficulty of receiving well.
  - the deep and short serves to the sideline corners cause the greatest disruption to the spiker’s approach.
  - all players should be able to accurately serve to each of these zones.
- trajectory
  - keep the ball as low as possible over the net, below to the top of the antenna (except when executing the sky ball serve).
  - take into account the wind.
- the type of serve
  - jump serve
  - jump float serve
  - float serve.

Some specific tactical considerations, while keeping in mind the six primary serving targets, can be:

- the seam between two players. This area can cause confusion and uncertainty between the players especially in important moments in the match. It therefore increases the chances of an ace, poor reception and putting the setter in a bad position. If a specific opponent likes to ‘go over on 2’, the seam serve can also create difficulty if the setter is first moving to receive and then must change direction to set.
- weaker attacker, as the receiver will also attack. Note that attack includes spikes and shots. A weak spiker is not necessarily a weak attacker.
- weaker receiver if both players are comparable in attack
- away from the weaker setter, i.e. if one player is a relatively poor setter it can be good tactics to force this player to set and therefore pressure this weakness
- an area from where the spiker is predictable
  - e.g. if the serve goes down the line and the spiker only spikes line then the defence can set up for this play in advance,
  - NOTE: In some cases, the predictability of an attack is not affected by the quality of the reception. This is, even from good reception, the attacker is predictable. Obviously this is a desirable situation as the server need not take great risk in serving.
- short serves prevent the spiker making a full approach and reduce the number of attack options.
- serving deep in the court in windy conditions forces the opponent the play ‘big’ (i.e. the opposite of playing small, see ‘RECEPTION IN BEACH VOLLEYBALL) and therefore increases the chances of the wind affecting the flight of the reception, the control of the players and therefore the attacking options of the attacker.
With only two players involved, there must be a greater conscious decision to vary the serve. This could be for example:

- a variety of serves with the same tactical aim
  - changing between jump and float serves,
  - changing position along the baseline while serving to the same player

- varying tactics
  - using different tactical priorities at different moments (e.g. serving with high risk at some stages of the game and serving for the defence at other times),
  - scouting can provide valuable information about when to use certain serving tactics. Spikers often have different tendencies at important moments of the game than they do at the beginning of a set.
COACHING SERVING IN BEACH VOLLEYBALL

TRAINING IDEAS

TARGETS
- Put tables or chairs into the six primary serving targets. The servers must hit the targets.
- Put tables or chairs into receiving positions. The servers must serve AWAY from the targets.
- Use receivers on the court. The servers must serve for the six primary serving targets with receivers in place.
- Create challenges where the server must hit the same target multiple times or must hit a certain sequence of targets (2 or 3 different targets).

ELASTIC
Extend a thin length of elastic between the two antennae.
- In normal conditions, the players must serve between the elastic and the net.
- In windy conditions, the players must serve over the elastic and into the court.

‘CRICKET’
This is a game play drill. One team serves consecutively and receives a point for each point won and two points for each ace. An ace is defined as any reception that isn’t touched a second time. The serving team serves until it has won 10 points, i.e. 10 wickets.
The receiving team counts the number of sideouts (i.e. runs) before the serving team has taken 10 wickets.

GAME PLAY
Make an area in the sand around the desired reception area. This area can be relatively big or small depending on the level of the teams. Play a normal game. If the reception is outside the marked area, then the receiving team cannot win a sideout point. If they win the rally, no point is given to either team. This focuses the attention firstly on the quality of the serve.
## TROUBLESHOOTING GUIDE

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<th>CAUSE</th>
<th>SOLUTION</th>
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<td>Serve is always out over the baseline</td>
<td>Contact is behind the head</td>
<td>Focus on toss in front of the body</td>
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<td>Server cannot hit the required area with a jump serve</td>
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<td>Server cannot hit the required area</td>
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<td></td>
<td>Contact point on the ball is variable</td>
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<tr>
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<td>Wrist not fixed</td>
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</tr>
<tr>
<td>Float or jump serve is not flat</td>
<td>Contact under the midline of the ball</td>
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<tr>
<td></td>
<td>Server serves too conservatively</td>
<td>Aim to serve below the top of the antenna</td>
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<tr>
<td>Jump serve goes to the left or right</td>
<td>Toss is too far to one side</td>
<td>Focus on toss in front of the hitting shoulder</td>
</tr>
<tr>
<td>Jump serve has no power</td>
<td>Toss is behind the head</td>
<td>Practice and focus on toss</td>
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<td>Toss is not inside the court</td>
<td>Practice and focus on toss</td>
</tr>
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<td></td>
<td>Toss is too low</td>
<td>Practice and focus on toss</td>
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<td>Server does not optimise the use of environmental conditions</td>
<td></td>
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BLOCKING

Blocking is the action of attempting to the opposing team’s spikers from crossing the net. It is the first line of defence of the court. Blocking is the most difficult skill in volleyball due to the fact that the blocker can only react to the opponent. This creates extreme technical and time demands. At no point during its execution does the block control the action. During a match the block contributes fewer points than the attack however it is a major component of the defensive complex and the quality of a team’s block is often decisive. Blocking is particularly difficult to teach as a perfect block does not guarantee a perfect outcome. Therefore, players do not always get appropriate feedback. Players need to learn the processes involved and coaches need to be very clear about how and when feedback is given.

BLOCKING IN VOLLEYBALL

BLOCKING PRIORITIES

- BLOCK POINT
- CONTROL THE BALL
- FORCE SPIKER ERROR
- CHANNEL ATTACK TOWARDS DEFENCE
- FORCE OPPONENT TO ATTACK AGAIN

The first priority of the block is always to make a block point. The block is normally considered as part of the defence, but it is first and foremost a method of scoring a point and must be thought of as an attacking action.

If the block is aggressive and well-formed there is a greater chance it will be able to control the ball that is spiked into it. That is, deflect the ball to the advantage of the defence. There are some situations where controlling the ball becomes the main priority of the block, for example, if the blockers are late or in less than optimal position.

If the block is aggressive and in good position, then there is a greater chance of forcing the spiker into error as the spiker must try to take greater risks to score a point.

A major role of the block is to channel the attack towards the defence. The defence must always consider its position relative to the block and the block cannot work independently of the defence. This ensures that the greatest possible area of the court is defended to the best possible effect.

A block that forces the opponent to attack again must also be considered a good block. Each time a team attacks the defending team has a new chance to score a point.

TECHNICAL REVIEW

- PENETRATION
  - FORM
- JUMP VERTICALLY
  - POSITION
  - TIMING

The technical elements described here can be split into general and position specific. The general elements that blockers must always consider are penetration, form and jump. The position specific elements are position and timing. Penetration over the net is the reach of
the blocker into the space on the opponent’s side of the net. This effectively makes the court smaller and therefore makes the job of the spiker more difficult. For this reason, penetration is more important than height above the net. The position of the jump affects the ability of the blocker to penetrate effectively. If the jump is too close to the net, the blocker will be unable to reach forward without touching the net. If the jump is too far from the net, the blocker cannot reach the net at all. The exact position depends on the height and jumping ability of the blocker.

The block form is the position of the hands and arms as they are over the net. The block form determines to a large degree where the ball will go after contact. The perfect form is with blocker’s shoulders parallel to the net and the arms forward, not more than shoulder width apart. The hands should be directed at the opponent’s court.

The jump should always be vertical. That is, the blockers should jump and land in the same position. Only by jumping vertically can the block maximise penetration and optimise form.

The block position has some position specific elements. Against an outside attack, the outside blocker is responsible for determining the position of the block by fronting the spiker. That is, they should be in a position to block the power angle of the spiker. Normally this is with the inside hand of the blocker lined up with the spiking arm, taking into account the direction of the spiker’s approach. The block is in a different position if the spiker approaches directly towards the net or at an angle. There may be other tactical considerations but the blocker will still attempt to front the best option of the spiker. The middle blocker must then move to be as close to the outside blocker as possible (see ‘Double Block’ below). For a first tempo attack, the position of the middle blocker is determined by tactical considerations. The middle blocker can front the spiker in the same way as an outside blocker or focus on protecting an area of the net.

The timing of the block is critical. If the block is either too early or too late it will be less well formed the spiker will be able to spike more angles and more easily ‘tool’ the block. For an outside attack, the block should jump after the spiker for several reasons. Firstly, the blocker does not jump as high as the spiker and will reach their maximum height quicker. The blocker should be at maximum height at about the same time as the spiker.
Secondly, if the spiker is late in seeing where the block is, the spiker must either decide where to spike before knowing where the block will be (increasing the chances of a successful block) or decide where to spike later (increasing the chance of a spike error). Thirdly, if the block is early it will not be well formed at the right moment and the spiker will be more easily able to tool the block. On multiple player blocks all blockers should jump at the same time. For quick attacks, the timing is determined by the setter. In traditional read blocking (see below) the middle blocker jumps after the set. In commit blocking (see below), the middle blocker jumps before the set.

READ BLOCKING
Read blocking (or ‘read and react blocking’) is the technique which allows the blockers to most effectively optimise the technical priorities. In this technique the blockers ‘read’ the set and then ‘react’. In this way they are unaffected by the various fakes and deceptions and can theoretically always block in the correct position. All blockers (not just middle blockers) must be proficient in this technique as it the basis for the development of block tactics. Players should learn read blocking along as they learn the other technical components of the skill rather than separately. It is much easier to learn to react to the setter appropriately if all of the components of the block (reading, footwork, hand movement) have been learned collectively from scratch.

Start Position and Posture
- The start position for the middle blocker is near the middle of the net (this can vary with tactics).
- The start position for the outside blockers is between two and three metres from the sidelines.
  - This will vary will specific block tactics but the general rule of thumb is that the blocker will start in a position that allows them to get to the outside spiker with one step. That is, a bigger blocker can start further inside the court that a smaller blocker.
  - One situation that occurs often at lower levels is when there is a front row setter and no backrow attack. The block should adjust position so that the three blockers are aligned to take advantage of this mismatch.
- All blockers start with their knees slightly bent and hands held high. Hands are held high to minimise the time required to penetrate over the net against a quick attack.

Eye Sequence

<table>
<thead>
<tr>
<th>RECEIVER</th>
<th>BALL</th>
<th>SETTER</th>
<th>BALL</th>
<th>SPIKER</th>
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The essence of this technique is to ‘read’ as soon as possible where the set will go. The only person who knows this information is the setter. Therefore, the setter must be the main focus of attention for the blockers. After briefly observing the receiver and the flight path of the reception, the blockers switch their attention to the setter and more specifically, the hands of the setter. The focus then remains on the setter’s hands until
AFTER the ball is released. After the blocker SEES the direction of the set, they begin their movement. (NOTE: While the main focus of attention during this period is the setter, important cues can also be gained from the position of the spiker and the general direction of their approach before the setter’s contact. The blocker should be aware of the spiker’s approach, either by following them in their peripheral vision or taking a quick look at the appropriate moment.) In the same way that the setter is the only player who knows where the set is going, the spiker is the only player who knows where the spike is going. Therefore, after briefly observing the set to determine the general position of the attack, the blocker switches their attention to the spiker while still moving. From the spiker, the blockers determine their final position and timing. The blocker only needs to watch the set for a short moment and should shift their attention almost immediately to the spiker.

NOTES:
- The blockers must be aware of situations that unfold during a rally. For example, if a player passes a ball in a way that does not allow them to participate in the attack (e.g. while on the ground) it is silly for the blocker to remain in the same position. As soon as one spiker is out of the play, the blockers should adjust their positions to take advantage of the new situation.
- **Beware of deception!** Setters will use tricks with their hands and body and spikers can fake with their approaches. The ‘read and react’ technique was developed to counter these tactics. Focus attention on the setter’s hands until after the ball is released and on the spiker afterwards. Experience and scouting will assist the blockers to read earlier and more effectively.

**Final position**
As already described, the final position of the block is determined by the approach of the spiker. The outside blocker must front the spiker and the middle blocker makes position as close as possible. If time allows the blockers should be ‘shoulder to shoulder’. If the blockers are shoulder to shoulder there are no seams, or spaces between the blockers. It is the responsibility of the middle blocker to be in the appropriate position and to close the seam.

**SPECIFIC TECHNIQUE**
**Movement to the outside**
Efficient movement skills are essential to optimise the chances of a successful block.
For the middle blocker, the normal blocking footwork is long step - cross step.
- Start in ready position, feet no more than shoulder width apart, watching the setter’s hands,
  - If the feet are too wide apart, it is not possible to make a long first step
- First step is as long as possible with the leading foot in the direction of the movement,
- Hips rotate in the direction of the movement,
- Following foot crosses over and turns towards to net,
- Leading foot closes in the direction of the net, leading the hips to a position parallel to the net,
- The arm action is short, with elbows bent, but powerful to optimise jump height and speed of penetration,
- Ensure both hands are equally penetrated (focus on pushing over with the inside hand to prevent or delay over rotation),
- After landing, the blocker’s natural rotation and remaining lateral momentum will take them behind the outside blocker
For the outside blocker, the normal movement is a single cross step.

- Start in ready position, watching the setter’s hands,
- Outside blocker does not wait for the middle blocker
- Inside foot crosses over and turns towards the net,
- Outside foot closes in the direction of the net, leading the hips to a position parallel to the net, and is used to convert lateral movement to the jump,
- The arm action is short, with elbows bent, but powerful to optimise jump height and speed of penetration,
- Time the movement so the jump is after the jump of the spiker,
- Push over with the inside arm to ensure that both hands are over the net even as the upper body rotates,
- Emphasis is on jumping and landing in the same position.
Hand and Upper Body Movement
With the hands, the objective of the blockers is maximum distance and speed of penetration.

- As the blocker moves the hands are relatively close together and in front of the body,
- As the blocker begins to jump, the arms will begin to extend towards the top of the net,
- As soon as the hands reach the top of the net (i.e. before the block has reached maximum height), they begin to penetrate the plane of the net. The cue is ‘fingers first’. This timing is essential. It MUST be the focus of the blockers to penetrate the plane of the net as early as possible.
- As the blocker completes the jump, their hands reach maximum penetration with core firm, elbows locked and wrists and fingers hard.
  - The blocker should be ‘tight’ from the core to the fingertips.
  - If the blocker is high enough, the cue should be ‘push forwards with the shoulders’.
  - Fingers NOT thumbs should be pointed upwards.
- Both hands must be over the net with good form.
- The direction of penetration is forward.
  - This presents the biggest barrier for the spiker.
  - Minimises the possibility of being tooled.
  - The natural direction of the spike will result in the ball being rebounded into the opponent’s court.
NOTE: Some coaches encourage an active movement of the hands towards the court to minimise the chances of being tooled. The timing of this movement is important as a mistimed ‘sweep’ can leave either the arms an open target or open the seam to the spiker.

- The outside blocker lands in the same position as the point of take-off.

Alternate Footwork
- Shuffle Movement
  - The cross step technique optimises the aggression and penetration of the blocking movement. However, sometimes this is at the expense of time. A simple shuffle to position with the hands held high is sometimes appropriate when the attack is very fast. With this movement, the hands are nearer the top of the net, with good form, very early. Therefore, there are advantages in control blocking as good form is maintained throughout the blocking motion.
  - Alternatively, when the block has a lot of time (e.g. a high ball set from deep in the court), the blockers may shuffle to position and reach the final position early. This block will be better formed and have better timing than a block using the cross step, but may not be as high or as aggressive. This block is more likely to control the ball or direct the attack to the defence.
• **Single Cross Step**
  - Very tall or athletic middle blockers can use a single cross step movement. In his technique the initial position is with the legs a little wider apart than normal. Instead of stepping with the outside foot, the movement is initiated by turning the foot in the direction of the movement without lifting it from the ground. The cross step part of the movement is the same as in the step-cross technique. This technique is faster than the step-cross but requires greater athleticism.

TEAM BLOCKING SKILLS
While individual blocking technique is important, blocking is a team skill. How the blockers work together determines the overall success of the team.

**AS MANY BLOCKS AS POSSIBLE**
The objective of read blocking is that each attack has the maximum number of blockers. Because the middle blocker always reads the direction of the set and always gets to the point of attack, there is always a double block. However, the team should not be limited to two blocks. If there is a possibility to get three blockers to the point of the attack, then the defensive team must take it. This requires great team skill and discipline but if successful puts enormous pressure on the opponent.

**BLOCKING RESPONSIBILITIES**
The goal of the blocking team is to get the greatest number of blockers possible against each attack but each blocker is primarily responsible for one spiker, the spiker in that blocker’s zone. For example, the position IV blocker is responsible for the opponent’s position II / I spiker. While the blocker must be ready to assist on the quick attack and to make double and triple blocks when possible, the first priority remains the spiker in their zone. In most situations, there will be no blocker with direct responsibility to cover the setter tip.

In most situations it is clear where the responsibility lies. However, there are exceptions. If the spikers change positions along the net, or example in a combination attack, then the blockers communicate this movement and take over responsibility for the player that moves into their zone.
DOUBLE BLOCK

- Outside blocker determines the position of the block taking into account team tactics and individual blocking technique,
- The middle blocker closes by getting as close as possible to the outside blocker.
  - Preferably shoulder to shoulder
- Both blockers block straight ahead
  - Neither player ‘reaches’ into the seam to minimise the possibility of being tooled.
  - If there is a seam, the solution is that the middle blocker must get closer to the outside blocker
- If the blockers have time to make position, there should be NO seam.

If the middle blocker is late, for example a very fast attack on the outside, there are two possible solutions. The blocker can either attempt to reach into the seam or can block as normal. Reaching into the seam can challenge more attacks at the net and control spikes hit close to the top of the net. A normal block can lead to more block points and can be easier to defend around.

  - If trying to close the seam,
    - The blocker jumps and reaches as far as they can.
    - The blocker must stay close to the net to prevent the ball going between the block and the net.
    - The blocker may direct their hands slightly backwards to increase the chances that the ‘touch’ will go to the advantage of their team.
  - If blocking normally,
    - Focus on penetration and form, disregarding position.
TRIPLE BLOCK
The triple block should be used whenever possible. Any time a non-setter sets the ball or when the setter is five metres or more from the net is a great opportunity to turn the odds of an attack in favour of the block and defence. When the reception or defence is bad, all three blockers must be in position to move to triple block.

If the set is coming from the back of the court and obviously will go to one position;

- The blockers should move to position as early as possible using a shuffle step to ensure excellent position,
- The three blockers get into position early,
- The three blockers jump together
- There can be NO seams!

If the set is nearer the front row and could go to either position II or IV;

- The blockers stay in the initial read blocking position and are ready to move in the direction of the set,
- Once the direction of the set is known, the blockers move as quickly as possible to position.
- The initial footwork of the movement is free but last step of all the blockers should be the cross step.
  - Short fast steps can help the blockers (especially the middle and third blocker) get into position without getting into each other's way (see photo sequence).
- The three blockers jump together.
  - There can be NO seams. The spiker must be challenged to hit around the block.
  - To optimise possibilities of success, the triple block should cover the line. This prevents the spiker from tooling the block and forces him to hit towards the strong part of the block and defence.
NOTE: If the third blocker finds they cannot effectively make position to block they must continue their move off the net into a tip coverage position behind the block.

**ASSIST BLOCKING**

The read blocking goal of getting as many blockers as possible against all attacks means that outside blockers must be prepared to assist, or help, blocking the quick attack.

- The blockers start in their initial read blocking positions.
- The initial position is the position from which the outside blocker can still get to the outside.
- The blockers read block but maintain their positions.
- If the quick attacker is in the blocker’s zone, the assist blocker jumps and reaches directly towards the attack. The position IV blocker may assist with an ‘a quick’ or ‘c quick’ attack. The position II blocker will normally only assist on a ‘b quick’ except in exceptional circumstances.
- The block must be close to the net, penetrating if possible, but never allowing space between their arms and the net.

NOTE: The priority of the outside blockers is always the outside spiker. They cannot compromise this role at the expense of assisting on the quick attack.
**MATCH UP BLOCKING**

Match Up blocking is the most basic blocking tactic. The object is to ‘match up’ the best available blocker against the best available spiker. A key consideration in this tactic is that players will often block away from their natural attacking positions (e.g. an outside spiker may block in position II etc.) and therefore transition attack could be compromised. This is a trade-off that the coach must decide beforehand and should practice when possible. The most extreme situation is when the setter blocks in position IV. This will normally leave a spiker in position II and the opposite in position I. Each team must have a solution for this situation already practiced to avoid unnecessary confusion and subsequently lost point scoring opportunities. The easiest solution is to designate one of those two players to spike in transition. Another less common solution is for the opposite to play defence in position V therefore maintaining the presence of an attacking threat on both sides of the net.

**IMPORTANT SKILLS**

**Commit Blocking**

Commit blocking is when the blocker (normally the middle blocker) predicts a particular attack (normally quick attack) and decides where they will block before the rally begins. The timing of the commit block is important as if the commit block is too early the setter can change the point of the offence or the spiker can adjust the direction or type of attack and if the commit is too late, the effectiveness is lost. Against the quick attack, the timing should be just as or after the spiker jumps so the blocker has time to reach their maximum height and penetration, but the setter does not see them. Against the fast attack to the outside, the timing should be just as the setter touches the ball.

