

Volleyball

Completion of this chapter should enable the reader to:

- Appreciate the development of volleyball and describe the general rules and equipment used
- Practice the fundamental skills of passing, setting, spiking, serving, and blocking
- Explain aspects of team play and offensive and defensive strategies
- Teach the fundamentals of volleyball

HISTORY

Good for all age groups

Volleyball was invented in 1895 by William J. Morgan, who was physical education director of the YMCA in Holyoke, Massachusetts. He developed the game to provide an indoor game for the winter months in which relatively large groups of men could participate in a small gymnasium. The principal features of tennis were employed, but the net was raised and the players struck the bladder of a basketball with their hands instead of racquets.

The YMCA is chiefly credited with promoting this very fine game throughout the United States and in many foreign countries. In the United States volleyball is played regularly on playgrounds and in recreation centers, camps, and school and college classes and intramural programs. It recently has become one of the most popular sports in high school and college women's athletic programs. Also, it has become an excellent recreational game in the armed services and was played in both World War I and World War II.

The YMCA held its first National Volleyball Championships in 1922. The annual YMCA tournament and the addition of the United States Volleyball Association (USVBA) Open Championship in 1928 further popularized the game, not only as a pleasurable sport but also as a competitive game.

Volleyball was adopted as an Olympic sport in 1964 at Tokyo. Although at the time it was a sport played around the world, it was the Soviets and Japanese who took it

most seriously. The Japanese women's teams introduced tenacious defense and increased the level of play by scraping and diving for every ball hit by an opponent. The Soviet's contribution to the game was the power offense. With the exception of 1976, when the Polish men's team defeated the Soviets for the gold medal (the Soviets or the Japanese won every men's and women's volleyball gold medal through 1980) (Soviet men three gold, women three gold; Japanese men one gold, women two gold). In fact, in the women's competitions from 1964 through 1980 the only time the gold or silver medal failed to go to the Soviets or Japanese was in 1980, when the Japanese boycotted the Olympics (silver to East Germany).

Until 1984 the highest finish by a U.S. men's team was seventh in 1968, and the highest placement by a U.S. women's team was eighth in 1968. But in 1984 (when the Soviets boycotted) the U.S. men won the gold and the U.S. women won the silver (China won the gold). In 1988 the Soviet women's team regained the gold by beating Peru (with China capturing the bronze), but the U.S. men's team repeated its gold medal performance, this time by beating the Soviets 13-15, 15-10, 15-4, and 15-8. Both the men's and women's U.S. volleyball teams took the bronze medal at the 1992 Barcelona Olympics. The men's gold was won by Brazil and the women's gold by Cuba.

Today the game of volleyball requires team strategies involving offensive and defensive plays and highly refined individual skills. Another modification that has become

popular, especially on sand courts and beaches, is played with just two players on each side. Most recently four-person volleyball has become popular across the nation.

DESCRIPTION AND EQUIPMENT

Volleyball for men and women is played on a rectangular court divided by a tightly stretched net. The top of the net is 7 feet 11½ inches (2.43 m) from the floor for men and 7 feet 4½ inches (2.24 m) from the floor for women (Fig. 38-1). A backcourt spiking line is drawn across the court 9 feet 10 inches (3 m) from and parallel to the centerline. Two lines, each 6 inches (15.2 cm) long, are drawn behind the endline to designate the serving area. One line is an extension of the right sideline. The other is 9 feet 10 inches (3 m) to the left of the first line. Six players constitute a team: three frontline players and three backline players.

An inflated leather ball 25½ inches (65 cm) in circumference and weighing between 9 and 10 ounces (260 to 280 g) is used. It is somewhat smaller than a basketball and resembles a soccer ball or water polo ball in size.

The play begins with a serve by the right back player. The server stands with both feet in the service area, which must be at least 6 feet 6 inches (1.98 m) deep and is 9 feet 10 inches (3 m) wide to the right and in back of the endline. The right boundary line of this area is an extension of the right sideline of the court. The serve consists of hitting the ball with the hand (open or closed) or any part of the arm so that it goes clearly over the net and within the boundaries designated by vertical extensions of the sidelines called the "net antennae." The receiving team must return the ball over the net before it touches the floor. Each team may hit the ball a maximum

of three times in returning it across the net (a block is not considered one of the three hits). The ball is returned back and forth until one team makes an error. Only the serving team may score points. If the receiving team commits a fault, a point is scored. If the serving team makes the error or commits a fault, side-out is called and the other team serves following the rotation of players.