One useful technique to disguise the intention of the middle blocker is to step and jump in one movement. This can be used against any quick attack that is away from the middle blockers normal position eg ‘b quick’.

![Start in middle of court](image1)

![Step in front of first tempo](image2)

![Jump with first tempo attacker](image3)
Controlling the Ball

If the block is late or in poor position it may attempt to 'touch' the ball for its team’s advantage rather than try to score a point. In this case the blocker must focus on technique and providing a surface that the spiker cannot take advantage of.

- The hands are turned more upward so the ball that is touched will be deflected up and to the advantage of the defence.
- The hands must be near the net, to seal the space between the net and the blocker.

Transition from 'BLOCK to BLOCK' or 'ATTACK to BLOCK'

Whenever the ball is on the opposite side of the net, the blockers must return as fast as possible to their primary block positions. There is no prescribed footwork for this movement. The blocker should be in position early enough to read block effectively.

Transition from 'BLOCK to ATTACK'

- After landing, the first movement is to turn in the direction of the ball to see what happens.
- If the ball is defended, then each player must quickly decide if they will be required to play it. Normally the setter is responsible for setting but it may be necessary for another player to set.
  - The blocker should not transition until it is clear they will not be required to set.
- If not required to set, the player must quickly retreat to a position (transition) to begin their approach. Footwork can be shuffle or turn and run, depending on the time available. The cross step footwork is preferable as it is faster but the spiker must always be in a position to see the ball and the setter.
- The timing of the attack is related to the setter, therefore stop the transition move before the setter plays the ball even if it means the spike approach will be abbreviated.
Downballs

Knowing when NOT to block is a valuable skill. In some situations, the presence of a block will give the spiker an advantage. If the spiker is unbalanced or the set is away from the net, the spiker can gain an advantage by tooling the block or by playing the ball into the block to get the rebound. In these cases, (i.e. when the attacker can spike but not with full power), the block should not blockers but retreat from the net to play defence.

This situation should be communicated by the blockers to the defence. It is not necessarily important which blocker is responsible for determining the downball, but each team should have rules. The outside blocker is normally watching the spiker most closely, so it may be most appropriate for this player to make the decision. Other teams use the middle blocker in their role as the captain of the block to decide. Verbal and non-verbal communication are equally important. There should be a call from the designated blocker to the other blockers and to the defenders. The designated blocker can also use some other signal to communicate their decision such as a hand on the shoulder of blocker next to them. The defensive response to the downball is very important. In the normal defensive positions with no block, the middle of the court will be open. If the defenders are attentive to the unfolding situation they will know that if the set is poor, a downball may follow. They should already be ready to move forward to cover closer to the net (around 7m) as soon as they hear the call or see the blockers retreat.

The defenders should be able to effectively respond to the situation even if they do not hear a call. The blockers must also remain in play. They can retreat to a position near the 3m INSIDE THE COURT. From this position they may play some easy balls, but are also available to defend balls that hit the top of the net. The setter defends and cannot penetrate until after the attack.

General Positioning Rules

If the set is outside the antenna, then specific blocking tactics are no longer applicable. The block must move to the antenna and make a block in this position. When the spiker is forced into this less than optimal position, their first and best response is to attempt to tool the outside blocker. Blocking the antenna prevents this attack and forces the spiker to hit into the block, to tip, or to attempt a very difficult spiker sharp cross court. In this situation, the block should NOT penetrate the net. Penetration over the net will also give the attacker a target to tool.

If the set is very close or tight to the net, then the blocker must go for a block point. This should be an advantageous situation for the blocking team. By blocking a position, the blocker allows the spiker to attack sharp angles or tool the block. Touch the ball!!
STRATEGIC REVIEW

ROLE OF THE MIDDLE BLOCKER
The middle blocker is the captain of the block. They are normally responsible for organising the block and communicating the block tactics from the coach to the team. The coach will communicate and discuss with them general and specific blocking tactics throughout the course of the match. Middle blockers must be excellent read blockers and must be able to move to and block all areas of the net. A good middle blocker will also have a good understanding of how the match is developing and may make adjustments to the match plan on a point by point basis.

ROLE OF THE OUTSIDE BLOCKERS
Outside blockers must proficient in read blocking to be able to assist block against first tempo attacks in their zone and still make an effective block on the outside. Outside blockers must be good at reading the direction of the spiker’s approach to ensure the block is in the optimal position. The outside blocker shares responsibility for the timing of double and triple blocks.
COACHING BLOCKING

TEACHING POINTS

A TEACHING PROGRESSION FOR BEGINNERS

- Footwork and hand movement without the ball
- Hand movement from a thrown ball
- Footwork and hand movement from a thrown ball
- Hand movement with coach spiking from a box
- Footwork and hand movement with coach spiking from a box
- Blocking live spikes
- Multiple (double and triple blocking)

NOTE: This is not necessarily the only order that these drills can be completed. The coach will decide what is most appropriate for the team and may go backwards and forwards until all elements are learnt or to practice specific elements.

TRAINING IDEAS

PENETRATION 1

The most difficult part of learning to penetrate the net when blocking is receiving appropriate feedback. Players are often not fully aware of where their hands are in relation to the net. Using elastic stretched across the net about 10-20cms above net height in any blocking drill will provide this feedback.

- Attach elastic to antennae 10-20cms above net height.
- Instruct the players to penetrate the net under the elastic.
- Players receive instant feedback on hand position and timing of penetration.
- Elastic can be also used during scrimmages to provide feedback to blockers (and spikers!)

PENETRATION 2

- The coach stands close to the net and throws a ball directly up, parallel to the net
- The blocker completes their movement and catches and immediately releases the ball ON THE COACH’S SIDE OF THE NET.
  o It is very important that if the ball is not caught it will land in the same position that it was thrown. The blocker’s MUST be required to catch the ball completely over the net to gain a benefit from the drill.
- The coach should time the throw so that the throw occurs after the blocker has jumped.
- This drill can be done with medicine balls to add a specific strength component.
READ BLOCKING

• The coach should provide feedback to the player on the focus of their attention (i.e. where are the eyes focused at which points in the blocking process).
• Players should be given as much opportunity as possible to ‘read and react’ the setter (i.e. spiking / blocking drills where the blocker must make decisions).
• Instruct the middle blocker to make ONLY correct moves during a scrimmage. Emphasise that it is not important to make a block, only to make the correct move. This teaches the middle blocker to wait for longer and to learn how much time they really have to make any required movement. This can be a powerful learning tool as blockers always think they have less time than they do.

BOX DRILLS

• The coach or another player stands on a box and spikes at a blocker.
  o Without footwork to practice hand and upper body movement
  o With footwork to practice the whole technique (without read blocking)
  o Double or triple blocks
  o Assist blocks
  o Spike directly into the blocker’s hands
  o Spike away from the blocker’s hands to encourage the blocker to read cues from the spiker

DOUBLE AND TRIPLE BLOCKING

Players should practice double and triple blocking footwork. This is an excellent drill for the warmup period of practice. It is extremely important that these drills are done correctly. The coach must ensure correct footwork and arm and hand movements.

• Blockers decide which direction to go and time their footwork accordingly.
  o Coach provides feedback on movement, position and timing.
• Blockers must respond to a visual cue and form a block in the designated position.
  o Ensure that the cue is as realistic as possible. A verbal cue is not appropriate as blockers are required to respond to visual cues in a match.
  o Use a setter whenever possible.
• Block must respond to a setter and block a spiker in a required position.
  o This exercise can be executed as a stand-alone drill or as the initiation for any scrimmage.

GENERAL BLOCKING

Blocking can also be practiced in any spiking drill. It is also beneficial for the spikers to practice against a live block.

GAME PLAY

Blockers are given specific tactical instructions for a drill.

• E.g. read / commit / assist / line / cross etc.
  o Feedback is given on the tactical and technical execution.
## TROUBLESHOOTING GUIDE

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>CAUSE</th>
<th>SOLUTION</th>
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<td>Blocker hands are not over the net</td>
<td>Focus on hand penetration</td>
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<tr>
<td></td>
<td>Blocker is too close or too far from the net</td>
<td>Focus on position in relation to the net</td>
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<tr>
<td></td>
<td>Blocker is late</td>
<td>Practice read blocking and/or footwork</td>
</tr>
<tr>
<td>The ball goes between the blocker’s arms</td>
<td>The arms have not penetrated the net</td>
<td>Focus on penetration over the net</td>
</tr>
<tr>
<td></td>
<td>NOTE: This has NOTHING to do with the arms being apart.</td>
<td></td>
</tr>
<tr>
<td>Block flies or floats</td>
<td>Poor footwork</td>
<td>Focus on pushing off with the outside foot</td>
</tr>
<tr>
<td></td>
<td>Hips facing the direction of the movement and not the net</td>
<td>Focus on outside foot facing the net</td>
</tr>
<tr>
<td>Block ‘hits at the ball’</td>
<td>Block reaches maximum height before beginning penetration</td>
<td>Elastic drills</td>
</tr>
<tr>
<td>Outside blocker is consistently tooled</td>
<td>Hands are not directed forwards</td>
<td>Focus on penetrating straight over the net</td>
</tr>
<tr>
<td></td>
<td>Block has not penetrated</td>
<td>Focus on penetration</td>
</tr>
<tr>
<td>Outside blocker is consistently tooled although the hands are straight</td>
<td>Blocker is in poor position in relation to the spiker</td>
<td>Focus on watching the spiker and jumping in the appropriate position</td>
</tr>
<tr>
<td>Outside blocker is consistently tooled off the arms</td>
<td>Blocker is reaching into court</td>
<td>Focus on penetrating straight</td>
</tr>
<tr>
<td></td>
<td>Blocker is making poor position</td>
<td>Focus on watching the spiker and jumping in the appropriate position (inside hand v spiking arm)</td>
</tr>
<tr>
<td>Spike goes past the inside hand of the outside blocker</td>
<td>Blocker is rotating as the spiker attacks</td>
<td>Focus on pushing forward with the inside hand</td>
</tr>
<tr>
<td>There is a seam in the block</td>
<td>Middle blocker is too far from the outside blocker</td>
<td>Focus on blockers making shoulder contact</td>
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<td></td>
<td>Middle blocker is concerned about landing on the foot of the outside blocker</td>
<td>Focus on first step of the middle blocker</td>
</tr>
<tr>
<td></td>
<td>Middle blocker is late to the outside</td>
<td>Practice footwork without the ball to give the players confidence in each other</td>
</tr>
<tr>
<td></td>
<td>Reading skills are poor</td>
<td>Focus on cues that can allow the blocker to make earlier decisions</td>
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<tr>
<td>PROBLEM</td>
<td>CAUSE</td>
<td>SOLUTION</td>
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<tr>
<td>Middle blocker is late to the outside</td>
<td>Movement is poor and inefficient</td>
<td>Practice movement skills, particularly use of the correct footwork</td>
</tr>
<tr>
<td>Middle blocker makes short first step</td>
<td></td>
<td>Check the starting posture of the middle blocker, especially the width of the feet</td>
</tr>
<tr>
<td>Middle blocker goes in opposite direction to the set</td>
<td>Middle blocker is not reading the setter</td>
<td>Focus on the setter’s hands</td>
</tr>
<tr>
<td>Outside blocker jumps against the quick attacker in his zone and is beaten to the outside</td>
<td>Outside blocker is not reading the setter</td>
<td>Focus on the setter’s hands</td>
</tr>
<tr>
<td>Outside blocker does not understand his role</td>
<td></td>
<td>First priority of the outside blocker is the outside spiker</td>
</tr>
<tr>
<td>Spike is deflected out on the spiker’s side</td>
<td>Block is too late to penetrate</td>
<td>Focus on speed of penetration</td>
</tr>
<tr>
<td>Middle blocker runs into outside blocker</td>
<td>Outside blocker is not reading the setter early</td>
<td>Focus on read blocking for outside blocker</td>
</tr>
<tr>
<td>Outside blocker is moving too late or inefficiently</td>
<td></td>
<td>Practice specific footwork for double blocks</td>
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BLOCKING IN BEACH VOLLEYBALL

BLOCKING PRIORITIES

- BLOCK THE BALL
- CHANNEL ATTACK TOWARDS DEFENCE
- FORCE SPIKE ERROR
- DEFEND

The first priority of the blocker is to block the ball, i.e. the power attack of the spiker. This is the most difficult ball for the defender and therefore the blocker will attempt to stop the power hit at the net. Using scouting information as a basis blocker will watch the spiker very closely to ensure that the power shot is not available. The blocker’s goal is to force the spiker to make a power shot to another, less preferred, part of the court that is covered by the defender (i.e. channelled towards the defence) or a slower hit that the defender can reach.

If the blocker blocks in a good position with good timing and form, the spiker will be forced to take greater risks to make a point which optimises the chances of forcing a spike error.

An important blocking skill is to know when to block and when to get ready to defend i.e. when NOT to block. If the spiker is in a poor situation (i.e. one in which they will not be able to spike hard) the blocker will have very little chance of blocking the ball, and their presence will open a big area of the court. In this case the blocker must retreat from the net and defend.

TECHNICAL REVIEW

Start Position and Eye Sequence

- The blocker starts;
  - In the middle of the net so as not to tip off the receivers about the intended serving tactics and to be ready to block the second hit.
  - About one metre off the net if ‘pulling off the net’ is a major team tactic. This is the retreat ‘ready position’.
  - NOTE: If the blocker must serve first, they can run directly to the area of the net they expect to block as it will be clear which player will be spiking.
- Adjust position gradually along the net towards the likely attacker.
- Watch the pass to determine the likely setting position.
- Watch the spiker to determine the power hit and shuffle to a neutral position using short fast steps.
  - The neutral position is one step away from a either a cross court or line block.
- Line up to block before deciding whether to block or to retreat.
  - This is very important as not lining up to block first will either make getting into position to block very difficult or will tip off the attacker to the intentions of the blocker.
- Watch the set closely and decide whether to block or retreat.
Penetration and Form

Penetration and form are keys in all forms and at all levels of volleyball. With only two players covering the court in beach volleyball the margin for error is significantly less. A single blocker must cover a greater area of the court, and the single defender is less able to correct any errors made at the net.

Penetration over the net is the reach of the blocker into the space on the opponent’s side of the net. This effectively makes the court smaller and therefore makes the job of the spiker more difficult. For this reason, penetration is more important than height above the net. The position of the jump affects the ability of the blocker to penetrate effectively. If the jump is too close to the net, the blocker will be unable to reach forward without touching the net. If the jump is too far from the net, the blocker cannot reach the net at all. The exact position depends on the height and jumping ability of the blocker. In some of the individual blocking variations described below it is necessary for the blocker to reach outside their body to attempt to block or influence the spiker. The key point is that a blocker can reach outside the line of their only as far as they maintain penetration. The ability to reach in the block is directly determined by the height and jumping ability of the blocker.

The block form is the position of the hands and arms as they are over the net. The block form determines to a large degree where the ball will go after contact. The perfect form is with blocker’s shoulders parallel to the net and the arms forward, not more than shoulder width apart. In beach volleyball, situations and tactics often dictate that the blocker will not be in this optimal position. The keys are to ensure that the hands are directed to the court and the blocker keeps their arms close to the net to minimise the opportunities for the spiker to tool the block.

Position and Timing

• The blocker holds a neutral position for as long as possible.
• At the last moment the blocker steps quickly to the final blocking position.

  NOTE: There is a difference between men and women in this regard. Men must be able to influence the hard spike at the net and must move late and fast. Women attackers are not as reliant on the hard spike and so the block will tend to be positional. In this case, the blocker can make position earlier. In both instances the technique is the same. The difference is the timing.
• Be prepared to make adjustments in timing as different situations require different timing. In general, due to the surface and consequently the difficulty in attaining a balanced position, the block should jump relatively early, as the spiker is jumping. There are however variations in timing due to the position and speed of the set and spiker and the individual characteristics of the spiker and blocker. Some specific considerations for timing:
  o If the set is close to the net, jump earlier.
  o If the set is off the net, jump later.
  o A shorter blocker should block earlier.
  o Against taller spikers, block earlier.
  o Against spikers with fast arm swings, block earlier.
  o If the spike approach is fast, block early.
  o If the spike approach is slow, block late.
• Start the jump as low possible (i.e. low squat position), as a low position increases power for the jump and can keep the block out of sight of the spiker.
• Penetrate early to discourage the spiker from spiking with power as this is the most difficult to defend. Then reach for the shot if applicable.
• Arm movement is active. However, always ensure that form is good.
  o When blocking into an angle ensure that form is maintained (i.e. ‘a wall that can move’).
• Always watch the spiker!!! The spiker dictates the angles that must be blocked. The blocker must watch the spiker’s upper body, especially after the block jump.
• If the blocker determines that a shot is more likely than a spike, then the jump should be delayed and the block should reach high to force a higher shot and therefore give the defender more time. In this instance, the positioning of the block is to force the attack to shoot over the block and never past the block in the same direction the block is intended to cover. For example, if the block is line, the defender has no chance to reach a shot played past the block down the line.
Blocking Positions

There are three normal blocking positions:

Line (i.e. to block the power spike that is directed towards the line)
  o Usually signalled by one finger held behind the blocker’s back
    o When blocking a left side attack, the blocker’s outside shoulder lines up on the spiker’s hitting shoulder.
    o Line up the outside hand against spikers hitting hand. The ball is the line-up point and the inside hand reaches toward the middle of the court.
    o If the set is in the middle of the court, block MORE line.

• Cross (i.e. to block the power spike that is directed cross court)
  o Usually signalled by two fingers held behind the blocker’s back.
    o Using the line blocking position as a guide, the blocker blocks slightly more cross court.

• ‘Ball’ (i.e. the blocker will read the spiker and block according to the cues they see from the spiker)
  o Usually signalled by a fist held behind the blocker’s back.

NOTE: In practice there is only a small difference between these positions as the blocker does not want to open up a large area of the court.
Technical variation

In beach volleyball there are several technical variations that are used to improve the effectiveness of the block. The object of these is to hide the intention of the blocker until the last possible moment. In using all of these techniques, the blocker's form MUST remain good throughout the various movements. The coach (and the blocker) must be aware that these variations are only effective if the basic blocking principles are maintained. For example, when reaching it is tempting for the blocker to reach as far as possible. However, the cue must be to reach as far as possible while maintaining good form and penetration. If the blocker cannot maintain form and penetration, then the block will not be effective in covering the net effectively and will be more likely to deflect the ball out of reach of the defenders.

- **Reaching**
  - A tall or high jumping blocker can reach with their hands to block in a position away from the body.
  - In timing the arm movement, it is essential to show the actual direction of the block as late of possible.

- **In and out jumping**
  - The blocker positions themselves to show the spiker they are blocking in one direction.
  - The blocker jumps ‘into’ the angle they wish to block, either line or cross court.
  - In timing the jump, it is essential to show the actual direction of the block as late of possible.
  - Ensure the blocker penetrates over the net.
  - The lateral distance of the jump is small, probably only about 50cm.

- **Spread blocking**
  - The blocker positions themselves to show the spiker they are blocking in one direction.
  - The blocker opens (spread) their arms to cut out the angles on either side of the block.
  - This can be either one arm, with the other blocking as normal, or both arms
NOTES:
All of these technical variations require a certain height above the net in order to be effective.

**IMPORTANT SKILLS**

**Retreating from the net**
Retreating from the net is also known as dropping, pulling or peeling from the net. This skill is more common in women’s beach volleyball. In the men’s game it is used more to channel the attack to a fixed position.

A blocker may retreat in either one of two situations. The retreat may be either ‘situational’ or ‘tactical. A situational retreat is one where the blocker responds to a poor attacking position of the opponent and decides that is more appropriate to defend than to block. A tactical retreat is a prearranged tactic where the blocker will show that they intend to block, but instead retreats at the key moment. When using a tactical retreat, the block will often also retreat to a prearranged defensive position. Scouting information can assist a team in deciding when in may be possible to tactically retreat and to which position.
The technique of retreating from the net is covered in detail in the chapter ‘Defensive Skills’.

**Blocking the second contact attack**

The blocker must remain attentive for the attack on the second contact or ‘ball on 2’. In this situation the blocker’s priority will not be put up a strong block but to maintain a presence in front of the setter/spiker to channel the attack towards the defender. The optimal position for the blocker to line up for the ball on 2 is on the power angle of the opponent.

**Blocking in Transition**

In the situation where the blocker must block again (i.e. when they block the first ball back into the opponent’s court) they must return to the neutral position as quickly as possible. This is a key point.

In the situation where the opponent has defended a spike, the team must be ready to transition to block very quickly. If there is sufficient time, the blocking specialist will take their normal position. If the play unfolds too fast, the player who has just spiked may be in a better position to block as they are likely to be closer to the blocking point. These situations must be communicated very quickly and clearly.
COACHING BLOCKING IN BEACH VOLLEYBALL

TRAINING IDEAS

BOX DRILLS

- The coach or another player stands on a box and spikes at a blocker.
- 2 coaches (or players) stand on two boxes of different heights and different distances from the net to practice blocking with different timings
  - Player must block both balls.
  - Player blocks one ball and retreats and defends on the other.