The ball must be cleanly hit in volleyball; it may not come to rest momentarily in the hands or on the arms. A player may not hit the ball twice in succession (*exception: blocking rule*). The server continues to serve until loss of serve or completion of the game. Following a side-out, the opposite team must rotate clockwise one position before serving. This rotational system is used so that every player rotates not only in serving but in position on the floor. Both teams must be in correct rotation order at the time the ball is served. However, after the serve players may exchange court positions.

ABRIDGED RULES AND REGULATIONS

USVBA rules and regulations are described here.

Playing area and court specifications

The height of the net is the only difference between court specifications for men and women. For the official measurements of the court and playing area for men see Fig. 38-1.

Officials and their duties

1. The first referee is the superior official and decides whether the ball is in play or dead and when point or side-out is made and imposes penalties for rule infractions.

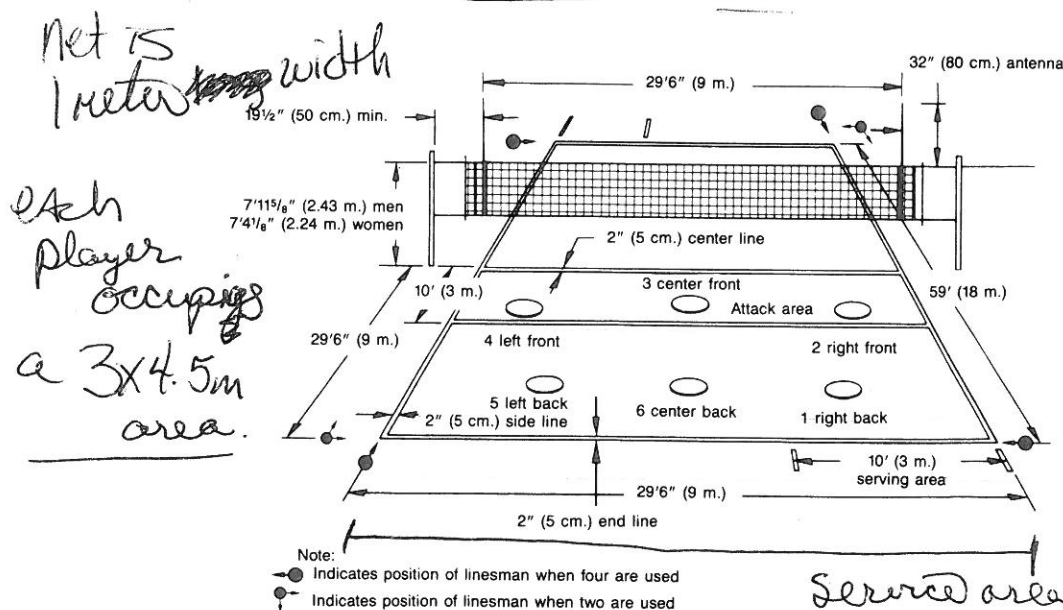


Fig. 38-1. Volleyball court.

- ② The second referee assists the first referee wherever possible but is primarily responsible for net and centerline violations, supervision of substitutions, and overlap violations of the receiving team. This referee stands outside the court behind the standard, constantly changing positions as the ball changes sides of the court.
- ③ The scorer, seated on the side of the court opposite the referee, keeps the record on points scored, substitutions made, and time-outs called and supervises rotations of servers.
- ④ When two line judges are used, they are stationed diagonally opposite each other (Fig. 38-1). They are responsible for decisions concerning boundary plays and serving errors.

Players and substitutes

1. In official matches each team must consist of only six players. Player positions along the net are designated right front, center front, and left front; those in the backcourt are called right back, center back, and left back.
2. When the ball is served, players must be in their rotational order. Side-to-side and front-to-back relationships of players must be maintained until the serve is contacted. In the frontline the center front must be between the right and left front. In the backline the center back must be between the right and left backs. Also, back-row players may not overlap with their corresponding frontline player. In other words, the left back must be deeper in the court than the left front. However, the left back does not need to be deeper in the court than the center forward because they do not have a side-to-side or front-to-back relationship. As soon as the serve is contacted, players may move anywhere on their side of the court.
3. A substitute may replace any player when the ball is dead, provided the player has reported to the scorer and received permission of the referee. A player taken out of a game may reenter once, but must return to the original position in the serving order.
4. In international rules, a substitute who enters the game and is then removed cannot reenter until the next game. In high school and collegiate rules a player is permitted three entries into a game, with starting the game counting as one entry.

Service and rotation of positions

1. Choice of playing area or service at the start of a match is determined by the toss of a coin. After each game the teams alternate who serves first. When teams are tied in the number of games won, the first serve in the deciding game is determined by a coin toss.

2. The player in the right back position makes the serve and continues as the server until side-out is called. After side-out is called, an opponent becomes the server.
3. Each member of a team, on receiving the ball for service, rotates clockwise one position and remains in this new position until side-out has been called on an opponent's serve.
4. When a game is completed, teams change courts, and alterations in rotation of players must be made at that time. During the deciding game of a match the team captain may decide to change courts when one team reaches 8 points unless it is mutually agreed to remain on the same side of the court throughout the final game for the match.
5. The server must stand entirely outside the court in the service area until the ball is struck. The server must bat the ball with one hand clearly over the net so that, if untouched, it will land within the opponent's court. A serve is good if it clears the net and is touched by an opponent, regardless of where it might have fallen.

Returning the ball

1. A return may be hit in any direction. A player may use any part of the body above (and including) the waist to hit the ball.
2. A return that passes over that part of the net between the net posts or their imaginary extensions is in play even if it touches the top of the net while in flight.
3. A return may be recovered from the net, provided the player avoids contact with the net.
4. After once contacting the ball, a player may not touch it again until it has been touched by some other player. (Note: After the ball has been blocked at the net, any of the blockers may make the next contact.)

Restrictions in the play of backline players

1. Backline players may not participate in the action of blocking.
2. Backline players may not spike from the attack area, but may from behind the attack line.
3. Inasmuch as the attack line extends indefinitely, a backline player may not hit a ball into the opponents' court from above the height of the net while outside the court and within such limits of the attack area.

Infractions

If any member of the receiving team commits any of the infractions listed, 1 point is credited to the serving side; if the infraction is made by the serving team, side-out is called.

1. Serving illegally or serving out of turn.
2. Catching or holding the ball or failing to make a legal return.

3. Touching the ball twice in succession, except following a block, which is not considered a hit.
4. Contacting the net. A player is not considered to have contacted the net if a hard-driven ball causes it to touch him or her. (Note: Should two opponents contact the net simultaneously, both are called for a violation; however, neither team is penalized and the serve is repeated.)
5. Touching the ball when it has already been played three times without passing over the net.
6. A player's foot completely touching the floor on the opposite side of the centerline. (Note: A player's foot or feet may contact the opponents' side, provided that some part of the foot or feet remains on or above the centerline.)
7. Reaching under the net and intentionally or unintentionally interfering with the opponent's play of the ball.
8. Changing player positions before the serve has been made. Until the serve is made, players on each team must be in their relative court positions.
9. Violating substitutions or time-out regulations.
10. Unnecessarily delaying the game.

Time-out

1. Time-out can be called only by the referee on request of a team captain or coach when the ball is dead.
2. Time-out for substitutions is not charged against a team, provided play is resumed immediately.
3. Time-out for rest is limited to twice in each game, and play must be resumed in 45 seconds, except that if a player has been injured but is to remain in the game, the rest period may last 3 minutes.
4. Time-out between games is 2 minutes.

Scoring

1. Failure of the receiving team to return the ball legally over the net into the opponent's court scores 1 point for the team serving.
2. A game is won when either team scores a 2-point lead with 15 or more points.
3. The score of a forfeited game is 15-0.
4. A match is won by the team that first scores two of three or three of five games. The three-of-five format is most common among college and international matches. Courts are changed in the middle of the third or fifth game.
5. Some local rules may put a 17-point cap on the first four games of a five-game series with no cap on the deciding game.
6. NCAA rules require rally scoring (eliminates side-out and thus a point is scored every serve) in the fifth game of a match. However, often home teams in dual matches decide the method of scoring to be used.

FUNDAMENTAL SKILLS AND TECHNIQUES

Volleyball is a game that challenges the participant's skill in the use of the hands and agility in jumping, twisting, reaching, and hitting. Hitting motions that require the use of proper body control and muscular coordination are constantly demanded.

✱ Passing

The most fundamental skill to be learned is the ability to pass the ball to a teammate, which is required on almost all plays.

Forearm pass

A forearm pass should be used to receive serves, low balls, and spikes (Fig. 38-2). The forearm pass used to recover the opponents' attack is called a "dig." The official rules do not permit carrying the ball, which occurs during any openhanded hit below the chest. If the ball is hit underhanded, the player should clasp the hands together in any one of three methods: (1) clenched fist, (2) curled fingers, or (3) thumb over palm (Fig. 38-3).

When possible the passer should move quickly to a position behind the ball, with knees bent, feet shoulder-width apart, and trunk slightly forward. The hands and arms should be extended and together and parallel, with the elbows locked during contact. The hands should point toward the floor, and the ball should be contacted on the forearm above the wrist. The arm movement should be an arc from the shoulders, with the legs actively involved.