![Box Drill Diagram]

BLOCKING MULTIPLE ATTACKS

Blocker must block two balls; one from a spiker in the middle of the court, one from a coach on a box on the outside. This practices the blocker’s readiness to block and movement between two blocking positions. The coach controls the timing of the drill.

![Multiple Attack Diagram]

GENERAL BLOCKING

Blocking can also be practiced in any spiking drill. It is also beneficial for the spikers to practice against a live block. Always give the blocker the choice of blocking or retreating. The blocker can also practice specific tactics and technical variations as directed by the coach.

GAME PLAY

Blockers are given specific tactical instructions for a drill.
- E.g. block line / block cross / reach out / stepping etc.
  - Feedback is given on the tactical and technical execution.
## TROUBLESHOOTING GUIDE

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<td>Block flies or floats</td>
<td>Poor footwork</td>
<td>Focus on footwork</td>
</tr>
<tr>
<td>Blocker is consistently toolled</td>
<td>Blocker is not penetrating</td>
<td>Focus on penetration of the block</td>
</tr>
<tr>
<td>Blocker is making poor position</td>
<td>Blocker shows final position too early</td>
<td>Focus on late and aggressive step to position</td>
</tr>
<tr>
<td>Blocker shows final position too early</td>
<td>Block tactics are incorrect</td>
<td>Reconsider block tactics</td>
</tr>
<tr>
<td>Defender has too much of the court to defend</td>
<td>Blocker shows his final position too early and gives away the defensive position</td>
<td>Use one of the technical variations to delay ‘showing’ the block</td>
</tr>
<tr>
<td>Blocker is in poor blocking position</td>
<td>Block tactics are incorrect</td>
<td>Reconsider block tactics</td>
</tr>
<tr>
<td>Blocker is beaten with a high shot when retreating</td>
<td>Blocker retreats too late</td>
<td>Focus on timing of move</td>
</tr>
<tr>
<td>Retreating blocker holds his hands too low</td>
<td></td>
<td>Keep the hands relatively high</td>
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</table>
**DEFENCE**

Defence is in the action of keeping the ball off the ground, or more specifically, keeping the ball spiked by the opponent from ending the rally. The word defence in volleyball is often used to describe two different situations. As well as the action of keeping the ball off the ground, the term defence is also applied to the coordinated action of winning points when serving through the combination of serve, block, defence and transition attack.

This duplication of terms can lead to some confusion but this chapter will focus solely on the action described above, that of keeping the ball off the ground. The chapter ‘DEFENSIVE SYSTEMS’ will address the coordination of serve, block, defence and attack. At the same time, it must always be remembered that defence is a consequence of blocking. A good blocking team will be good defending team.

**DEFENCE IN VOLLEYBALL**

**PRIORITIES OF DEFENCE**

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<tr>
<td>o</td>
<td>ALLOW AN OFFENCE FROM THE DEFENSIVE TEAM</td>
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<tr>
<td>o</td>
<td>ALLOW AN ATTACK FROM THE DEFENSIVE TEAM</td>
</tr>
<tr>
<td>o</td>
<td>FORCE THE OPPONENT TO ATTACK AGAIN</td>
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</tbody>
</table>

As with receiving the first ball from a serve, the first priority of the defender is to play the ball with accuracy and height, to allow the team to run an offence. Accurate defence, allows more spikers to be available for the setter and therefore increases the chance of winning a point through transition attack. The defender should aim to play the ball high near the optimal setting position. If the defended ball is played high enough the setter has time to get into position and the spikers have time to move from their blocking or defensive positions to prepare for attack. A defended ball that is high but not near the setting position will allow an attack but not allow spikers to participate. A defended ball that is played to the setter’s position but is too low will not allow all spikers time to be available and is not optimal. Both accuracy and height are required for an optimal defence.

The second priority is to defend a ball that allows an attack by the defensive team. In this case the ball must be played high enough that the setter or another player can set to an attacker. If the team can attack the defence can still be considered to be a good defence. One common defensive rule is that the ball must be played across the court. The defenders orient themselves so that if the ball rebounds from them it will travel across the court in the direction of their teammates. This optimises the chances that a teammate will be able to set to an attacker.

The final priority is to make the opponent attack again. Even a desperation attempt that results in a free ball to the opponent will provide a new opportunity to block and defend, and just as importantly, for the opponent to make an error.

**TECHNICAL REVIEW**

**GENERAL POSITIONING**

Each defensive system will have specific positioning rules for the players, but there are some general rules that can be applied in most situations.

**Primary position**

The primary position is the position the defenders start in when the team serves. It is normally defined as the optimal position to defend a first tempo attack as for the first tempo attack there is no time to move between the set and the spike therefore the players must be in this position before the set. The defender remains in this position until the ball is set away from the first tempo.

Position V and I are relatively shallow in the court and can face across the court. Position VI is deeper than V and I and can stay in the centre or can move to either side depending on the specific tactics of the team.

The exact positions are dependent on the defensive system applied by the coach.

NOTE: The primary position is NOT a neutral position. It is the position to defend the first tempo attack.
Secondary position

The secondary position is the final defensive position the players reach for each type of attack. A simple example of the secondary positions for an attack from position IV is:

- **Position I** is responsible for:
  - The ball that goes past the block down the line
  - Tips
  - The ball that is tooled off the block in the direction of position I

- **Position VI** is responsible for:
  - The baseline
  - The seam between the blockers
  - Balls that are touched by the block and fly deep into or behind the court
  - Spikes that go over the block

- **Position V** is responsible for:
  - The ball that goes past the blockers cross court (CUE: see the ball outside the block)
  - Tips
  - Balls that deflect off the block and travel cross court

- **Position IV** is responsible for:
  - Balls hit very sharp cross court
  - Tips

The positions are mirror imaged when the attack is from position II or I.

The line and cross court defenders should be in a position that follows the principle of the ball ‘crossing the court’. This principle states that each player should be in a position such that, if the spike is too fast for the defender to react, the ball will still rebound across the court in the direction of the other players and not over the net or outside the court. In practice this means the line defender should have their outside foot forward, and the cross court defenders will tend towards having their backs to the sideline.
NOTES:

- In a good defensive system, the distance between the primary and secondary position will be small enough that the defender has ample time to move from one position to the other. If this rule is followed, the defender has a better chance of being stationary and stable at the secondary position (see PLAYING THE BALL), and hence a better chance to make a successful defence.

- The cue ‘see the ball outside the block’ is a useful cue at lower levels, but at higher levels when the block is bigger and penetrates further over the net, it may not literally be true in all cases.

- If a defender finds themselves directly behind a closed block, they should retreat deeper in the court, otherwise they are covering the same area as the block. This is inefficient from a team perspective. By retreating deep in the court, they are prepared for a ball deflected by the block which is most likely situation.

BASIC POSTURE IN THE PRIMARY POSITION

- Feet are a comfortable width apart
  - If the feet are too wide apart, the defender cannot move quickly
  - If the feet are too close together, the defender is unbalanced for balls outside the line of the body

- Weight is forward, but comfortable
  - The head should be in front of the feet
  - Weight is on the front of the feet as every movement requires pushing from the front of the feet.
  - Heels are on the ground for balance

- Arms are in front of the body in a neutral position to allow the ball to be played either underarm or overhead
  - The shoulders should be relaxed to allow fast movement

NOTE: Remember, the defenders’ first priority is to dig all balls that are within reach. Chasing after balls outside the defender’s reach is a secondary priority. The basic posture must reflect this.
EYE SEQUENCE
The eye sequence for defenders is very similar as it is for blockers.

PASSER - BALL - SETTER - BALL - SPIKER

Defenders must:
• watch the pass.
• watch the setter while scanning the movement of the spikers.
• watch the set to determine the position of the attack.
• watch the spiker while taking into consideration the block.
  o Watch the spiking hand very closely.
  o Hold position for the spike that is deflected by the block. That is, do not ‘anticipate’.

While watching these actions closely, the defender will be making constant, small adjustments in position and body orientation.

PLAYING THE BALL
• The movement from the primary to secondary defensive position is
  o Short, fast shuffle, steps
  o Step, cross step (similar to blocking footwork) if the distance is longer
  o Maintain the basic posture (i.e. low, head still)
• The defender is stationary as the spiker contacts the ball, but balanced so that they can move quickly if required. This is a key point.
• Expect every ball to be played in my area.
• Block the ball
  o That is, where possible the ball should be defended near the midline of the defender rather than outside the body.
• Contact should be in front of the body Hold position for the spike that is deflected by the block. That is, do not ‘anticipate’.
  o Cues:
    ▪ Reach for the ball
    ▪ Take the ball early
  o Use the arms to direct the ball high
  o Use the shoulders and body to absorb energy
• The more difficult the defence, the higher the ball should be played. Remember that the setter is not penetrating to the net before the defence. They must defend first and then penetrate. The same applies to spikers moving from defensive positions to attack positions.
ADVANCED TECHNIQUES
OVERHEAD DEFENCE
If the ball arrives at shoulder height or above the defender will need to use another
technique to play the ball. There are three basic possibilities:
Setting: If the spike is not too hard, or the defender is highly skilled, it can be played with
a setting action similar to the overhead service reception technique. The important point
is to keep the body still and take the ball with the hands and fingers. Use the cue ‘catch
the ball’ to give the defender the feel of having the ball in their hands, but note that the
ball cannot literally be held. The arms must follow through to full extension to ensure the
ball is played high enough to allow an effective transition attack.

Two handed dig: If the spike is too hard or the defender is not proficient at setting a hard
spike, then the two handed dig should be used. The ball can be played with the palms or
the forearms if the hands are clasped.
One handed dig: If the ball is travelling more slowly but over the head of the defender
(e.g. a ball touched by the block) the defender can use a single hand to play the ball
towards the setter. The hand and wrist is held firm and the action is similar to the float
serve. The ball is played with the palm of the hand.

ONE HANDED DEFENCE
In the short cross court positions (i.e. the non-blocker and position I and IV) the defender
may be required to defend a very hard driven spike that travels a very short distance. In
these cases, there may not be time to play the ball in the traditional manner. Indeed,
attempting to get two hands to the ball can actually reduce the chances of successfully
defending the ball. If the ball is fast and to the side of the defender it can be appropriate
to the ball with one hand. The keys to this technique are:
- Arms are very relaxed (to allow fast movement) and in front of the movement.
- Upper body remains fixed while moving to the ball. That is, do NOT rotate the body.
SPRAWL
The sprawl is used when the ball is played in front of the defender but they do not have enough time to move to the ball. The defender pushes forward and contacts the ball either before or just after their arms touch the ground. The weight of the player is taken first by the wrists and forearms and THEN by the knees.

As with all defensive and reception actions, the integrity of the platform should be maintained as long as possible.

NOTE: The sprawl can only be performed effectively if the defender is in a good basic posture.

DIVE and ROLL
The most important point to remember about the dive and roll techniques is that they are NOT techniques for defending the ball. They are techniques for landing after defending difficult balls without the risk of injury and for quickly getting back onto the feet for the next action. Without skill in these techniques, the ability of the defender to play balls outside the normal defensive range will be severely limited. They are also psychologically important as they reduce the fear that many players have about hurting themselves. As coaches demand that players go for every ball, they have a responsibility to teach them to do it safely.

EVERY player should learn these techniques. Female players do not normally use the dive technique, but male players should be proficient in both diving and rolling. The dive is used for balls that are a long way in front of the defender.
• dive forward taking off on one leg
• take the ball above the ground with one or two hands
• take the bodyweight in front of the head with both hands outstretched
• ‘lower’ the chest onto the ground
• extend the back and curl the legs backwards to prevent the knees and hips banging into the ground.

NOTE: Highly skilled players can take all their weight on the chest, using only one or no hands at all to guide the chest to the ground. This is an advanced skill.

The roll is used when the ball is to the side of the defender or also in front for female players.

• Reach for the ball to the side with one or two hands
• Take the weight of the falling body on the knee and then thigh
• Arm remains outstretched
• Roll over the outstretched arm and the opposite shoulder
• Land on the feet in the ready position for the next action.
**PANCAKE**
The pancake is a desperation defensive action when the defender is late and has no opportunity to play the ball before it hits the ground. The pancake is played by putting the hand flat on the ground so that the ball then hits the hand instead of the ground. The pancake is normally played in conjunction with a sprawl or a dive.

Remember this is the last option for defence. The player has very little control over the ball and it is often a very difficult situation for referees to adjudicate. Playing the ball above the ground when possible, increases control and reduces the possibility of a mistaken call by the referee.

**IMPORTANT SKILLS**

**TRANSITION**

For defenders, transition is the movement between primary and secondary position and back again and also the transition from attack to defence and back again. The movement from the primary to secondary position should be efficient while keeping in mind the requirements of the action. Normally the distance is short so a simple shuffle step can be used to keep the required posture and body position. If the distance is a little longer, a step-cross movement can be used. Maintaining balance, posture and position is vital. In returning to the primary position for a second defensive opportunity, there is typically more time available and footwork is not so important. However, the defenders should return to position as quickly as possible ensuring they return to a stationary position before the setter plays the ball. For transition movements from defence to attack the same principles hold - a shuffle step for short distances and turn and run for longer distances.

**ATTITUDE!!**

Defence is the ‘dirty work’ of volleyball and it requires the appropriate attitude. For successful defence, there must be an individual and team attitude of never letting the ball hit the floor under any circumstances. However, it is not enough only to try for every ball. The defender must aggressively pursue each ball with the objective of playing it into a position of advantage for their team. Players with this attitude will often be able to defend seemingly ‘impossible’ balls, even if technique is deficient. An aggressive attitude in defence is essential and infectious. Each successful play frustrates the opponent and builds up your team.

A typical catchphrase used in teaching attitude in defence is the ‘NON EFFORT’. A ‘non-effort’ is giving up on a ball either by stopping before the ball lands or by not diving or rolling towards a difficult ball. Many coaches will sanction ‘non-efforts’ to develop the attitude of ‘never say die’. Extra defensive actions (e.g. ‘coach on 1’ - see Training Ideas later in this chapter) reinforce the required behaviour and also provide extra practice.
TACTICAL REVIEW

ROLE OF THE LIBERO

Although the primary role of the libero is reception, they also play a major role in defence. The libero should be the ‘captain’ of the defence in the same way that the setter is the ‘captain’ of the offence and the middle blocker is the ‘captain’ of the block. They must organise the other defenders in relation to the team defensive tactics and be able to make subtle variations as the game progresses. The libero most often plays defence in position V.

POSITIONING OF PLAYERS IN DEFENCE

... in relation to defensive qualities: Individual player’s defensive skills can be used to determine which position they will play in defence. Playing in position V and position VI have different skill sets. In position V the defender will typically be required to hold a fixed position and dig hard driven spikes that are untouched by the block. The position VI defender will have a much larger area to cover and must be able to read the play as it develops. They will also play fewer hard driven spikes and more spikes that are deflected by the block. Taking this into account, although the libero normally plays in position V their individual skills may be better suited to playing in position VI. The coach should not have fixed ideas about what ‘must’ happen, but be prepared to put players in the position where they can best help the team.

... by relation to transition attack. A secondary consideration for placing players in defence is their roles in the transition attack. For this reason, the setter and opposite normally defend in position I, and the passer hitters defend in position VI so they can still attack in that position. The coach must make the decision whether to place the players in primary defensive positions (i.e. based on their defensive skills) or primary offensive positions (i.e. based on their attack responsibilities) or more likely a mixture of both.
COACHING DEFENSIVE SKILLS

Training defence involves two different kinds of drills.

- Drills for developing ball control, which is a vital component of successful defence:
  o aim to maximise ball contacts for the players to develop technique and ‘feel’ for the ball. These are relatively simple drills that do not take into account the ball or player movement or use the required eye sequence.

- Drills that specifically train defence;
  o are most often over the net drills and take into account as many of the specific movements and sequences as possible.
  o should always be in specific court positions with movements between primary and secondary defensive positions.
  o should include a block whenever possible.
  o also train ball control.

For example, simple two-man pepper has NO similar movements or specific requirements for defence. Therefore, it must be considered as a ball control drill rather than a defensive drill.

TEACHING POINTS

A TEACHING PROGRESSION FOR DIVING

Always use gymnastic mats when teaching diving. Ensure that the mat is fixed and cannot move due to the momentum of the diver.

- Player kneels, extends hands in front of the body, simulates the landing movement without leaving the ground.
- Player stands, leans forward then falls forward, catching themselves with their hands, and simulates the landing movement kicking the legs up behind.
- Player begins from a handstand, coach grabs and holds the feet of the player while simulates the movement
- Player stands on the edge of the mat in a very low position, dives and completes the movement, while maintaining the low position.
- Player dives onto mat using an approach
- Player must dive and retrieve a ball thrown by a coach or partner.

NOTE: Many players learn the movement well through observation and can skip over some or all phases.

TRAINING IDEAS

BALL CONTROL DRILLS

- Pepper
- Directed pepper
  o can be useful to practice advanced techniques or to give players extra contacts. E.g. two contacts with a movement in between, hitting above the head, hit to the sides, hitting in front for sprawl or dive, etc
- 3-man pepper
  o introduces the concept of triangles (i.e. setting the ball away from the direction of the first contact, playing the ball away from the direction of the spiker).
- ‘Coach on 1’
  o the coach stands with a trolley of balls and spikes / tips / rolls to a single defender.
  o this is an excellent drill for teaching the ‘attitude’ of the successful defender.
- Over the net pepper
  o 3 man (players play both sides of the net), 4 man (players change only on their own side)
PRIMARILY BALL CONTROL DRILLS with Defensive Elements

- 6 man pepper
  - all play is on one side of the net
  - eye sequences are similar to defence
  - players should be in specific defensive positions

- Rally drills. These are over the net drills where spikers hit for accuracy and control and two teams must work together to achieve a set number of net crosses.
  - rotating rally (5 or more players per side, front row spiking, players rotate in normal volleyball order)

- full court rally (6 v 6, players in their normal positions, with correct movements in block and defence)

- Defensive Relationship Drills
  - coach initiates from ground or from box over the net
  - 2 - 4 defenders
  - coach spikes or tips with goal of practicing specific movements and relationships between court positions
    - e.g. if a spike goes between two players, they practice the specific movement patterns (i.e. which directions to cross)
    - e.g. which players move to cover tips, etc.
    - drill can be progressed by including setting and spiking
NOTE: The coach must have a very clear idea of how their defensive system works and structure the drills carefully to reflect the specific requirements of their system. This is an excellent specific warm up drill as all movements and actions are specific. It also allows tactics to be trained during the warmup time. As a warmup routine, start with two players on court, then three, four, six. Continue as an over the net rally drill. Each set should be more intense than the previous one.

**DEFENSIVE DRILLS**

- **Standing on the ground**
  - Players work in pairs, one at net, one in defence
  - Defender moves from primary to secondary position and defends spike

- **Standing on boxes**
  - One player on a box or table, one in defence
  - Defender moves from primary to secondary position and defends spike
  - All variations are possible with 1 - 4 attackers and 1 - 6 defenders
  - Include setting after defence for more specific team training
  - Include blockers for more specific team training

- **Live action**
  - Defence plays against live spikers
  - Attack from 1 - 4 different positions, with 3 - 6 defenders
  - Include setting after defence for more specific team training. Also, including setting in a defensive drill provides more direct feedback on the quality of the defence.
  - Include blockers for more specific team training. Including blockers into a defensive drill is also more game like.

NOTE: All drills with scoring systems can have sanctions for ‘NON EFFORTS’. Automatically returning to zero for all ‘non efforts’ with very quickly reinforce the required behaviours.

Negatives in drills for defensive plays over the net can reinforce low movement and high digs.
## TROUBLESHOOTING GUIDE

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<td>Position is too near to the net</td>
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<td>Ball control is poor</td>
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<td>Defender is trying to ‘touch’ the ball rather than dig it</td>
<td>Demand the defender dig the ball (i.e. practice for success)</td>
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<td>Focus on stationary positions</td>
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<td>Defender doesn’t push with the legs (i.e. the legs go behind the defender rather than the body goes forward from the legs)</td>
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<td>Focus on movement from primary to secondary defensive positions</td>
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<td>Defender has arms too close to body</td>
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<td>Focus on taking the ball in front of the body</td>
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<td>Defender is leaning forward, rather than in a low, upright position</td>
<td>Focus on correct posture at contact</td>
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<td>PROBLEM</td>
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<td>Defender doesn’t react to tipped balls</td>
<td>Defender doesn’t watch the spikers hand</td>
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<td>Check body orientation (i.e. ‘cross the court’)</td>
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<td>Arms are not behind the ball</td>
<td>Ensure arms are in front of and away from the body</td>
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<td>Balls touched by the block are not retrieved</td>
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<td>Hold position until the ball is past the block</td>
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DEFENCE IN BEACH VOLLEYBALL

DEFENSIVE PRIORITIES

- ALLOW AN ATTACK FROM THE DEFENSIVE TEAM
- FORCE THE OPPONENT TO ATTACK AGAIN

The primary priority of defence is to allow an attack by the defensive team. The ball must be played in a way that allows the defender (or blocker if they have touched the ball) the optimal chance to attack. The defence always considers the actions that will follow. The secondary priority is to force the opponent to attack again. Even a desperation attempt that results in a free ball to the opponent will provide a new opportunity to block and defend, and just as importantly, for the opponent to make an error.