Fig. 38-2. The forearm pass.

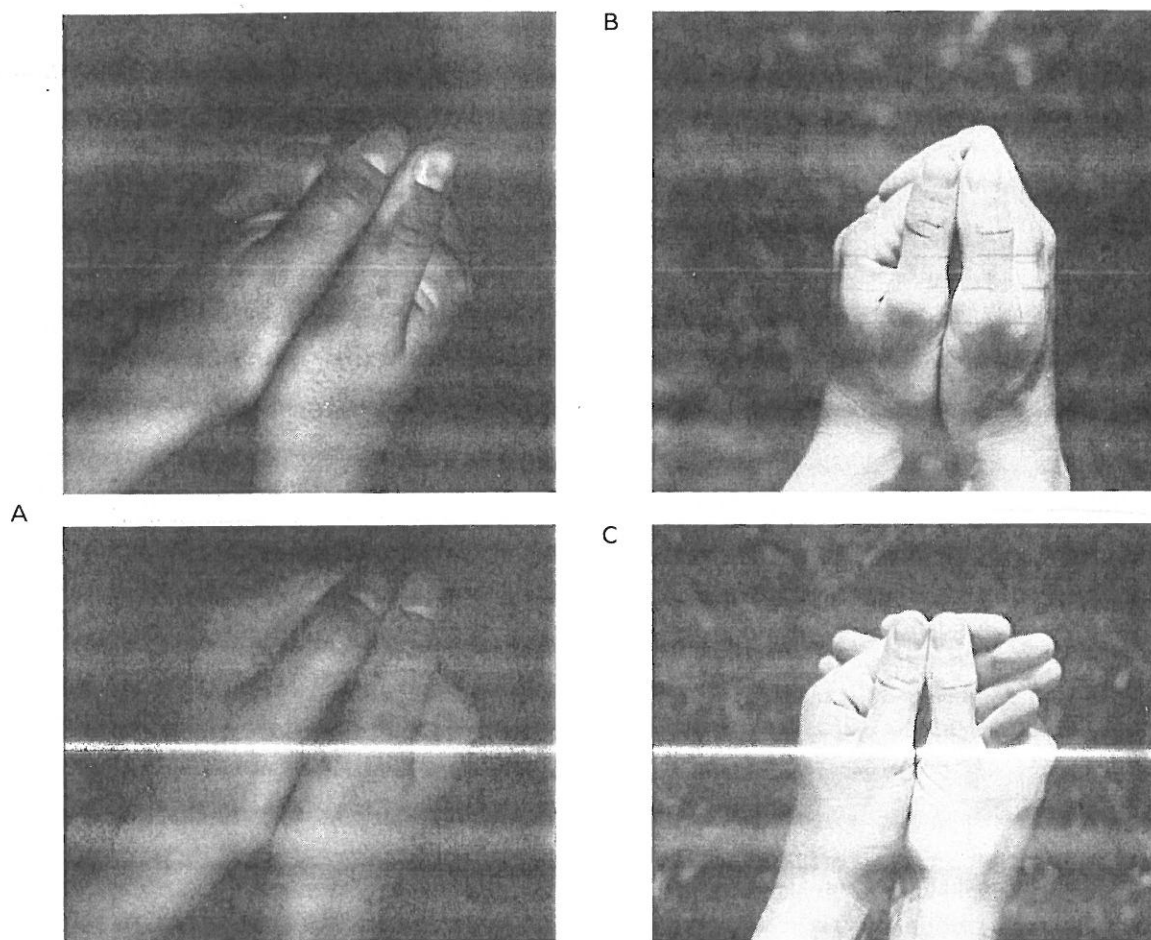


Fig. 38-3. Hand positions for the forearm pass. **A,** Clenched fist. **B,** Curled fingers. **C,** Thumb over palm.

Setting

The setter moves to a position so that the forehead is in line with the descending ball and faces the direction of the intended set. The setter's hands "form a window" 6 inches in front of the face, with the upper arms nearly horizontal, wrists cocked, and fingers spread. The ball should be contacted with the inner surface of the thumb and fingers. *A synchronized springing action of the fingers, wrists, and arms, as well as extension of the legs, pushes the ball forward (Fig. 38-4).*

Spiking

Speed most important factor
Spiking is the act of striking the ball with great force in a downward direction into the opponent's court. To accomplish this powerful offensive skill, the player must learn to coordinate the approach, takeoff, and arm movements. The spiker's preliminary position is near the sideline and attack line. Three or four steps are taken during the approach, with the last step taken with the stronger leg.