TECHNICAL REVIEW

INITIAL POSITION

In beach volleyball one player must be prepared to defend a large area of the court, both spikes and off-speed shots, and must therefore remain in a neutral position for as long as possible. If they commit to a position too early it will compromise the chances of covering the court as the attacker can easily see the defender and attack a free area. Depending on the opponent, the initial position of the defender (analogous to primary position in indoor volleyball) is a position that allows the defender to defend an attack on the second contact.

BASIC POSTURE IN THE INITIAL POSITION

- Feet are a comfortable width apart.
- Weight is forward, but comfortable.
- Arms are in front of the body in a neutral position (parallel to the ground) to allow the ball to be played either underarm or overhead.
  - The shoulders should be relaxed to allow fast movement.

MOVEMENT AND FINAL POSITION

- Start from a neutral position near the centre of the court.
- Watch the receiver first.
- Watch the movement of the setter before contact to determine if a second hit attack is possible.
- After the threat of a second hit is over, watch the flight path of the ball and movements of the setter and spiker, with particular focus on the spiker.
  - While watching, they make small adjustments in position as required using short, shuffle steps.
- All movements are short and fast.
  - Either shuffle or cross steps can be used while the body stays balanced and the head and eyes stay as still as possible. The hips and shoulders remain facing the attacker.
- Just before contact, ‘step down’ and take the final position outside the block.
  - The priority for final position is to defend against the spiked ball as this is the fastest and most difficult ball to defend. In most cases defending against the shot is the second priority as the defender has more time to move to the ball.
  - If the block is cross court, the defender will be in position outside the block down the line.
  - If the block is line, the defender will be in position outside the block cross court.
  - Body is in a relatively low position with the head still.
PLAYING THE BALL

- Defender is stationary as the spiker contacts the ball, but balanced so that they can move quickly if required.
- Hands are held relatively high and in front of the body to prepare for both high and low shots.
  - The defender should see their own hands as they are watching the spiker
- Contact should be in front of the body.
  - Use the arms to direct the ball.
  - Use the shoulders and hips to absorb energy of the spike.
- The defender will be required to play the ball from a variety of body positions. However, whatever the body position the platform must always be facing the target.
- When required to play the ball above the head, with an open hand or setting action, ensure the eyes remain behind the ball, and the ball is played up rather than forwards. The rules for ball handling allow the ball to be held slightly and the cue ‘catch the ball’ can help give the defender the feel of having the ball in their hands.

- As with reception in beach volleyball, environmental conditions affect how the ball should be played. When the conditions require it, the defender should ‘play the ball small’. Environmental conditions that need to be considered include wind, sun and depth of sand. When playing small in defence, the defender should play the ball:
  - between themselves, the blocker and the desired attack position to simplify all movements. ‘Draw’ the blocker to the optimal setting position. If playing in deep sand, this will minimise the distance the defender must move in transition.
  - played relatively low so as to reduce the effect of environmental conditions.
- If the block touches the ball, the defender becomes the setter. In this situation the ball must be played directly into a position that the blocker can spike.
ADVANCED TECHNIQUES
Due to the nature of beach volleyball that two players must cover the whole court alone, players will be required to play the ball in many different positions and with a variety of different techniques. Some of these variations are:

Chasing shots: The defender will very often have to chase down shots that are played to empty areas of the court. The defender should always attempt to play the ball with two hands, i.e. with correct underarm technique. The key is early preparation of the platform. The platform should ‘lead’ the defender. Even as the defender is falling to the sand, the integrity of the platform is maintained.
**Overhead dig:** If the defender is not proficient at using an open hand defence, then the two handed dig can be used. The ball can be played with the palms or the forearms if the hands are clasped. This technique doesn’t allow the same control as the open hand dig. It can also be used to play slower balls that are not allowed to taken with the open hands.

**One handed overhead dig:** If the ball is travelling more slowly but over the head of the defender, e.g. a ball touched by the block, the defender can also use a single hand to play the ball towards the setter. The hand and wrist is held firm and the action is similar to the float serve. The ball is played with the palm of the hand. Care must be taken with this technique to avoid a ball handling error.

**Pokie:** Another technique that can be used for slow travelling balls overhead is the pokie. The pokie is played with the knuckles. It does not have the same degree of control as some other defensive techniques but may be useful in some circumstances as the defender can play the ball and move more easily to attack.

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**IMPORTANT SKILLS**

**READING THE SPIKER**

As the defender has no help in defending a ball that is not stopped at the net, they must develop excellent skills in reading the spiker. Most of the information for the defender comes from the spiker. The defender must collect cues that will help them decide whether the spiker will spike hard or play a shot and in which direction the attack will go.

Cues that the defender must consider include:

- placement of the set
  - width (e.g. if the set is short, the spiker is more likely to spike cross court or to play a shot)
distance from the net (e.g. if the ball is off the net, be prepared for the blocker to retreat).

- the spiker
  - direction of approach (i.e. at an angle or straight towards the net)
  - timing of the approach (i.e. is the spiker early or late)
  - height of contact (i.e. the height can influence the type of shot that can be played)
  - direction of spiker’s shoulders

- the jump
  - does the spiker jump maximally? If not, an off-speed shot is likely.

- The armswing
  - Direction
  - Speed
  - Contact on the ball

RETREATING FROM THE NET
An extremely important defensive skill in beach volleyball is retreating from the net when blocking. It is also referred to as dropping, pulling or peeling. Essentially the blocker should not block if there is no possibility of affecting the spiker. If the blocker blocks when there is no chance of affecting the play, the spiker effectively has only one defender to beat, for example the set is away from the net. The blocker must:

- Start in a neutral position from where they can block line or cross or retreat. That is, the blocker must be lined up with the spiker before making a decision on whether or not to retreat.
- Carefully watch the position and speed of the reception, and the movement of the setter and spiker.
- Determine if a hard driven spike will be possible.
  - If a spike is not possible and the set is not close to the net, then retreating from the net is the right tactic. If the set is off the net, it may also be appropriate to retreat even if the spiker can attack with the power as the number angles available to be attacked are greatly reduced and the spike becomes more predictable.
- Delay the retreat until after the set is made. That is, until the last possible moment.
- Use short, fast cross steps while keeping the weight forward and the hips facing the court.
  - This is the same principle as ‘crossing the court’ in indoor volleyball.
- Keep the arms in a relatively high position as the most likely shot is a high one to the retreating blocker.
- Stop BEFORE the spiker makes contact, no matter which the position the retreating blocker is on the court.

NOTE: The position to which the blocker should retreat is normally a fixed tactic. For example, at lower levels if the blocker had planned to be cross court, then they retreat cross court because the defender would normally already be moving towards the line. The reverse holds for a planned line block.

At higher levels, the blocker will normally retreat down the line because the distance is shorter and because the defender will tend to remain in a neutral position for longer. If the set is near the middle of the court, then it is more likely that the blocker will drop cross. For a set near the antenna, the blocker should always drop down the line.
COACHING DEFENSIVE SKILLS IN BEACH VOLLEYBALL

TRAINING IDEAS

OVERHEAD DEFENCE
To effectively teach overhead defence emphasise in drills that the defender must either catch the ball or set to themselves.
Training drills should be included that teach players to effectively decide when to play the ball with open hand defence and when to use another technique (e.g. flat hand or pokie).
That is, drills should have attacking shots that are played with a variety of speeds.

BOX DRILLS
Coach stands on a box or table and spikes towards the defender or plays shots away from the defender.
· Defender must defend two balls consecutively, a spike then a shot. NOTE: For more game like feedback, the defender does not receive the second ball unless the first is successfully defended.
· Defender must defend and then transition to attack.
· Defender must learn to chase down all slow shots. Emphasise early platform preparation.
NOTE: Defence should as often as possible be practiced with a block, even if the block is not active. For example, the block stands in the correct blocking position even if he doesn’t jump to give the defender the perception of the block.

CONTROL DRILLS
Spikers must spike to predefined areas of the court.
1 v 2
One player serves and defends the whole court. This emphasises that the defender must read the spiker effectively and be prepared to chase ‘every’ ball. It also emphasises the importance of the serve and the link between good serving and defence.
· When used as gameplay, the spiker who is dug becomes the server / defender.

GAMEPLAY
· The spikers are directed where to attack, e.g. power cross and shot line, and the defender must read the game and then successfully defend.
· Defender knows where the spike will go and must successfully defend and counter attack.
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<td>Ball goes past the defender too high for him to play</td>
<td>Position is too near the net</td>
<td>Focus on good positioning</td>
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<td>Defender touches many balls but controls few</td>
<td>Ball control is poor</td>
<td>Ball control exercises</td>
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<tr>
<td>Defender is always rushed when attempting to play the ball</td>
<td>Defender is not in a stationary position even if the position is not correct</td>
<td>Focus on stationary position even if the position is not correct</td>
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<tr>
<td>Ball control is poor</td>
<td>Defender is not in a stationary position</td>
<td>Focus on stationary position even if the position is not correct</td>
</tr>
<tr>
<td>Defender does not track the ball efficiently</td>
<td>Focus on controlled movement, keeping the head still and eyes level</td>
<td>Ball control exercises</td>
</tr>
<tr>
<td>Defender has poor technique or poor control</td>
<td>Focus on stationary position even if the position is not correct</td>
<td>Ball control exercises</td>
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<tr>
<td>Defended ball is too low</td>
<td>Defender has arms too close to body</td>
<td>Focus on taking the ball in front of the body</td>
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<tr>
<td>Defender reacts to shots too late</td>
<td>Defender does not read the spiker</td>
<td>Focus on the attacker to get the required cues</td>
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<tr>
<td>Ball deflects from the defender out of the court</td>
<td>Defender has his weight on his heels or moving backwards</td>
<td>Focus on being stationary as the ball is being struck</td>
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<td>Overhead defence is deflected out of court</td>
<td>Eyes are not ‘behind’ the ball</td>
<td>Focus on keeping eyes behind the ball</td>
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<td>Defensive attempt goes behind the dropper out of court</td>
<td>Bodyweight is behind the feet</td>
<td>Focus on being stationary at contact with bodyweight forward</td>
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<td></td>
<td>Hands are too low</td>
<td>Focus on keeping hands high while retreating</td>
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<tr>
<td>Ball deflects from the dropper out of court</td>
<td>Hips are facing out of court</td>
<td>Check body orientation (i.e. ‘cross the court’)</td>
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<tr>
<td>Defender moves in the wrong direction</td>
<td>Defender is guessing not reading</td>
<td>Focus on reading the cues and moving after the spiker makes contact</td>
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OFFENSIVE SYSTEMS

The offensive system of a team is the coordination of all of the players on the court to achieve the outcome of scoring a point through a spike. Therefore, the offensive system includes all of the phases of the offense (reception, setting, spiking) and all of the players on the court. The term is most commonly used to refer specifically to the offense after service reception. However offensive systems that occur after defensive actions (i.e. transition offence) are also included in this chapter.

OFFENSIVE SYSTEMS IN VOLLEYBALL

OFFENCE SYSTEM PRIORITIES

- OPTIMISE STRENGTHS OF THE TEAM
- MINIMISE WEAKNESSES OF THE TEAM
- FLEXIBILITY
- CONTROL TIME AND SPACE

The offensive system developed by the coach should maximise the strengths of all players on the team. Each receiver, setter and spiker will bring particular skills to the team and the coach must devise a method of allowing each of those skills to be displayed. For example, opportunities should be given to spikers to hit their favourite shots. Every player is more engaged in the team if they are able to do the things that are good at.

At the same time, the coach’s system should minimise the weaknesses of all players. For example, a very fast offence may be very effective against a particular opponent but it is worthless if the setter cannot accurately set fast sets or one or more of the spikers can’t spike them. Manipulating the rotational order of the team (see ‘COACHING THE GAME’) is one method of organising the offensive strengths and weaknesses of the team.

A successful offensive system will have some inbuilt flexibility. Only a strong team can play to their strengths without regard for an opponent’s strengths and weaknesses. This could manifest itself in the ability to move players around the net in attack, the type of play in certain situations or the relative positions of the receivers. Often the setter has responsibility for controlling this on a play by play basis.

The offensive team attempts to control time and space. In the simplest terms, the offensive team tries to make the defensive team cover the greatest amount of space (the whole 9m width of the net) in the shortest amount of time (first or second tempo). Width and speed are the prevalent offensive systems in modern volleyball.

DEVELOPING AN OFFENSIVE SYSTEM

RECEPTION AND SETTING

The first component of an offensive system is the reception strategy. Simply, without good reception, an offensive system is not possible. The coach must choose which players should be involved in the service reception, as well as how many receivers will be involved in each rotation. How and if the libero is used must also be considered. The coach has enormous flexibility in this area and need not be constrained by the most common tactics.

Currently in the volleyball world specialisation is the predominant strategy and most teams use a 5–1 system (in which the 5 refers to the number of spikers and the 1 to the number of setters). In the 5–1 system each team has one setter, one opposite (the player who lines up opposite the setter in the rotational order), two middle blockers and two outside hitters. In general, the two outside hitters are responsible for the majority of the service reception, along with the libero who typically (but not always) plays in the backrow for one the middle blockers. In women’s volleyball, the opposite often also plays as a receiver in some situations, but otherwise the system is similar.
The next most common system, especially at lower levels, is the 62 system (6 spikers and 2 setters, with the setter penetrating from the backrow so that there are always three spikers in the front row). In this case, there are two setters, two passer hitters and two middle blockers. The passer hitters and middle blockers have the same roles as in the 51 and the setters spike when they are in the front row. The main advantage of the 62 system over the 51 is that there are always three spikers in the front row and therefore doesn’t require strong opposite. The disadvantage is in the difficulty in finding two setters of the same quality who are also good spikers. These are the factors that the coach must consider when choosing a system. If the coach finds two great setters who can both spike, then the 62 system may be the most appropriate. The Cuban women’s team often use this system to take advantage of the athleticism and attacking ability of their players.

How many receivers are used in each rotation is determined by the quality of the receivers and the quality of the serve of the opponents. If at least one of the two passer hitters and the libero are excellent receivers, then a two player reception system can be used. If the passer hitters are not excellent or if the opponent’s serve is very good (e.g. jump serve) then a three player reception pattern may be better.

When using a two player reception system, the coach can choose which of the three primary receivers will receive in each rotation. Possible solutions include;

- Libero + best receiver
- Libero + backrow receiver to free the front row receiver for a fast outside attack (shown in the diagrams below)
- Libero + front row receiver to free the backrow receiver for a pipe attack

**NOTES:**

- The coach and players must clearly understand the rotational rules in order to optimise the efficiency of the reception patterns. For example, when the setter is in position V they must be behind position IV and to the left of position VI. Therefore, they can stand in the middle of the court to prepare to penetrate to the net.
- The basic reception patterns will not be any different using the 51 or 62 systems. In the 62 system only the first three rotations are used.

**Three Receivers**

![Diagram 1](image1)

![Diagram 2](image2)
Four Receivers

Very strong jump serves can sometimes be received with four receivers, however normally only when the setter is in position I, V or IV. This is because the fourth receiver must be the opposite and these three rotations are the only ones in which the opposite can receive and still be available to attack from the outside positions. If the setter is in position III, II or VI then the opposite would have to receive in the middle of the court and could not attack. This may be used in emergency situations, but effectively limits the team to attacking options.

Reception Target

The reception target is normally between positions III and II. This is simply because the setter can more easily set forwards and in this position has two spikers in front and only one behind. A secondary reason is that most spikers are right handed and it is easier for right handed spikers to spike a ball coming from their right. The reception should also be close enough to the net to allow the setter to set all positions and tempos easily. In practice this is a reception with a high trajectory, normally not more than one step from the net.

Other possible reception targets are the middle of the court and close to position II. If the target is the middle of the court, the middle blocker can more easily spike in front or behind the setter creating more isolation opportunities (see TYPES OF OFFENCE). If the reception target is close to position II, then the setter has more opportunities to play time differential attacks in position II and wide to position IV (see TYPES OF OFFENCE).
The coach can vary this reception target in different situations or to account for the strengths and weaknesses of the team. For example, the middle of the court is used as a target when the setter must penetrate from position V or position IV. This allows the setter to more easily make position to set. Against an aggressive serving team that may be the priority.

Use of the Libero

The libero is a defensive specialist who can make unlimited entries into the court (see ‘RULES OF THE GAME’). The libero’s primary role is in service reception. They should be the leader of the receivers and be able to make adjustments in reception formations as required.

Most commonly the libero plays in the position of the middle blocker who is in the backrow. However, the libero can enter for any backrow player. It could be that one of the middle blockers is an excellent receiver. In this case the coach can use the libero for another player or not use the libero at all.

The important rules to know are that when substituting for a different player, the libero must be off the court for at least one rally. Normally this is a rally when the middle blocker serves. If the coach uses the libero for multiple players, they must always be mindful of this rule.

Court positioning

The actual court positioning of the receivers is very important. There are many small adjustments that are made from play to play depending on the:

- type of serve (e.g. two or three receivers)
- Position of the server. Normally the receivers ‘down the line’ will stand closer together as the ball travels much faster to this area and the receivers have less time to move. This leaves a bigger area for the second or third, cross court, receiver, but they will have more time to see and move to the ball.
- Positions of the receivers. The coach may wish to ‘hide’ a weaker receiver. Then the better receiver(s) will take more area.
- Organisation of receivers. The receivers must be clear on who is responsible for each serve, especially serves that go in the seams between the receivers (see the chapter RECEPTION).
Communication of the Offence

Most commonly, the offence is determined and communicated by the setter through hand signals. The setter can use one signal to denote the plays for all spikers or can signal each spiker individually. If the reception is poor changes can be made by the setter or spiker and are communicated verbally. Less often plays are determined and signalled by the spikers to the setter.

Some offensive systems are determined by the spikers and communicated verbally during the rally. The spikers will see how the blockers move, determine which play to run and call to the setter. This type of offence is rare as it requires highly skilled players and a large amount of practice.

TYPES OF OFFENCE

All effective offensive systems manipulate time and space. If the offence is spread over a greater area (space) the more difficult it will be for the opponents block to cover. Similarly, with fast sets time is reduced for the block and defence to react. The three basic offensive strategies are:

Speed and width

Fast sets using the whole width of the net (hence the importance of the backrow attack for men and slide for women). Speed is the predominant characteristic of modern volleyball. Very fast sets to the outsides put maximum pressure on the blockers’ technique and in many cases force the blockers to make decisions before the set is made. Examples include:

- ‘a quick’ first tempo and fast sets to either antenna. When the setter is front row the outside attack from the right side of the court is from position I.
- in women’s volleyball the variation when the setter if front row is often to play the pipe and slide together in order that there is a strong attack in all zones of the net.
Isolation

Two spikers attacking one part of the net to create space at another point of the net, such as:

- ‘b quick’ or ‘c quick’ first tempo, with a fast set to the opposite antenna

![Isolation in Position II](image1)

![Isolation in Position IV](image2)

Time differential

Two similar sets in the same area of the net with slightly different timings. Time differential attacks are most effective when the first tempo attacker is very early and when the setter is skilled in the use of deception. Examples include:

- ‘Cross’ play or ‘a quick’ with a fast pipe

![Combination Position II and III](image3)

![Combination with Pipe](image4)

- Long first tempo (‘b quick’ or ‘c quick’) with fast ball to the same side. This offence can be especially effective when the reception is good, but too far towards one side.
In practice, a successful offence will use combinations of all strategies at different times to take advantage of its own offensive strengths and the defensive weaknesses of the opposition. For example, it is common to use a time differential combination on the left side (‘b quick’ - black) combined with an isolation attack on the right side. Different elements will be used at different times depending which spikers are available to attack and on the responses of the blocking team.

Four Man Offence

The four-man offence involves the use of a player in the backrow to add complexity to the offence. The block is therefore under more time pressure due to the increase in the number of decisions that must be made. The fourth attacker is normally the ‘pipe’ (i.e. the backrow attack in the middle of the court). The pipe is a very important weapon in modern volleyball. There are several variations of the basic four-man offence involving the pipe. The pipe player can:

- Always run to the middle of the court regardless of the situation.
- Run ‘around’ the first tempo player similar to a front row combination offence. This can avoid confusion in the middle of the court, is more likely to open the seams between the blockers and also prevents the backrow player jumping on the quick attacker.
- Run to a position off centre to take advantage of a favourable blocking matchup or as a mini isolation play.

The other less common use of a four-man offence is a combination play in the middle of the court and a backrow player spiking from the vacant position (normally position I).

BLOCK COVER

An important component of the offensive system is the block cover. In each attacking situation, the players who do not receive the ball must be prepared to get into a position to defend balls that may be blocked back into court. The players must be arranged such that the greatest area of the court is covered. The most common error in block cover is to leave the deep area of the court unprotected. This occurs because the first instinct of all players is to rush forward, knowing that if they do this they will probably not get in trouble with the coach.
The exact positions will be dependent on the type of the offence that is run and the specific roles of each player within the system. An example of a block cover system for an attack in position IV is:

- Middle blocker turns after landing from the first tempo and covers in this position,
- The pipe attacker who has begun an approach takes a step to the left to cover close to the spiker,
- The setter takes a position between these two players,
- The libero will stay deep between position V and VI,
- The position II or I attacker will get as far off the net as possible towards position I

**NOTES:**
- If there is no pipe attacker, then the libero and backrow passer hitter will swap positions, that is the libero plays short and passer hitter plays long. This should be communicated before the rally or be a standard variation in case of poor reception.
- Block cover for an attack from position II is the mirror image.
- If there are any communication breakdowns or confusion, the players have the responsibility to go to a free space. Backrow players have the responsibility to cover the deep positions.

**Technical Notes**

The key technical point of block cover is to watch the block NOT the spiker. The spiker can give some cues but the block determines the direction of the covered ball.

The covered ball must be high enough to allow a new offence to be run. That is, it must be high enough for all spikers to have time to transition to their approach positions, and for the setter to penetrate from their defensive position, make the required decisions and play successfully.

**TRANSITION OFFENCE**

The offence that a team plays after a successful defensive action can be the decisive factor in a game. The team that uses these attacking opportunities the best will normally win. The first objective of the defending team is to play as close to the same offence as normal. The defended ball should be high enough and accurate enough that all the players have time to reach their optimal positions. This must always be the goal.

The players must react and move quickly. After block and defence:

- The first movement is to turn in the direction of the ball to see what happens.
• If the ball is defended, then each player must quickly decide if they will be required to set. Normally the setter has primary responsibility for setting, but it may be necessary for another player to set.
• If not required to set, ALL players must quickly transition to a position to begin the approach.
• The speed of set should be consistent with the time available to the spikers. That is, if the spikers do not have sufficient time, the set should be slower. If the spikers have enough time to prepare, then the set should be the fastest appropriate.

**Free balls**

Free ball situations should always be capitalised on. Some teams have set plays to run from free balls, some call the free ball play before the serve and some will use verbal calls during the rally. Each has its advantages and disadvantages. A set play can be scouted, a previously called play can break down if the situation is not appropriate, and a verbal call requires excellent communication skills and a setter who can absorb information quickly. The coach will choose which option is best for the team.

To optimise the conversion of free ball opportunities it is vital that the quality of the free ball reception is excellent. The ball must be high to allow the setter to jump set and exactly in the setting position.

**SPECIFIC TACTICAL CONSIDERATIONS**

Specific tactical considerations relating to the rotational order are covered in the chapter ‘COACHING THE GAME’.

**TACTICAL REVIEW**

**ROLE OF THE SETTER**

See the chapter ‘SETTING’.

**ROLE OF THE MIDDLE BLOCKER**

The middle blocker is largely responsible for setting the tempo of the offence. The presence and timing of the first tempo attack has a great effect on the overall offensive efficiency. The middle blocker must ALWAYS present themselves to attack. If the reception is less than optimal or if the middle blocker is not in a good position, he must still create a threat because if the first tempo is present then the opposition block has more decisions to make. They should also be able to attack in a range of positions along the net to prevent the opposition being able to concentrate their defence in one area.

The middle blocker should be in the air before the setter contacts the ball to optimise the time pressure on the opposition middle blocker. They must also be aware of the how the opposition middle blocker reacts in certain circumstances and communicate this information with the setter.

**ROLE OF THE OUTSIDE SPIKER**

The outside spiker is responsible for reception and second and third tempo attacks. A major role of the outside spiker is scoring points from less than optimal situations. That is, after poor reception and after defensive actions. The outside spiker must be prepared to work against a good block and have a variety of skills to make the best of these situations.

**THE ROLE OF THE OPPOSITE**

In attack the opposite has a similar role to the outside spiker without being required to receive. They are used for second and third tempo attacks and must be able to score from poor situations. They must have a wide range of skills to be able to be successful in all situations. In men’s volleyball the opposite has the additional responsibility of being the primary focus of attack from the backrow.
COACHING OFFENSIVE SYSTEMS

TEACHING OFFENSIVE SYSTEMS

When introducing any elements of a new system:

- practice the individual elements in isolation,
- work in controlled game play situations,
  - i.e. easy serve or down ball, repeating each of the required situations as many times as necessary before moving on, i.e. setter in 1, setter in 6 etc.
- game play
  - focus on a single rotation,
    - e.g. a small game with the setter in 1, setter in 2 etc.
  - focus on a single situation,
    - e.g. the first play is designated by the coach
- emphasise particular situations,
  - e.g. bonus points for point with first tempo / pipe / fast ball etc.

TROUBLESHOOTING GUIDE

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<td>Set is too fast</td>
<td>Set in the rhythm of the spiker</td>
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<td>Spiker transitions too slow</td>
<td>Practice a fast transition from block to the start of the approach</td>
</tr>
<tr>
<td>Transition offence is too slow</td>
<td>Defence is not high or accurate enough</td>
<td>Practice the quality of defence</td>
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<tr>
<td></td>
<td>Spikers’ transitions are poor</td>
<td>Practice a fast transition from block to the start of the approach</td>
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<tr>
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<td>Setter is too conservative</td>
<td>Using scoring systems that reward desired outcome, e.g. extra points for first tempo in transition</td>
</tr>
<tr>
<td>Combination attack has two blockers against it</td>
<td>First tempo is too slow and blockers can read</td>
<td>First tempo must be in the air as the setter touches the ball</td>
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<td>Setter is easily read</td>
<td>Practice consistent ball contact or deception</td>
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<td>Setter does not set the first tempo enough</td>
<td>Setter must set both balls of a combination offence</td>
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<tr>
<td>One player is repeatedly aced</td>
<td>Weaker passer covers too much of the court</td>
<td>Using scoring systems that reward desired</td>
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<td>Adjust positions accordingly</td>
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<td>Change starting rotation for next set</td>
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OFFENSIVE SYSTEMS IN BEACH VOLLEYBALL

OFFENCE SYSTEM PRIORITIES

- OPTIMISE THE STRENGTHS OF THE TEAM
- MINIMISE THE WEAKNESSES OF THE TEAM
  - FLEXIBILITY
- CONTROL TIME AND SPACE

The offensive system developed for the team should optimise the strengths of the players on the team. Each player will bring particular skills to the team and the coach must devise a method of allowing each of those skills to be employed.

At the same time the offensive system should seek to minimise the weaknesses of all players. For example, a very fast offence may be very effective when executed well but it is worthless if the players do not have the skills to perform it.

A successful offensive system will have some inbuilt flexibility. Only a strong team can play to their strengths without regard for an opponent’s strengths and weaknesses. Attacking different areas of the net or using different tempos are examples of flexibility of an offensive system that can be utilised at different times or against different opponents.

The offensive team attempts to control time and space. In the simplest terms, the offensive team tries to make the defensive team cover the greatest amount of space in the shortest amount of time. Attacking from a variety of places along the net and setting the ball with speed are the methods with which a team will use time and space.

DEVELOPING AN OFFENSIVE SYSTEM

In terms of the most basic offensive principles, beach volleyball does not differ from indoor volleyball. Manipulating time and space is always important. However, with two players on the court instead of six the methods of achieving the same ends vary.

OFFENSIVE CONSIDERATIONS

- VARIETY: Keep open the possibility of attacking from multiple positions along the net.
  - If there are more positions available to attack from, it is more difficult for the defence to prepare in advance.
  - Movement creates movement.
    - Movement of the attacker forces the block to move. As movement in sand is difficult, any movement by the blocker reduces the chances of the blocker being balanced and being able to form a good block.
  - Consider the ability of the players to execute.
    - For example, a developing team may choose to limit the number of positions they attack from in order to optimise the quality of their execution. The most common offensive system for developing players to ‘play small’ (see below).
- SPEED: Optimise the speed of the set.
  - A slower set will optimise execution of the attack but allows the defence time to prepare.
  - A faster set may reduce the quality of the attack, but will allow the defence less time to prepare effectively.
  - The coach must understand the strengths and weaknesses of both their team and their most common opponents.
Integrate the principles of variety (attacking from different positions) and speed.

- What is the best tempo for my team?
- Can my players spike a lateral set or are they better with an ‘up and down’ set?
- What are the strengths and weaknesses of my opponent.

**RECEPTION**

As the receiver is by definition also the attacker, the reception dictates the kind of offence that is possible. Put simply, the receiver passes the ball to the area from which they want to receive the set. That means that the reception target is not a fixed position in every situation but can vary depending on the strengths of the players and the type of offence that will played. Examples of different reception targets are:

- If the team’s offensive system relies on the quality of execution, it will likely utilise a traditional ‘up and down’ set. In this case the reception target will be towards the net in the receiver’s half of the court.
- If the team’s offensive system seeks to maximise the variety attacking positions along the net, then the target will likely be in the middle of the court. This position allows the spiker to also attack behind the setter.

**NOTE:** When playing in extreme conditions, especially wind, or with a team of developing players it may be appropriate to use the principle of ‘playing small’. This principle dictates that the receiver plays the ball in a position that minimises the effect of environment conditions, i.e. travels the shortest distance, and makes it easiest for the setter to play the ball. In this case the reception target is a area between the desired spiking position and movement of the setter towards the net.

![](playing_small.png)

**SETTING**

Setting ability limits the offence for a variety of reasons, therefore setting is critical.

- The ball handling regulations dictate a high quality of contact. If a setter is not able to set with their hands without making a ball handling fault and is required to bump set this reduces the quality of the set and therefore the quality of the offence.
- Precision setting is required due to:
  - The surface does not allow the spiker is not able to make many adjustments in the spike approach.
  - The size of the court (8m x 8m) requires the spiker to spike with precision.
  - The possible effects of environmental conditions.
- If a setter is accurate then the possibility of a variable offence is greatly increased. This increases the difficulty for the defence to prepare and so optimises the possibility of success for the offence.
VARIATION

At higher levels variation is the most important offensive principle in beach volleyball. This includes variation in the structure of the team offence and also on a play by play basis.

From a structural point of view, the offence attempts to take the block out of play (i.e. to attack only against the defender). The offence attempts to achieve this by varying the attack position along the net, from just behind the setter to the antenna, and by the speed of the set. In men’s beach volleyball, a late and poorly formed block gives the spiker more room in the court and allows the spiker to tool the block. Tooling the block is an important skill for two reasons;

• It effectively makes the area that the defenders must cover bigger and therefore makes it much more difficult to defend.
• The block counts as the first contact. If the attack can be defended, there is less likelihood of a successful transition attack due to difficulty in setting from outside the court and in spiking a set that originates from outside the court.

On a play by play basis, the offence wants to use a variety of shots to different positions on the court, especially when the chances of scoring a direct point are not great. This is especially so in women’s beach volleyball. Moving the ball to different positions in the court prevents the defence from creating good counterattacking opportunities.

Over on 2 is a very important variation, especially in women’s beach volleyball and with left hand / right hand combinations. This tactic very effectively changes the tempo of the offence and makes the blocker more accountable. It also has an important positive psychological effect on the attacking team.

TRANSITION ATTACK

In transition from defence to attack, the most important factor is timing. The defender must first analyse the situation (the position of the ball and the movement of the setter) and be prepared to make adjustments in position and timing. The approach should be as close as possible to the approach after normal service reception, leading to a balanced jump which optimises attacking options. The quality of the approach dictates the ability of the spiker to attack successfully.

Transition from block to attack is a key situation in a match. As the ball touched by the block counts as the first contact, the team has only one more contact available to build an attack. This means that the defender will often be required to ‘set’ the ball the directly to the blocker and ability of the blocker to transition directly into a spiking position is vital.

• Be aware of where the ball goes after the block.
• Move off the net (i.e. transition) fast and get into a position where:
  • The greater part of the oppositions court is open to attack. That is, if the block is on the right side of the court the block will transition to their right (i.e. outside of the court). In the same way, from the left side of the court, the blocker will mostly transition to their left.
  • The setter can set the ball between the spiker and the net.
  • This will normally result in a transition move at an angle from the original blocking position.
COACHING OFFENSIVE SYSTEMS IN BEACH VOLLEYBALL

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DEFENSIVE SYSTEMS

The defensive system is the coordination of serve – block – defence. It is this phase in which points are won when serving. Due to the nature of the game, the team that wins the most points on serve will win the match. Points are won directly through serve and block. Court defence does not directly lead to points won, but is vital in creating transition attacking opportunities.

The defensive system that a team employs is the specific coordination of the defensive elements of serve – block defence by that team. As the defensive system is so vital, coaches typically spend the most time and effort in preparing this phase of the game.

DEFENSIVE SYSTEMS IN VOLLEYBALL

DEFENSIVE SYSTEM PRIORITIES

- Optimise strengths of the team
- Minimise weaknesses of the team
- Flexibility
- Control time and space

When deciding on exactly which type of defensive system to use, the coach must accurately analyse the strengths of their team and the players within it. Any defensive system will firstly seek to optimise the strengths of the team. If a team has a relative strength in serving or blocking or defence, then the coach will seek to emphasise that area. The same analysis will reveal weaknesses. The coach will seek to minimise these weaknesses. For example, if a team is relatively strong in serving or relatively weak in blocking, it may choose a system which emphasises very aggressive serving. To maximise the effectiveness of its serving, it will likely focus its block and defensive tactics on taking advantage of poor reception and deemphasise tactics against good reception. Another example could be a team with excellent blockers. This team will attempt to give its block the maximum number of opportunities and so could choose a low risk serving strategy that focuses on tactical serving. Deciding the rotational order of the team (see ‘COACHING THE GAME’) is one method of organising the defensive strengths and weaknesses of the team.

The defensive system also needs the flexibility to be able to respond to specific opponents. Scouting information will reveal the strengths and weaknesses of the opponent and a good defensive system will be flexible enough to respond to that. A team will commonly choose to match their defensive strengths against the offensive strengths of the opponent, for example ‘match up’ blocking (described below). Combining a specific serving tactic with specific block and / or defensive tactic and being able to change them according to the opponent or game situation can be decisive.

The defensive team attempts to control time and space at the net and in defence. To create time an aggressive serving strategy is required. The further the reception is away from the net the more time the block and defence have available. Scouting is also used to create time by reducing the number of options the defence has to consider in specific situations. Space is controlled by the block and defence directly. Match up and commit blocking try to strongly defend a particular space along the net. Channelling the offence by having the defenders actively move into spaces around the block aims to cover the entire court. Tactical serving can prevent a specific attack or force the setter to set in a certain direction (i.e. channelling the offence towards a part of the net).

Developing a defensive system requires the use of scouting. By understanding the strengths and weaknesses of an opponent, a team will understand where best to concentrate their own strengths and weaknesses and allow them be better control time and space.
DEVELOPING A DEFENSIVE SYSTEM

The defensive system includes ALL components of defence. A good serve is good defence. A well-positioned block is good defence. A dig is good defence. An attack point in transition is good defence. How these elements fit together is the defensive system.

SERVING

The serve should always have a purpose. Firstly, the coach must consider a serving strategy for their team. For example, will the team serve for points or poor reception? Will the primary strategy be tactical serving? What will be the mix of aggression and tactics? The serving strategy may also include some basic rules that seek to create or maintain the pressure within the overall defensive strategy. These may include:

- No errors after timeouts or breaks in play;
- Never make two service errors in a row;
- No errors on set points.

Often on the basis of scouting information, the coach will decide on the specific serving tactics for a match. What will be the targets? Will poor receivers be targeted or positions on the court? This can vary from match to match. One team may have a poor receiver who can be targeted, while another may have a setter with a weakness from a certain position. The coach must decide the priority.

Generic serving tactics include serving the front row receiver (to make it more difficult for them to attack) and serving behind the setter, i.e. to position I or position II (which is the most difficult position from which to set).

The coach should also teach the players the strategic rules that are in place. If the players understand the principles involved, then they can make effective changes at the last moment if they see receivers making adjustments.

BLOCKING

Determining Strategy

The goal of the block should be to cause maximum disruption to the attack. The coach will develop the specifics of his strategy with this as the basis.

The basis of all blocking strategies is read blocking. The coach can decide that they want their team to read block under all circumstances or whether they prefer a strategy which includes a mix of read blocking and commit blocking.

To what degree will the coach seek blocking ‘match up’ situations? This not only affects how blocking is trained, but also spiking. Will players be required to block in multiple positions? Will players be required to spike in transition in multiple positions? The coach must ensure that all situations have been appropriately addressed in practice.

The importance of the triple block within the strategy must be considered. Will the triple block always be the goal? Sometimes? Never? Will some players aim to make a triple and others not? For example, a player who is a weaker blocker but a good defender may be instructed to focus on defence rather than triple blocking.

How the team will block against opposition outside spikers must also be part of the strategy. The coach can choose to block a fixed position or can decide to vary the blocking position depending on the individual spikers.

How important will scouting be? If the coach does not have the resources or opportunities to scout, then they may choose a blocking strategy of exclusively read blocking with the middle blockers and defining fixed positions for the outside blockers. This strategy may also be a practical use of training time and allows the team to focus completely on its own execution.
**Tactical implications**

**Middle blockers:** The coach determines when and where to commit block. Normally the commit block is used against a first tempo attack in the middle of the court. However, if the second tempo attack is very fast, the blocker may not have time to ‘read and react’ in the normal way. In this situation the coach may decide to commit against a second tempo attack on the outside. Be aware of overuse of the commit block. Although it can be very effective it is also a very high risk tactic as it opens up a big part of the court that a smart setter will be able to take advantage of it.

**Outside blockers:** A ‘line’ block refers to a block in a position such that the spiker will not be able to spike down the line past the blocker. The normal blocking position has the inside hand of the blocker in line with the spiking arm. A line block has the blocker positioned further outside. With a line block, the defensive player down the line may vary their position as they should not be able to receive a direct spike. They could move forward to cover tips, go deeper for the ball that goes off the top of the block or stay in their normal position but with a more upright posture so as to be ready to move for tips or touched balls.

A ‘cross’ block refers to a block in a position such that the spiker cannot spike cross court to the big area of the court. In this case the blockers outside hand will be in line with the spiking arm. With a cross court block, the spiker is challenged to spike line or very sharp cross court. This can leave the blocker open to being toolled and opens up an area behind the block. The ’22 Defence’ (see below) is sometimes played with the cross court block for this reason.

If the coach chooses to block a fixed position that position is normally about 50cm from the antenna.

**COURT DEFENSIVE PRINCIPLES**

The most effective body position for the defender to control the ball is balanced on both feet, with head high and still.

- Every movement reduces the player’s balance.
- The further the movement, the more imbalance.
- The faster the movement, the more imbalance.
- Therefore, the primary and secondary positions should be relatively close together to minimise fast movement and optimise balance.

The easiest ball to control is the ball that hits the block because it slows down and normally travels higher.

- The next easiest ball to control is the ball that travels a long way (i.e. deep into the court).
- The most difficult ball to control is a quick attack short in the court because of the angle and the short distance it must travel.
- Therefore, the defensive positions should cover the area of the court that will provide the easiest defensive opportunities.

If two players are close together, there is a greater possibility for communication problems.

- The further the players are apart, the more area they cover, the more balls can be defended.
Therefore, the defenders should be well spaced and in a different line to each other (i.e. staggered). Staggering the defenders:

- reduces confusion as the deeper defender will be out of sight for the forward defender,
- promotes the players ‘crossing’ i.e. one defender moving in front of the other.

Following these principles:

- More area is covered and there are more ‘easy’ balls.
- Control is better because the defence has more time and will play easier balls.
- There is less confusion because the defenders are further apart.
- Less confusion in defence and better defensive control leads to better transition setting and therefore better attacking opportunities.
- The spikers are in better position to attack because they are naturally deeper in the court.

SPECIFIC DEFENSIVE FORMATIONS

The defenders should be placed on the court in positions where the ball is likely to go. Further, the best defenders should be in the positions where the ball is MOST likely to go (taking into account the individual skills of the defensive players and allowing for possible transition attacking responsibilities). This varies from team to team, among different levels and is dependent on the blocking strategy. A team with small blockers will have different defensive positions than a team with big blockers. International and junior volleyball require different defensive formations. For example, at some levels the quick attack may not be effective and the defence should wait for tips. The coach should always analyse their team and the competition in which the team plays in.

31 Defence

The 31 Defence is the most basic defensive formation. The ‘31’ refers to the three defenders cross court and one defender down the line. Positions IV and V are ready to defend the cross court spike that goes past the block. Position VI is ready for the deep cross court spike. The player closer to the net has responsibility for the shorter angle (i.e. position IV crosses in front of position V who crosses in front of position VI). Position I is ready for the line spike. The outside defenders have responsibility for tips. The 31 Defence is basically the same defence as the ‘6 Back Defence’ or ‘Perimeter Defence’.

22 Defence

The 22 Defence is a variation of the 31 Defence where position VI defends closer to the line. Again it refers to the alignment of the defenders, in this case two defenders covering cross court and two defenders covering the line. This defence is used when the outside blocker is shorter than the middle blocker and it is likely that the spiker will try to attack.
that blocker. It is also sometimes used when there is a cross court block. Scouting information could also reveal that a spiker likes to spike to that position.

45 Defence
The ‘45 Defence’ is a tip cover formation. The ‘45’ refers to the angle at which the front row non-blocker retreats from the net to reach their defensive position. This defence is used in three situations:

- When scouting information reveals a spiker who likes to tip,
- When a blocker attempts to make a triple block but is late and decides to defend,
- From a backrow attack in position I, the spiker is unlikely to be able to spike sharp cross, so the position II player often covers the tip instead of the spike. This also reduces potential confusion with the position I defender.

Other tip cover formations have the line defender advancing to a position directly behind the block. This is sometimes played in conjunction with a line block (i.e. one that prevents a line attack) or with a triple block.

6 Up Defence
The ‘6 Up Defence’ refers to the defensive position of the position VI player and is another tip cover formation. The position VI player plays ‘up’ in the court, directly behind the block. It is mostly played in women’s volleyball where tips are more likely. In the 6 Up Defence, the setter plays in position VI as this position must typically play fewer first balls and is thus available to set more often. It is also easier to penetrate to set. This system requires disciplined blocking as neither the line nor the seam between the blockers is covered by defenders.

NOTE: If the opponent plays tips only rarely, then the defence is better served by having an extra defender for the spike and the ‘6 Up’ system may not be appropriate.
Defending Against the Backrow Attack from Position I

As mentioned in ‘45 Defence’, a spiker attacking from the backrow is less likely to be able to spike the very sharp cross court angle. It is common in this situation for the non-blocker in position II to cover the tip (as already mentioned) and the defender in position I to defender a little bit deeper than for a front row attack.

Other Defensive Principles Channelling the Offence

All defensive systems must consider both the block and defence, but the principle of channelling the offence refers specifically to the idea that the block is responsible for covering one part of the court and the defence is responsible for covering the other part of the court. In this way all parts of the court are defended. This system is oriented towards the defence to the extent that the block will at times remain static to allow the defenders a clean view of the ball. The goal of the defenders is always to move into a position from which they have a clear view of the ball.

This principle requires great discipline in blocking and excellent defenders. The blockers must always be aware that the defence is playing for direct attacks and that they will often not be in position for balls that are deflected by the block. The individual defenders must constantly adjust position as the block moves and closes off various areas so that they always have a clear view of the ball. This movement puts great pressure on the individual skill of the defender in reading the play and being able to achieve a stationary and stable position as the spiker contacts the ball. Two defenders will often be in a relatively small area of the court and so communication is vital.

The basic responsibilities of the individual players are:

Position I is responsible for:

- the line when the attack is from position IV,
the cross court attack past the block, when the attack is from other positions,
long in the court when the first tempo attack originates from near position II, short in the court when the first tempo is attack originates from near position IV.

Position VI is responsible for:
- the seams between the blocker on high attacks and quick attacks away from the setter (‘b quick’, ‘c quick’). They stay in the seam until it closes, only then can they retreat to a deeper position for touched balls
- a predetermined area (communicated with the middle blocker) when the quick attack is in the middle of the court

Position V is responsible for:
- the line when the attack is from position II
- the cross court attack past the block, when the attack is from other positions long in the court when the first tempo attack originates from near position IV, short in the court when the first tempo is attack originates from near position II.

SPECIFIC BLOCK AND DEFENCE CONSIDERATIONS

In most defensive systems, the block takes precedence over the defence and transition attack. That is, the first object of the defensive team is to stop the attack at the net. When following this principle, ‘matching up’ the block is a common tactic. That is, to put specific blockers against specific spikers. Normally the best blocker will go to the best spiker or the position where the attack is likely to go.

Matching up can also be used to hide a smaller blocker, usually the setter, by putting him in a position from which the attack is less likely or where there is a weaker spiker. The setter may even block in the middle if that is the weakest, or least likely, point of the attack. When moving the setter to different positions, be aware of the requirements for transition attack. Often the opposite will play defence in position V to maintain an attacking presence along the whole width of the net. Alternatively, it must be communicated clearly which whether the spiker in position II or position I will have priority to attack.

A triple block changes the block and defensive alignments as the block covers a much bigger area of the court. Normally a triple block will cover the line completely and prevent a spiker attacking past the block or tooling the outside blocker. This leaves the line defender free to move forward to cover tips or stay deep to prepare for the spike that goes off the top of the block. Unless the line blocker is very big, it is preferable for the line defender to stay in a neutral position and posture to be ready to move either forwards or backwards.
When using a **commit block**, the block and defence should be coordinated. The commit block will decide which part of the court it will cover, often with the benefit of scouting information, and communicate this with the defence. The defence will then cover the area of the court left unprotected by the block.

A **down ball** is the situation where the opponent attacks, but not from a position of advantage (see the chapter ‘**BLOCKING**’). Once the down ball has been communicated the blockers move back into the court to around the 3m line and the defenders move forward into the court (no deeper than 7m) knowing that the ball will not be spiked as powerfully as a normal attacking situation. The setter must remain in position to defend as many down balls are directed towards position I. See the Chapter ‘**BLOCKING**’.

A **free ball** is the situation where the ball is played into the defending team’s court from a dig or set and must go up over the net (i.e. to the advantage of the defending team). In this situation the setter will penetrate immediately. All other players should be attentive but the libero should receive as many free balls as possible to allow others the maximum opportunity to be available for the offence.

Principles for the **single block** on the outsides will depend on the coach. The single block normally occurs in a situation of advantage for the attacking team. That is, the chances of the defending team being successful are greatly reduced. The main possibilities in this situation are:

- Outside blocker blocks the normal direction of the spiker and allows the defence to play around them as though it were a double block.
- Outside blocker blocks late and aggressively in one direction with the objective of making a block point. The defence expects a clean spike (i.e. untouched by the block) and moves forward into the court to defend.

The coach’s choice is likely determined by their general blocking strategy, i.e. whether it is based on discipline and coordination or whether there is a large risk taking component.

**SPECIFIC TACTICAL CONSIDERATIONS**

Specific tactical considerations relating to the organisation of the rotational order to optimise the defence are covered in the chapter ‘**Coaching The Game**’.

**TRANSITION OFFENCE**

This is covered in the chapter ‘**Offensive Systems**’.

**IMPORTANT SKILLS**

Setting in transition is a very important component of the defensive system. Although serving and blocking are both point scoring skills, the majority of break points are won by spiking. Setting in transition (i.e. after defence) is a much less controlled situation than setting after service reception and the roles are less defined. The first rule is that after the defence EVERY player must be available to set. Only after the collective decision has been made on who will set, do the spikers transition to attack.
If possible, the setter should set every ball. In the case of the setter receiving the first ball, or the defended ball being too far away for the setter to reach, the team should define a hierarchy of rules to optimise the chances an excellent set. The two most common rules are that the middle blocker sets or the libero sets.

If the ball is high, near the middle of the court and towards the front row, the middle blocker is in the best position to set. In this situation the best possible attack is on the outsides and the middle blocker can set either forwards or backwards. It is therefore preferable for the middle blocker to play the ball.

If the ball is behind the 3m line, then it may be more appropriate for the libero to set. This makes sense as they should be a highly skilled player and will not be available to spike anyway. Some teams will, if forced, deliberately defend the ball in a position that allows the libero to become a setter (i.e. behind the 3m line, towards position V). The libero can also set either forwards or backwards. In addition, this can allow a team to play a fast offence even if the setter defends the first ball. Be aware that a set travelling from deeper in the court is more difficult to attack than a set coming from inside the 3m area and pay attention to the rules on the libero setting from in front of the 3m line.

In desperation situations, it is preferable for the player on the diagonal to set, as they at least have a simple forward movement to the ball and can set straight ahead. That is, if the ball is high in the middle of the court, and the setter is not available to set, it is preferable for position I or V to set, NOT position VI.
COACHING DEFENSIVE SYSTEMS

TRAINING IDEAS

All defensive drills that emphasise positioning can be effective for developing defensive systems. The following types of drills described in the chapter ‘Defence’ will also train the defensive system if appropriate attention, including feedback, is given to the positioning of the players.

- 6-man pepper
- Rally drills
- Defensive relationships drills
- Movements with the ball

BOX DRILLS

To practice specific situations, use ‘box drills’ (i.e. a coach on a raised platform putting the ball into play). For example, the coach can replicate and train for situations that will occur in the game by putting the boxes in those positions. For example, the coach can replicate attacks front row, backrow, first tempo etc.

GAME PLAY

Defensive systems should be practiced as much as possible in game like situations. Specific situations can be practiced either by;

- The coach can control the situation by putting the ball in to one team as a second or third contact. One team must then attack from a specific area or in a specific way that the defensive team must then counter.
- Then play a scrimmage that emphasises the defensive situations practiced.
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<tr>
<th>PROBLEM</th>
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<tr>
<td>Spike goes to undefended areas of the court</td>
<td>The block is not fulfilling its role in disrupting the spike at the net</td>
<td>Focus on block technique and tactics</td>
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<td>The defence is in the wrong position</td>
<td>Check that the defensive positions are actually the areas where the ball is most likely to go</td>
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<td>Block tactics are incorrect</td>
<td>Review blocking tactics</td>
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<tr>
<td>Spikes land in the middle of the court</td>
<td>The block is not fulfilling its role in disrupting the spike at the net</td>
<td>Focus on block technique and tactics</td>
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<td>The defence is in the wrong position</td>
<td>Review blocking tactics</td>
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<td>Touched balls are not retrieved</td>
<td>Defence is too close to the net</td>
<td>Focus on holding position deep in the court</td>
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<td>Defenders ‘anticipate’ the spike and move behind the block</td>
<td>Focus on waiting until after the ball has passed the block</td>
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<td>Balls between two defenders are defended</td>
<td>Defenders are too close together</td>
<td>Ensure correct spacing</td>
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<td></td>
<td>Defenders are not staggered</td>
<td>Ensure correct spacing</td>
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<td>All outside attacks are one against one</td>
<td>Middle blockers lack reading skills</td>
<td>Practice read blocking</td>
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<td>Middle blockers lack movement skills</td>
<td>Focus on read blocking and footwork</td>
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<td>Transition offence is unsuccessful</td>
<td>The transition from block/defence to attack is poor</td>
<td>Practice transition from block/defence to attack</td>
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<td>Poor organisation in transition</td>
<td>Define roles and practice specific situations</td>
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<td></td>
<td>Poor setting from non-setters</td>
<td>Define roles and practice specific situations</td>
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DEFENSIVE SYSTEMS IN BEACH VOLLEYBALL

DEFENSIVE SYSTEM PRIORITIES

- MAXIMISE STRENGTHS OF THE TEAM
- MINIMISE WEAKNESSES OF THE TEAM
- FLEXIBILITY
- CONTROL TIME AND SPACE

The defensive system will firstly seek to maximise the strengths of the team. If a team has a relative strength in one area (serve, block, defence) then the coach will seek to emphasise that area. Conversely, the team will seek to minimise these weaknesses.

For example, if the team is relatively strong in block, or weak in defence, the team may choose a defensive system that emphasises very aggressive blocking tactics. If the team is very strong in defence, they may choose to open up the court to encourage the opponent to spike towards the defender.

The defensive system also needs the flexibility to be able to respond to specific opponents. Scouting information will reveal the strengths and weaknesses of the opponent and a good defensive system will be flexible enough to respond to that. A team will commonly choose to match their defensive strengths against the offensive strengths of the opponent, for example ‘give and take’ as described below. Combining a specific serving tactic with specific block and / or defensive tactic and being able to change them according to the opponent or game situation is one of the keys to success in beach volleyball.

The defensive team attempts to control time and space at the net and in defence. To create time an aggressive serving strategy is required. The further the reception is away from the optimal setting position the more time the block and defence have available. Space is controlled by the block and defence directly. It is normal that the block will cover space at the net while the defender will cover space in the backcourt. This simple coordination of block and defence covers most of the court and theoretically forces the attacking team to take risks to beat the defence with power or change tempos (i.e. slower shots are easier to defend).

Developing a defensive system requires the use of scouting. By understanding the strengths and weaknesses of an opponent, a team will understand where best to concentrate their own strengths and weaknesses and allow them be better control time and space.

DEVELOPING A DEFENSIVE SYSTEM

The key to a successful defensive system is the coordination between the various elements. Serve, block and defence must work in unison to achieve the optimal results.

SERVING

In beach volleyball, the serve controls the offence. Whereas in indoor volleyball it is the setter who decides who will spike, in beach volleyball the server decides. Therefore, one of the most important objectives of the serve is to create a predictable offence. That is one that is predictable in position or predictable in tempo or both. A predictable offence allows the team to prepare their strongest block and defence and so maximise their chances to win the point.

To create this predictable offence, the server can manipulate the type of serve and its location. Different variations of the serve and their desired outcomes include;

- A fast jump serve increases the chances of a poor reception and therefore makes the tempo of the attack more predictable.
• A short serve restricts the approach of the spiker and therefore increases the chances of forcing the attacker to spike against the block or play an easy shot around it.
• A serve to the middle or the court tends to keep the set away from the antennae and therefore reduces the angles the attacker has available.
• A serve to the lines may prevent the receiver from playing small and therefore put more pressure on the setter or may simply reduce the number of available shots to the attacker.
• As well as the type and speed of the serve, the coach will choose the serving target. The rationale for using different serving targets is outlined in the chapter ‘Serving’. In brief, the most common serving targets are;
  • The seam between two players.
  • The weaker attacker, as the receiver will also attack.
  • The weaker receiver if both players are comparable in attack
  • The stronger setter as the weaker setter will then be compelled to set.

Scouting information will likely form the basis of the specific serving tactics of the team in a particular match. The coach will decide on the specific serving tactics for a match including the mix between speed, position and target. This can vary for each match and for different periods during the match.
Serving strategy and tactics must also take into consideration the effects on the server who must then move to the net to block. While the serving strategy may be to serve aggressively for aces, in some situations this may put the server / blocker under extreme pressure to make good position to block.

BLOCK AND DEFENCE
In principle the block covers one area of the court and the defence covers one area of the court. These may be different areas but not necessarily. It is not possible to defend 100% of the court. The coach must make choices about which areas of the court to cover with block and with defence and in which situations these positions may vary. The coach will always use the knowledge of the specific strengths and weaknesses of their team and their opponent to make these decisions.
When countering the strengths and weaknesses of opponent, the coach will sometimes choose to cover the weak shots that can lead to the best transition attacking opportunities. At other times, especially big points, it may be better to cover the strengths of the opponent.
For their own team, the coach should consider the mix of strengths and weaknesses of the players. For example;
  • With a tall blocker and a fast defender with relatively poor control of the hard driven spike, the best tactics may be for the blocker to front the spiker, always try to block and allow the defender to roam.
  • With a good positional blocker and a defender with good control from a spike, the best tactics may be force the spiker to spike hard past the block and challenge the defender, or play a very high shot over the block that is easy to chase.

Specific Block and Defence Considerations
The principle of ‘Give and Take’ follows from the dual ideas that;
  • it is not possible to defend 100% of the court and
  • that an attacking team will not actually attack 100% of the court.
Therefore, the defensive team will leave undefended the part of the court that is the most difficult to attack or that the offensive team doesn’t attack (i.e. ‘give’ it up) while concentrating the defence in the greatest area or where the ball is most likely to go (i.e. ‘take’). The decisions on where to ‘give’ and where to ‘take’ are based on pre match scouting or observations made during the game.

In a ‘double up’ defence, the block and defence will partially cover the same area of the court. This follows the principle of ‘give and take’ where the defence gives up a greater area of the court. For example, the ‘double up’ defence may be used if the team has been blocking line and the opponent has been successful with a very strong cross court attack. The spiker will expect that if the block changes to cross court the defence will also change and the shot over the block cross court will be open. In this case, a ‘double up’ will often be successful. Scouting information may also reveal that in certain situations an attacker will shoot over a particular type of block. Care must be taken when using the ‘double up’ defence as it opens up a large area of the court.

**Blocking Variations**

- Another important consideration is which of the blocking technical variations can be used in different situations. Some spikers will have different tendencies depending on the type of block with which they are confronted. For example, they may attack differently if a block lines up early in position than when the block jumps into the angle.

**TRANSITION OFFENCE**

This is covered in the chapter ‘SPIKING IN BEACH VOLLEYBALL’.

**SETTING IN TRANSITION**

This is covered in the chapter ‘SETTING IN BEACH VOLLEYBALL’.
COACHING DEFENSIVE SYSTEMS IN BEACH VOLLEYBALL

TRAINING IDEAS

BOX DRILLS

To practice specific situations, use ‘box drills’ (i.e. a coach on a raised platform putting the ball into play). For example, the coach can replicate and train for situations that will occur in the game by putting the boxes in those positions. For example, the coach can replicate attacks far from the net, close to the net, wide, middle etc.

GAME PLAY

Defensive systems should be practiced as much as possible in game like situations. Specific situations can be practiced either by;

- The coach can control the situation by putting the ball in to one team as a second or third contact. One team must then attack from a specific area or in a specific way that the defensive team must then counter.
- Normal game play can be used but the teams are instructed to play in a certain way to practice the desired situations. For example, Team A must spike cross or shoot line. Team B then practices defended the hard spike cross court and chasing the shot. Both teams could have the same instructions, or each team could work on different situations.

TROUBLESHOOTING GUIDE

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<th>CAUSE</th>
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<td>Spike goes to undefended areas of the court</td>
<td>The block is not in a good position</td>
<td>Focus on block technique and tactics</td>
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<td>The defence is in the wrong position</td>
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VOLLEYBALL RECOVERY SYSTEMS
(Materials initially developed by Angela Calder of applied sports knowledge Pty Ltd)

THE PRINCIPLE OF RECOVERY

The Principle of Recovery refers to that part of the training process where the benefits of training are maximised through practices which encourage natural adaptation to the training stimulus. Athletes overload their system while training to achieve physiological benefits and the attainment of these benefits can be accelerated when fatigued functions are restored to normal operational levels as quickly as possible after training. If there is sufficient recovery before the next workload the underlying system or fuel store stressed during training can improve its capacity to cope with the next stressor.

Work Hard + Recover Well = Best Performance

The types of fatigue that athletes can experience are:

- Metabolic - depletion of energy stores
- Neural - reduced capacity of the brain and muscles to perform
- Psychological - the result of emotional, social and cultural stimuli
- Environmental - response to climate, training and competition venues

The specific benefits of recovery to an athlete are physical restoration, psychological regeneration and medical rehabilitation.

MONITORING ATHLETES

For athletes wanting to be the best at their sport there is no alternative for hard work, but training hard and training smart are not always synonymous. Unless there is a corresponding adaptation to the type of training undertaken, the physical and psychological demands on athletes can lead to overtraining, overuse or burnout problems. It is for this reason that recovery is considered to be one of the basic principles of training, but it is also the one most frequently forgotten in the development of training programs. If there is insufficient recovery, then the athlete can experience negative adaptation responses to training. These responses are:

- Overtraining the immune system is overloaded and cannot cope with new stress
- Overuse problems excessive loading, poor movement patterns, or both
- Burnout excessive emotional stress and pressure result in both players and coaches leaving the sport
- The onset of these conditions is diverse and varied. No two athletes will respond to training loads in the same way. However, coaches can monitor the response of athletes to training through cues or signs that are indicative of nonadaptive responses:
  - Direct communication - athletes indicate they are struggling, sore and/or tired
  - Body language - facial expression and colour, the look in their eyes, bending over to recover, bad technique compared to normal
  - Physiological - increased resting heart rate, loss of body weight, loss of appetite
  - Psychological - low motivation, low concentration, aggressiveness, no self confidence
  - Others - poor eating habits, poor sleeping habits
- Coaches should also encourage athletes to actively monitor their own wellbeing. A training diary or log book can aid athletes in learning how to ‘read’ them self and recognise the signs and cues that their body displays. Recordings of the quality of sleep, morning resting heart rate and morning body weight, and a daily rating of
fatigue levels are four critical markers that should be recorded every day by athletes. Indicators that an individual’s body is not coping with the demands of training include:

- sudden drop in body weight (more than 3%)
- sudden increase in morning Heart Rate of > 6bpm
- inability to respond to relaxation or meditation techniques
- sleep disturbances (plus or minus 2 hrs for more than 2 days)
- low quality sleep for more than 2 days
- feeling constantly tired

REST

Sleep is the most important form of passive rest. A good night’s sleep of seven to nine hours provides invaluable adaptation time for athletes to adjust to the physical and emotional stressors they experience during the day. Getting to sleep can sometimes be difficult because of the excitement of the day’s events so it is important that athletes develop habits to promote a good night’s sleep. Things to do are:

1. Practise relaxation techniques before going to bed (relaxing music, muscle relaxation, breathing exercises, and visualisation).
2. Lie down to sleep ONLY when sleepy.
3. If not asleep within 30 minutes after turning out the light get up and do some relaxation work (see Point 1).
4. If awake in the night and unable to get back to sleep within 30 minutes do some relaxation work (see Point 1).
5. Get up at the same time each day.

A good night’s sleep can be further promoted by avoiding caffeine, nicotine, alcohol and high protein meals in the evening.

Other forms of passive rest involve techniques which help the mind to switch off from all the surrounding stimuli, such as meditation, flotation, reading and listening to relaxing music. Some of these are readily accessible to all athletes but a few are restrictive because they require special training or are quite expensive.

Active rest is much undervalued by athletes, but is a useful method for aiding recovery. Activities classified as active rest fall into two categories, these being activities that help recover the physiological state of the athlete and activities that focus on musculoskeletal recovery. Examples of activities in each of these categories are:

- Physiological - light walking, cycling and pool work
- Musculoskeletal - stretching and exercises to promote postural efficiency

Including both types of activities briefly at the end of a training session, especially after heavy training sessions, or a competition or heavy training week, are simple ways to incorporate active recovery into training programs.

Rest days are essential. At least one day per week should be a non-training day. This allows athletes time for physical recovery as well as time to develop interests outside their sport, so they can have a balanced lifestyle.

NUTRITION AND RECOVERY

Preparing for an event or training session and providing afterwards for the replenishment of fluid and fuel stores requires planning. Athletes need to take responsibility for balancing their nutritional intake in accordance with the demands of their training.
Replacing fluid and glycogen stores after training is important for most sports. Carbohydrate loading pre event is designed to maximise the storage of glycogen and minimise the onset of fatigue. As metabolism is increased during and after exercise an optimal time for replenishing glycogen stores is within the first hour after exercise. The recommended protocol is 1g of carbohydrates per kilogram of bodyweight per day. It is especially important to eat carbohydrates following eccentric exercise or incurring bruising. Muscle damage delays muscle glycogen synthesis particularly after the first 48 hours. Therefore, it is important to maximise the time when there is an increase in glycogen resynthesis by providing a high post exercise carbohydrate intake during the following 24 hours.

Monitoring fluid loss so that it is kept to a minimum is essential. Bodyweight loss of 2% or more during exercise results in measurable physiological changes which can lead to a reduction in aerobic output. Educating athletes to hydrate to keep pace with sweat rates is important and this can be monitored through urine checks and pre and post training weighing. For an event lasting 6090 minutes’ water should suffice, but for longer events isotonic drinks which help to stimulate the desire to drink and help to restore electrolyte balances are recommended.

Minerals and trace elements are important for muscle regeneration. However, the intake of synthetic supplements may not be as effective as increased dietary sources due to the reactivity of some elements and metals with other foodstuffs. Professional nutritional advice is necessary for those athletes who experience considerable muscle damage, or those who are continuously fatigued. Iron deficiencies or problems with absorption are not uncommon in athletes of both genders.

PHYSICAL RECOVERY TECHNIQUES

A wide range of physical therapies are available to athletes. Hydrotherapies and sports massage are the two most frequently used.

Hydrotherapies include showers, spa, baths, float tanks and saunas (dry baths) and provide ideal environments in which to stretch and perform self massage. Contrasting hot and cold showers, or using a warm spa with a cold plunge pool provides an increase in peripheral circulation, and neural stimulation. Pressure from jets and shower nozzles enhance muscle relaxation by stimulating light contractions in muscles. Collectively this promotes both physiological and neurological recovery. Athletes need to be reminded to rehydrate before, during, and after treatments as sweating tends to go unnoticed in wet environments and treatment times need to be monitored as lingering too long in a warm environment can offset the benefits of the treatment. Athletes should feel relaxed but stimulated afterwards, not sleepy and lethargic.

The second most frequently used recovery modality is sports massage. It has two major physiological benefits. Firstly, massage can increase blood flow and this enhances the delivery of oxygen and nutrients to tired muscles as well as promoting the removal of metabolic by products such as lactic acid. Secondly, the warming and stretching of soft tissues provides temporary flexibility gains. There are also psychological benefits as tired and tight muscles relax there is a corresponding improvement in mood states. Perhaps the greatest benefit from a sports massage is the biofeedback athletes gain as they become more aware of their body and which muscles and tendons are stressed. Tuning in to the way the body has been stressed helps the athlete identify and manage the stressed and fatigued areas. There are many professionals qualified in sports massage available to athletes. If the cost of these services is prohibitive then self massage techniques are free and easy to administer. The techniques take a few minutes to perform and can be done in a relaxing atmosphere while watching television or in the shower or bath.
PSYCHOLOGICAL RECOVERY TECHNIQUES

Developing the ability to control emotions and mood states through the application of a few simple psychological skills is beneficial for all athletes. In particular improving self-awareness and motivation, and decreasing reactions to stress are essential life skills. Meditation, autogenic training, breathing exercises, music, relaxation massage and flotation are the most frequently used relaxation techniques. An ideal time for athletes to incorporate relaxation techniques into their training is during passive rest.

It is also valuable to allow athletes the opportunity to debrief after games. Events within a game or the impact of the game’s result on the team’s season can cause psychological stress for athletes. Coaches should put in place systems to allow athletes to alleviate this stress and holding a team debrief following the game or at the start of the next training session, or speaking to athletes on an individual basis will facilitate this process. If athletes are using a diary to record aspects of their wellbeing then dedicating a section to reflect on performance at training and games and the outcome of games is recommended.

INTEGRATING RECOVERY INTO TRAINING PLANS

The extent and nature of recovery activities should vary during the season to reflect the phase of the program. In terms of recovery these phases can be identified as off season and early preparatory phase; specific preparatory and pre-competition phase; and competition phase.

- Off season and general preparatory phase

Preseason screening is essential and this is when athletes should develop protocols for recovery training. Self-monitoring techniques should be implemented and recovery techniques introduced, including appropriate nutrition, stretching, hydrotherapies, self-massage and one or two relaxation techniques.

- Specific preparatory and pre-competition phase

As the demands of training increase athletes will need to determine if they can commit to the team and still maintain a balanced lifestyle. The increase in training loads leads to an increase in musculoskeletal stress and this gives rise to the need for more physical recovery sessions, especially nutrition, hydrotherapies, massage, active recovery activities, cross training and postural correction techniques. Psychological recovery techniques should be introduced here, with athletes determining the techniques they will use and begin practicing them. Athletes should also put together a bank of music, specific to their tastes, for use in their relaxation activities.

- Competition phase

At this stage all recovery should be automated. Stress levels will be on the rise, so it is important to provide information about the competition program and ensure that athletes understand the program. Athletes will also have a heavier reliance on psychological recovery due to the pressures of competition. During competition it is advisable to include activities of a timeout or entertainment nature to provide a suitable balance in stress and relaxation.
DEVELOPING VOLLEYBALL TRAINING PLANS
LONG AND SHORT TERM PLANNING

A training plan is a valuable tool in identifying the pathway for achieving the long-term and short-term goals of both the coach and athletes. The most common type of training plan is a one-year plan that identifies the training and competition program of the team. In some instances, a training plan may be for longer than a single year, with the VTA programs working with quadrennial plans (four years) for each Olympic cycle. Alternatively, a training plan may be for a shorter period of time if the team is preparing for a single tournament/event or the athletes have additional commitments that reduce the length of time they are in training. Whatever length of time a training plan spans, putting together a plan may seem a huge task and it is. However, the plan can be broken into a number of phases and sub phases that can make the process less daunting and more manageable.

- Training phases and sub phases

The training plan can be broken into three training phases. These are the Preparation Phase, the Competition Phase and the Transition (Offseason) Phase.

The Preparation Phase comprises of two sub phases, these being the General Preparation Sub phase and the Specific Preparation Sub phase. The General Preparation Sub phase is when the foundation work for establishing fitness is undertaken. This sub phase is termed ‘General’ because the activities used to develop this fitness foundation are not specific to the sport. In contrast the Specific Preparation Sub phase involves components that are specific to Volleyball.

The Competition Phase also has two sub phases - the Pre-Competition Sub phase and the Competition Sub phase. The Pre-Competition Sub phase should focus on stabilising the components that were developed in the preparation phase and introduce basic competition simulation or include preseason ‘friendly’ matches. The Competition Sub phase is where fitness components are maintained and refined to specific game needs, specific skills are developed and athletes are competing in their season competition or building up to their major tournament.

The final phase, the Transition (Offseason) Phase, is where players are involved in active recovery in alternative sport or activities. This facilitates an opportunity to have a break from the sport, but still maintain fitness components so that less work will need to be done to re-establish the fitness in the following season.

- Macrocycles, Microcycles and Training Sessions

Having divided the training plan into phases and sub phases it should then be broken down further into cycles. Macrocycles are periods of between two and six weeks in which there is a common theme to training or competition. It may be that a sub phase is equivalent to a macrocycle because its length is only six weeks. Situations where this may occur are the Specific Preparation Sub phase and Pre-Competition Sub phase which can be short depending on the time from when the team comes together and the beginning of the competition.

Microcycles are blocks of training sessions that are often equivalent to a week for the purpose of simplicity. Each microcycle will include any training sessions and competition games within that week. Microcycles should be coordinated to work towards achieving the aims of the macrocycle in terms of skill and fitness development.

Training sessions are units that comprise skill development, game scenarios and recovery and are typically between 30 minutes and two hours depending on the aims of each session.
In developing a long term plan the coach should identify the goals for the season or competition and then divide the year into its phases and sub phases, identifying the aims of each phase or sub phase and how they will build towards achieving the identified goals. Short term goals will be identified throughout the season and these should be attached to specific macrocycles, or even microcycles. These goals may reflect the development of new offensive or defensive systems during the period of a macrocycle or following a poor performance in a particular game the goal of a microcycle may be to remedy skill deficiencies identified. Scouting an upcoming opponent may also lead to establishment of a goal for a microcycle as the development of skills that will take advantage of perceived deficiencies in the opponent.

GOAL SETTING

Goals should be established to provide direction for the team and individual athletes. It is important to remember to make goals performance based as opposed to outcome based because it allows the team and athletes to still achieve success irrespective of the result of a game. Many teams may have one or two outcome goals that are specific to winning a particular competition or finishing above a certain placing in the competition, but where possible performance based goals should be developed. Examples of suitable performance based goals may centre on the team achieving a particular positive serving % or passing proficiency rating. Similar performance based goals could be established for each of the players within the team, although each player should be given their own individual goal specific to their ability in each area. It is also important to include the athletes in the development of the goals so that they feel a degree of ownership and therefore want to succeed in achieving their goals.

Remember to make goals as detailed as possible. The SMART acronym is a popular tool for establishing detailed goals. The letters represent the words Specific, Measurable, Action orientated, Realistic, and Time framed.

THE PRINCIPLES OF PROGRAMMING AND PLANNING AS THEY APPLY TO THE ATHLETE DEVELOPMENT PATHWAY

In developing a long-term plan for the season, it is important for the sake of the athletes that the coach looks beyond the current season. A development pathway exists that provides the opportunity for athletes to represent their country and make a living from the sport as a professional. As tempting as it is to focus entirely on the current season and the major competition that the team is building towards, the coach has a duty of care to develop all of their players and assist them to take the next step on the development pathway. The coach needs to ensure that players develop the full array of skills required to play Volleyball and encourages them to participate in appropriate development camps and trial programs appropriate to their age and ability.

INTEGRATING TRAINING / LIFESTYLE / COMPETITION PROGRAMS

It is important when designing training plans that coaches consider the other commitments of their athletes, both within Volleyball and in terms of their lifestyle away from Volleyball. Examples of the other commitments athletes may have within Volleyball include training for their club, school and state teams, as well as commitments with state institute or academy and national teams. It is also necessary to remember that athletes may be playing both Beach and Indoor Volleyball. These commitments will require athletes to not only attend practices on a regular basis for each team or squad, but also attend training camps and competitions for one team that will make them unavailable to attend trainings for their other teams. The commitments that athletes may have outside of Volleyball that can impact on their availability include family, friends, school, study out of school, work and other sports.
Given players have a number of other commitments in their lives it is critical that coaches optimise what time they do have with them and the development of training plans is a valuable step in achieving this outcome. Formalising what is to covered at each stage within the program and developing precise plans for each training session allows the coach to not only optimise their time with their athletes, but tends to create a more focussed environment at training.

THE TRAVELLING ATHLETE

Not only must coaches be mindful of the other commitments of their athletes and schedule trainings accordingly, but they must also be aware of the obstacles athletes face in getting to training. Athletes may be dependent on public transport to get to training or have to deal with rush hour traffic. The coach should attempt to accommodate these circumstances by scheduling trainings at times that are not going to create difficulties for their timely arrival, and also their departure. Coaches of State teams or teams that comprise athletes from a vast geographical area may need to consider alternatives to weekly trainings. Weekend camps on a regular basis may better suit the circumstances of the athletes and result in full attendance.

PROBLEM SOLVING

A number of potential problems have been identified that coaches may be faced that could hinder the cohesion and performance of the team. To prevent this from occurring it is necessary for the coach to implement a problem solving process. This process requires the coach to go progress through the following stages to identify a solution to the problem:

1. Identify the problem
2. Identify potential solutions to the problem
3. Determine the best solution to the problem
4. Implement the solution
5. Evaluate the situation to determine if it has been resolved and if it has not been resolved, begin the process again.

This process can also be applied to other areas of the team environment, including strategies for skill development and the implementation of team tactics.

WORKING WITH ATHLETES TO DEVELOP SOLUTIONS

Any problems that arise will generally revolve around the players. To include the players in the process of developing solutions can be extremely beneficial. If athletes feel their ideas are given due consideration in the process and they have an opportunity to determine the solution that is to be implemented they are more likely to support the solution and attempt to make it work. If they are excluded from this process, then they may go as far as to intentionally ensure that the solution implemented fails.
COACHING THE GAME

This chapter looks at some areas of the coach’s work related to organisation of the team, preparing players for the game and coaching during games.

TEAM STRATEGY AND SET UP

When developing a team strategy, the coach has three choices:

- Impose a strategy on the team and either teach the players this system or recruit players who fit in with this strategy,
- Choose a strategy based on the individual abilities of the players in the team,
- A combination of the two.

It would always be preferable to choose a strategy based on the individual abilities of the team. The reality is that each coach will have at least a standard basic structure for their team. However, they must always be aware of the individual strengths of players and seek to include those strengths in any strategy.

Many systems are developed on the basis of the specific skills of certain players. The worst mistake a coach can make is trying to fit players into a system that does not suit their skills. For example, it is common that the libero plays in the backrow for the middle blockers. However, if the middle blockers have well developed skills in reception and defence or there is no obvious candidate to be a libero then there is no reason to use the libero. If the coach wants to play a very fast or complicated offence and the players are not capable of playing such an offence, then it is not an appropriate strategy. That is not to say that the coach should not continue to develop the player’s skills, but that it may not be the best strategy for the current technical level of the group. Similarly, it is not fixed that there should only be one setter. There are advantages to the 5 – 1 system but also disadvantages that must be considered. Similarly, in beach volleyball, it is traditional that the better spiker plays on the left side and the better shot player on the right. However, if this doesn’t fit with the other skills of the players involved then the coach should consider other solutions.

TEAM STRUCTURE IN INDOOR VOLLEYBALL

The rotational order of players on the court is very important. In general, the coach should aim for a balanced line-up. That is, every rotation is roughly equal in strength. The coach must ensure that each rotation has the potential for quick attacks and to use the whole width of the net. Furthermore, each rotation should be roughly equal in reception and blocking strength. To achieve this balance may be desirable, but it is extremely difficult.

Some considerations for choosing the rotational order in a 51 system are:

**Quick Attack**

- The better quick attacker next to the setter as the offence is generally weaker when the setter is in the front row.
- The weaker quick attacker next to the better outside hitter to balance the offence.

**Reception**

- In a three receiver system, the passer hitter who starts close to the setter receives in position VI twice while the other passer hitter receives in position VI only once. The receiver in position VI is easier to attack with the serve therefore the better receiver plays close to the setter.
Block

- The better middle blocker starts next to the setter as the setter is often the weakest blocker.
- The middle blocker closest in height to the setter starts next to them. A mismatch in height can give the spikers an extra target off which to tool the block.

Outside hitters

- The better outside hitter starts next to the setter as the offence is generally weaker when the setter is in the front row.
- The outside hitter who is better spiking from position II starts close to the setter as they will attack from position II in one rotation.

Serving

- All other things being equal, it may be advantageous to have the most aggressive server(s) serving with the weakest blocking rotations or a low risk serve in the best blocking rotations.

It can easily be seen how difficult it is to achieve balance when considering the possibility that one middle blocker is relatively better in attack and weaker when blocking. Who plays next to the setter? Or consider the possibility that the better receiving passer hitter is worse in attack. Who plays next to the setter? The use of statistics is important in this decision making process to improve the objectivity of the coach.

The coach might on some occasions consider a ‘stacked’ line-up. A stacked line-up might have three or four very strong rotations and two or three relatively weak rotations. The rationale behind this is that the team can win relatively more points in the very strong rotations than it loses in the weaker rotations. By starting each set in the strongest rotations, over time they will be ones used the most, further balancing out the strengths and weaknesses.

TEAM STRUCTURE IN BEACH VOLLEYBALL

In beach volleyball, the equivalent is choosing which side each player should play. The most obvious and common is that, when paired, a right hander should play on the left and a left hander should play on the right. Left handed spikers tend to spike better from the right side and vice versa. There is also the tactical advantage that both players can easily hit over on the second hit, increasing the team’s offensive options. If the team has two right handers or two left handers, then the principle that the coach should follow is to seek to promote the strengths of the team and to disguise weaknesses. For example, some players may have difficulty in moving into position for an outside in approach from the left side. In this situation, they may be better suited to playing on the right side. The coach must consider all these elements carefully and again statistics can play an important role in the process.

TEACHING GAMEPLAY

Players learn gameplay best from playing and the higher the level of competition, the quicker and more effectively they learn. If a young player has the technical ability to compete at a higher level, then they should. Research shows that highly skilled adult players have very often played with adults from an early age (various studies by Abernethy).

The coach can greatly assist the players understanding of the game by creating team rules, conducting effective training sessions and effectively using a post-match review process with the team.
Team Rules

The coach can use their own knowledge and experience to make team rules that will aid in making correct decisions at certain predictable key moments. The most common of these rules are ones that address the momentum changing moments that occur. Some examples are:

- No service errors after timeouts or breaks in play as this is the moment that the opponent’s concentration will be less.
- Never tip from a bad set as this is what the defence will expect.
- When in doubt serve to position I as this is the most difficult position for the setter to receive the ball from or in beach volleyball serve to the middle of the court as this maximises confusion with a relatively low risk.
- Direct all free or down balls to position I as it may force the setter to play the first ball and therefore a non-setter to set or in beach volleyball play all free ball towards the sidelines or short to increase the difficulty of the subsequent attack.

Training

The coach’s role is to develop players who are capable of making decisions. This is the case whether coaching indoor or beach volleyball. The coach must avoid taking shortcuts in this area as players who are not able to understand and respond to game situations without input from the coach will not prosper at higher levels regardless of any physical talent they may have.

Training is the time when the coach can have the greatest influence in developing these skills in their players. In beach volleyball it is particularly vital the coach address decision making and game play in practice as they have no direct influence during a match. Each drill must be carefully planned to ensure that it is game like and addresses actual situations that occur in games. Many times coaches will automatically use a drill that they like, or that they think will address an area they want to practice, without carefully planning the drill or reviewing it afterwards. No drill should work. It either makes the team better or it doesn’t. The coach must constantly review all parts of the training and the drills that are used. More importantly they must review the matches played in conjunction with the trainings that preceded them. For example, if a coach focuses on service reception at training and in subsequent matches service reception does not show the expected improvement, then the coach must consider whether the drills used adequately addressed the technical areas required. Well-designed drills take into account the required movement of the players (before and after ball contact), the flight path of the ball (before and after ball contact) and where possible include some or all of the decision making processes that are required. Further specific implications for training gameplay include:

- Players should be put in situations where they must find solutions to problems that will be presented in matches.
- Players should be given the chance to discover the solutions themselves (i.e. give the players multiple opportunities to discover the best solution). Players are much better at retaining information that they have worked out for themselves. The age of the player determines how soon the solution should be presented. With younger players the solution can be given earlier. A good strategy could be to repeat the same exercise at the following session without giving the solution to test whether the players have retained the information.
- If the coach does intervene, feedback should be immediate. Replay the situation by putting the ball directly into play at the point of breakdown and have the player(s) carry out the best solution. Replay the situation multiple times to reinforce the required point.
• Make drills competitive. Competition in training provides motivation and stress. Players perform better if their performance is measured. Any stress created during training is not gamelike, but if scoring systems are devised well then it can approximate game stress.
• Be aware of the learning styles of the players. That is, which players learn best through explanation, which learn best visually, which learn best kinaesthetically.

For example, explain game situations on the court using the players themselves to replicate the positions and actions required. The use of a whiteboard at practice to write an overview for that day (including drills to be used and important points) can give the players more time to digest information.

A good coaching tool is to use ‘what if’ situations, where a problem situation is first discussed and a solution devised and presented and then immediately practiced. Beach volleyball lends itself particularly well to this form of training as problem situations can be easily replicated and drilled with only two players on the court. For example, discuss the problem of a short serve. ‘What if’ the opponent serves short? How can the team create time to attack effectively against this tactic? After discussing the solution, progress to a drill situation where all serves are short and the players must practice putting this solution into effect. Other examples could be; ‘What if’ the opponent serves hard into the middle of the court at the end of sets? Or ‘what if’ the block touches the ball?

Post-match Analysis
Video and statistics can be used to review the match in general and as well as many specific situations. Video review is particularly useful in analysing and improving decision making and game understanding. For increased effectiveness, video should be watched immediately before practice the situations identified in the video addressed directly.

UNDERSTANDING MOMENTUM
Momentum is a psychological lift or impetus that a team can receive (or lose) during a game. This can lead to short term performance increases for one team and performance decreases for the other, usually reflected in the score by runs of points. Momentum is a fragile thing and cannot be predicted in advance. There are moments in the match that CAN create momentum, but do not always. A good team recognises these moments and takes advantage of more of them than their opponent.

Moments that can affect momentum include:
• the second (and subsequent) points made by one server;
• points after breaks in play (e.g. timeouts, substitutions, breaks to wipe the floor);
• long rallies;
• the point after a long rally;
• an emphatic block, spike or service ace;
• an emphatic block against a key player;
• an error, particularly an unforced error, particularly after another momentum changing occurrence;
• the point after a disputed referees call;
• a point won with intelligence;
• good play!!

Most of these situations are ones in which one team may lapse in concentration. The speed with which they regain concentration is vital and pressure from one team in the right moment can lead to changes in momentum. A good team will recognise when these situations arise and act accordingly. For example, after a long rally both teams will be fatigued and are more likely than normal to be lacking in concentration. At this moment, the serving team has the advantage because it is not expected to win the point and has no
reduced pressure to construct a winning action. The sideout team on the other hand, is expected to win the point and must regain its collective composure, control the ball and win the point. There are many areas where a concentration breakdown can lead to the loss of a point. The serving team should choose a lower risk serve that will require the opponent to play the ball. The coach should also be aware of this situation. All things being equal after a long rally is a good moment for a timeout if your team will receive the next serve, but a bad moment for a timeout for the serving team.

Never forget that the best way to create or prevent momentum is through consistent good play with a minimum of unforced errors!!

AFFECTING MOMENTUM

In indoor volleyball the coach cannot control momentum, but can influence it by giving instructions and adjusting tactics during play, by calling timeouts and making substitutions. In beach volleyball, the coach can have no influence during the match.

Tactics and Instructions

The coach can communicate directly with the players between rallies. They can give immediate and concise feedback on situations that have occurred during play. When providing feedback, the coach must be aware of how their instructions can affect the concentration of the player(s). For example, immediate feedback about a block action may be the most effective for skill learning or improvement, but if the player is about to concentrate on reception it is likely to be forgotten or worse, affect preparation for the next action.

Tactics can be communicated and adjusted without the need for calling a timeout. For example, many teams will have a system whereby someone from the bench will call the serving targets before each rally. Given the ease with which the coach can communicate with the players during the game, changes can also be made in other tactical areas. As with feedback, this works best when the messages are clear and concise. Remember that normally the coach will speak with only one player who must then communicate with the rest of the team. That player will often be the ‘captain’ of the various phases of play (i.e. the libero, setter or middle blocker). Alternatively, a series of signals may be devised. Normally the libero and middle blockers will spend time on the bench. This time can also be used to communicate information.

Timeouts

- can interrupt the momentum
- allow the provision of technical or tactical feedback
- allow the provision of technical or tactical keys for upcoming points
- affect the arousal levels of players (i.e. lift enthusiasm, calm down)

The coach should have a timeout routine. Some coaches will choose to allow the players a few moments to have a drink and relax themselves before speaking. Other coaches will speak first and let their players have time to concentrate before recommencing play. Or the coach may choose to speak individually with only one or two players and then only briefly with the whole group. The coach should understand their group and structure timeouts accordingly.

The amount of information that players can process during a timeout is limited therefore instructions should be limited to a maximum of two or three key technical or tactical points. Timeouts should provide solutions to problems rather than identify problems. Be prepared to use visual media (e.g. small whiteboard) for players with different learning styles. Do not forget that many players will only remember the last thing that is said. Give, or repeat, the most important piece of information last.

The timing of timeouts can vary. In principle, there should be timeouts available for the
key moments that arrive near the end of sets. However, if a team begins poorly or the opponent gains some early momentum, those moments may never arrive. Timeouts can be used very early in the set if one team gains an early lead or, for example, as a response to a team winning three points in a row. If used, technical timeouts (i.e. at 8 and 16 for indoor volleyball, and after 21 total points for beach volleyball) will affect how and when timeouts are called. Side changes in beach volleyball also interrupt momentum and should be considered when deciding whether to call a timeout.

If a timeout is called to specifically to interrupt the opponent’s momentum, then it should seek maximum disruption. That is, call the timeout at the last possible second before the serve to interrupt the serving routine of the server. Return to the court after the opponent. Make the opponent, and in particular the server, wait.

In beach volleyball, the players must learn how and when to use timeouts. This must be discussed and practiced in the preparation so the team is comfortable during competition. Coaches can assist by giving guidelines for timeouts, especially with younger players. Some examples of guidelines are:

- after losing two sideouts in a row to break the opponent’s momentum and refocus on what is required,
- when negative thoughts start to occur, regardless of the score, to focus on positive communication and body language,
- when the team isn’t ready or fully concentrated, to regain concentration.
- Use the timeout when at the ‘bad’ end to prevent the opponent creating momentum.

Remember that in beach volleyball there is only one timeout per set together with a technical timeout after 21 total points. This timeout must be used wisely but as in indoor volleyball, there is no point having a timeout available at the end of the set if there is no chance for it to be effective.

**Substitutions**

- Can interrupt momentum
  - maximise momentum changes by delaying the substitution until the last possible moment.
  - when used instead of a timeout (e.g. when there are no timeouts remaining or if the coach does not want to use a timeout).
  - at the end of a losing set, substitutions can affect the momentum of the opponent leading into the next set.
- Can provide a specific technical or tactical improvement
  - replacing a player who is not playing to their normal level.
  - Introducing a player who may be better in a particular skill area.
- Can provide a short term tactical or technical improvement
  - serving (e.g. jump server for float server)
  - receiving (e.g. a backrow specialist to receive and defend across the backrow)
  - blocking (e.g. good blocker for poor blocker, often the setter. Ensure that it is clear who will set in case of a successful defensive action!)
- Can provide an emotional boost

The coach must decide what kind of substitution philosophy they will have. Some coaches will substitute just to change the game. Others will substitute for improvement. At some levels it is appropriate to substitute to give everyone a chance to participate.

The coach must know the individual characteristics of their players to enable them to
substitute most effectively. It is helpful if the coach develops players to have specific roles. This is not only good psychologically for the players to feel part of the team, but also ensures better play when they are brought on.

- Which player(s) play well when brought on?
- Which player(s) play better after having had a ‘rest’?
- Are the ‘specialists’ dependable? Will a serving substitute actually make a good serve when they come on?
- Which player(s) can provide an emotional boost? These players can be used even if there is a technical decrement, but often for only a short period.

The coach must know the substitution rules of the competition the team is playing in. In Australia it is common in junior competitions for a twelve substitution rule to be allowed. Other competitions use the international ‘six substitution’ rule.

Other Methods of Interrupting Momentum

Players and coaches have other, more subtle ways of interrupting momentum without using timeouts and substitutions. In indoor volleyball, wiping the floor, checking the rotational order or using the full eight (8) seconds allowed to serve can disrupt the opponent. In beach volleyball, smoothing the sand, cleaning the glasses or taking a few seconds to converse with the partner can have the same effect.

PRACTICING COACHING

Just as the coach prepares the players for a match, the coach must also prepare. They should practice coaching in a game and should prepare for what he will be required to do.

One of the most important elements that the coach should practice is the position from which they watch the game. The best view for a coach is from behind the court. However, during the match the coach is on the sideline. They must practice watching and interpreting the action from this sideline position during practice.

The coach must also have a coaching game plan in place. For example;

- What is match plan B if match plan A is not working? Or match plan C?
- What is the solution if the other team gets an early lead?
- Who is the best substitute for Player X? Player Y?
- To what extent will the players be asked to discover their own solutions before the coach intervenes? The answer to this question may be different at different times of the season, against different opponents, in different competitions or at different stages of development.
- What are the possible matchups to counter expected tactics from the opponent? Like all areas of volleyball, coaching during a match requires preparation and practice.

LIMITATIONS PLACED ON COACHES DURING MATCHES

In indoor volleyball the coach CAN:

- Move anywhere in the free zone from the 3m line to the warmup area. In some tournaments there may be a zone preventing the coach being closer than 1.8m from the sideline.
- Communicate with the players on the court in any way that does not interrupt the match.
- Call timeouts and substitutions. The coach CANNOT:
- Talk directly to the match officials. Only the captain is authorised to speak to officials.
- Make official protests. Only the captain is authorised to make protests.
The coach can instruct the captain to speak to the officials or make protests. In most Australian tournaments there is instant protest resolution. In this situation the captain can request the tournament Chief Referee to adjudicate.

The coach must know any specific tournament regulations that apply and the instructions referees are given before a tournament. This will allow the coach to properly explain decisions to the team and prevent misunderstanding and eliminate unnecessary frustration and confrontations. For this reason, it is also important to have a dialogue with referees. Not understanding the specific rules or interpretations is the biggest cause of frustration and stress between match officials and participants and the most easily prevented.

In beach volleyball, there is normally no coaching allowed and the coach can have no direct involvement in the game. However, in some competitions (e.g. junior competitions, Australian Beach Volleyball Tour) coaching is allowed. In this case the coach CAN:

- Sit in the designated area next to the court
- Communicate with the players during timeouts and end changes.

The coach CANNOT:

- Move from the designated area beside the court.
- Call timeouts. Only the players can call timeouts.
- Communicate with the players at any other times other than timeouts and end changes.
TALENT IDENTIFICATION

‘Talent Identification’ for volleyball refers to the process of identifying athletes who are not yet playing volleyball but, whose particular set of physical skills would predispose them towards the sport. The ‘identification’ of athletes already playing volleyball is technically called ‘Talent Development’. For the purposes of this chapter identification of players already playing volleyball and who may be physically capable of playing at a high level will be considered as ‘Talent Identification’, although it is technically not correct.

There are many differences between volleyball and beach volleyball due to difference court sizes, team sizes and conditions of play. However, from a physical point of view the two disciplines require similar characteristics from their players.

PHYSICAL REQUIREMENTS OF VOLLEYBALL

Volleyball is a court sport, played indoors in teams of six or on the beach in teams of two. It is characterised by dynamic actions in a range from high above the net (up to 3.70m for men and 3.40m for women) to centimetres above the ground. The physical characteristics of successful volleyball players can be split in to three main categories:

- Anthropometric the size and shape of the body,
- Physiological the workings of the body,
- Technical how the anthropometric and physiological components work to produce the desired outcome.

ANTHROPOMETRIC

While volleyball requires a range of abilities, since a large part of the game is played above the net it is self-evident that there is a height ‘requirement’. To be successful, volleyball players, with the exception of the libero and the partial exception of the setter, must be able to compete above the net. Therefore, successful volleyball is dependent on players who are relatively tall. Exactly how tall will be dependent on the position played and other characteristics (including physiological and technical) an athlete possesses.

Remember that the key is ‘height above the net’. Relatively long arms add to the height that a player is able to compete above the net and therefore reach is also important. Long arms also give players a mechanical advantage in spiking, due to longer lever lengths. The key measure is that the normal arm span is approximately equal the standing height without shoes. If the player’s arm span is greater than height, then the player has a relatively good reach and is suited to volleyball.

However, for simplicity a guide for heights in different positions for men’s and women’s international volleyball would be:

<table>
<thead>
<tr>
<th>POSITION</th>
<th>FEMALE</th>
<th>MALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setters</td>
<td>175cm+</td>
<td>185cm+</td>
</tr>
<tr>
<td>Passer Hitters</td>
<td>185cm+</td>
<td>190cm+</td>
</tr>
<tr>
<td>Middle Blockers</td>
<td>190cm+</td>
<td>200cm+</td>
</tr>
<tr>
<td>Opposites</td>
<td>185cm+</td>
<td>195cm+</td>
</tr>
</tbody>
</table>

For beach volleyball the range of heights is similar to indoor volleyball with a starting point of approximately 190cm for male players and 180cm for female players.

The libero is almost completely a skill position. Taller players may have some advantages in reach, while shorter players may have some advantages in mobility and speed. However, the technical abilities of reception and defence are paramount.
Given that the jumping is such a major component of volleyball, it is clear that relative strength and power are more important than absolute strength and power. This means that volleyball players are typically lean, perhaps even thin, with low levels of body fat. A lean athlete is able to use their power more effectively. There is also an important injury prevention component. To prepare for and play volleyball requires a great amount of jumping. Jumping is very demanding on the joints in the legs and back. Volleyball players who are not lean add to their risk of developing chronic injuries particularly in the knees.

On the basis of anthropometric attributes, the kinds of athletes most likely to transfer well to volleyball will be playing sports where are least some positions have a requirement for height and long levers such as basketball, netball, Australian football, rugby union and rowing.

**PHYSIOLOGICAL**

Height alone is not a determinant of success. Indeed, it is very rare that the tallest team wins. There are several important physiological components of volleyball that, when allied to the appropriate size, contribute to success. These are:

- Power
- Speed
- Agility
- Muscular endurance
- Aerobic Power

**Power**

Apart from height and reach, the characteristic that most allows a player to compete above the net is jump height. Jump height is directly related to power, specifically leg power. Athletes who are naturally good jumpers will have a significant advantage in playing volleyball especially as good jumpers are also often, but not always, fast and powerful in other areas (e.g. speed of movement or spiking power). Power is important as a contributing factor to jump height and in spiking.

Powerful athletes who may be suited to playing volleyball could be found in sports that require a lot of jumping or other explosive actions such as basketball, netball, Australian football or badminton.

**Speed**

The sport of volleyball has developed in the century in such a way that speed is becoming increasingly important. As the offence tries to play at maximum speed to all areas of the net, players are required to have the ability to move fast into position to spike very fast sets. To defend these spikes players are required to cover a great amount of space in a short amount of time. Speed is hugely important of volleyball. The distances covered in volleyball are generally no more than 5m at a time and therefore the speed required is only over short distances.

- Spikers require primarily forward speed.
- Blockers, especially middle blockers, require lateral speed (and backward speed in retreating in beach volleyball).
- Receivers and defenders and beach volleyball players require speed in all directions.
- Setters require forward speed in moving to position prior to the reception and to set.

In all phases of the game (block, attack and defence) must be able to move their arms fast. The speed of the armswing is vital in the ability to spike with power and helps greatly in beating the block and defence. The speed of penetration over the net is vital in blocking.
The speed in getting the platform into position is vital in defence and in some situations, reception.

Fast athletes who may be suited to playing volleyball could be found in court sports that require fast or dynamic actions over short distances such as basketball, netball, squash, or badminton.

**Agility**

As volleyball is played in a range of body positions from 3.70m to 1cm above the ground and is played in a relatively small area, agility is important. Volleyball players must be able to change direction or initiate movement quickly, maintain balance while making these movements, move quickly in the new direction, prepare to play the ball and play the ball successfully after having arrived in position. Volleyball players must be able to move effectively close to the ground and also have balance in air.

Racquet sports such as tennis, squash and badminton are played in a range from high above the ground too low to ground and in all directions. Different areas of agility can be observed in all ball sports and sports that are played in a small area.

**Muscular endurance**

Volleyball requires power and speed but, not in the same way that a sprinter or high jumper requires power and speed. Volleyball players must perform repeatedly over a period of time. For indoor volleyball that period can be to 2.5 hours. For beach volleyball that period can be up to 1.5 hours but, a beach volleyballer will often be required to perform two or more times in one day. It is important that the player be able to perform with the same power and speed at the end of a long match as at the beginning. Therefore, muscular endurance is a key physiological component of volleyball.

Muscular endurance is difficult to observe in an uncontrolled environment. Always note athletes who are prominent at the end of intense passages of play or at the end of a match.

**Aerobic Power**

Although most of the energy for volleyball actions comes from the phosphate energy system, aerobic power is required to replenish this system between actions. In studies (eg Viitasalo, J., Rusko, H., Pajalo, O., Rahkila, P., Ahila, M. and Montonen, H. (1987). Endurance requirements in volleyball. Canadian Journal of Sport Science. 12:4 194201), volleyball players typically have quite high levels of aerobic power, comparable with basketball players. This system can be very effectively addressed in training (see chapter ‘PHYSICAL DEVELOPMENT IN VOLLEYBALL’) but, potential volleyball athletes must start with a reasonable level of aerobic power.

Aerobic power is difficult to observe in an uncontrolled environment. Always note athletes who are prominent at the end of intense passages of play or at the end of a match.

**TECHNICAL**

Volleyball requires a very high degree of technical ability. It is not a sport in which brute force or intensity (or height) will cover for technical deficiency. This must also be considered when identifying potential volleyball athletes. In modern volleyball, and of course in beach volleyball, there are no specialists. Players must be able to perform multiple skills at a high level. For example, it is not enough for a middle blocker to be good at blocking. They must also be good at spiking and / or serving. It may be possible for a passer hitter with a relatively poor block to play at a high level, but, only if that player is excellent in at least two of the skills of reception / defence / serve. Beach volleyball players must be proficient in all technical areas.

One of the problems for the coach is that while it is clear that size is important, tall athletes take longer to develop technically simply due to their size. It is tempting to exclude such players at the earliest stages of learning because they do not progress at the
same rate as the rest of the group and therefore take more of the coach’s time. Alternatively, the coach may create a narrow role for that player which doesn’t allow the player to develop a wide range of skills. This is particularly dangerous for early developers. Early developers may be pushed into a specialised role for tall players (e.g. middle blocker) and do not learn all of the volleyball skills. When they then don’t continue to grow they are often left as specialists in a role that is not appropriate at a higher level (e.g. they are too small to be middle blockers) and without the skills to change roles (e.g. reception). Tall players must therefore be given special consideration in the early stages of learning. They must be provided with ample opportunities to develop in ALL areas of the sport.

Athletes with excellent technical capabilities will be evident in all ball sports.

ADDITIONAL REQUIREMENTS

Volleyball is not only a physical game. It also requires a wide range of personal and psychological skills. The National Talent Identification and Development program in conjunction with the AIS / National Beach Volleyball Program have identified the following characteristics as being typical in international calibre beach volleyball players. These characteristics are also desirable for indoor volleyball players.

Good Learning Capacity

Athletes must demonstrate the ability to learn quickly as well as understand and follow instructions. They must show a capacity to solve problems and think for themselves as well as demonstrate a capacity to learn from their mistakes.

Leadership/Teamwork

Athletes must be willing and able to offer leadership and support to other squad members. Athletes must be willing to do whatever it takes to achieve team goals.

Decision Making

It is important that athletes make good quality decisions. These need to be made decisively in match situations as well as outside of the match.

Work Ethic - ‘Walking the Talk’

Athletes must have a strong desire and demonstrate an ability to work hard on specific tasks. They must show a commitment and willingness to actively work towards longterm goals.

Taking Risks

To exceed their current levels of skill, knowledge and talent, athletes must have the courage to take risks.

Success and Excellence

Athletes must be able to focus their energy and attention on the most appropriate processes/tasks to achieve a successful outcome, whatever tasks or challenges are presented.
BIBLIOGRAPHY AND READING LIST

BOOKS


One of the more highly regarded volleyball coaching books, with focus on women’s volleyball.


Prepare to look at volleyball in a new way.


A completely different approach to thinking about setting. If you are prepared to open your mind it is a great read.


A beginners level book covering all the main areas of the game. From the popular “Steps to Success” series by Human Kinetics.

Kiraly, Karch. (1999) Beach Volleyball. Human Kinetics, Champaign, IL, USA

Beach volleyball by Karch!


A good book which looks at the theoretical basis of different parts of volleyball. The opening chapter on practice is particularly good.


Originally written in German. One of the first books to take a systematic approach to preparation for beach volleyball. A little dated but still useful.


Originally written in German. Takes a more scientific and technical approach than most American books.


Originally written in German. Takes a more scientific and technical approach than most American books.

Advanced book with a scientific focus but very good.


A good introduction to using and adapting different kinds of statistics for individual needs.


Individual chapters written by well known American coaches.

ARTICLES


WEBSITES

www.goldmedalsquared.com

An American coaching clinic company run by Carl McGown, Doug Beal and Marv Dunphly. The site often has interesting articles among the coach resources.


The official FIVB technical reports from the 2006 World Championships, 2007 World Cup and 2008 Olympics. This includes selected statistics and technical and tactical video clips.

http://nuke.conditioningzone.com

A website for conditioning and preparation of volleyball players.

http://www.mycoachonline.com/Volleyball/

American online coaching community.