The step-close takeoff is one method of transferring the momentum of the body into a vertical direction.

During the last steps the heels of both feet contact the floor, and then the weight is shifted forward to the toes. Both arms swing backward to shoulder height when the heels contact the floor. The arms are swung forward and upward during the takeoff. The left arm extends directly upward above the shoulder, and the right arm bends into a throwing position. The left elbow leads the swing, followed by an extension of the spiking arm, contacting the ball with the heel of the open hand. The wrist should snap quickly over the ball to impart a topspin (Fig. 38-5).

Tip

A tip is a soft shot contacted with the fingertips. The arm action is similar to the spike, but the attacker reduces the speed of the swing. The ball is contacted high above the net so that the tip is just over the opponent's attempted block.

Serving

Serves should never be missed at the beginning of a game, after a time-out or substitution, or near the end of a close

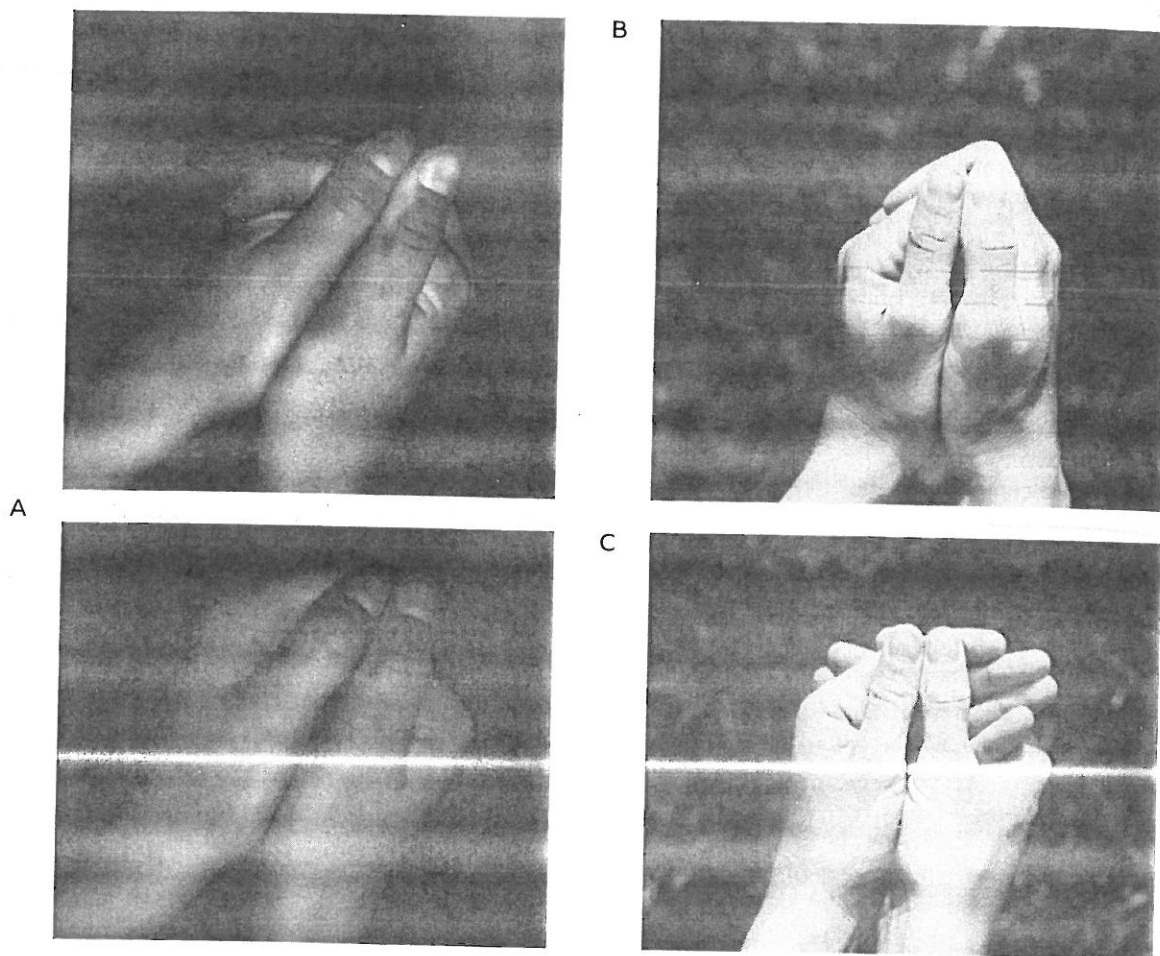


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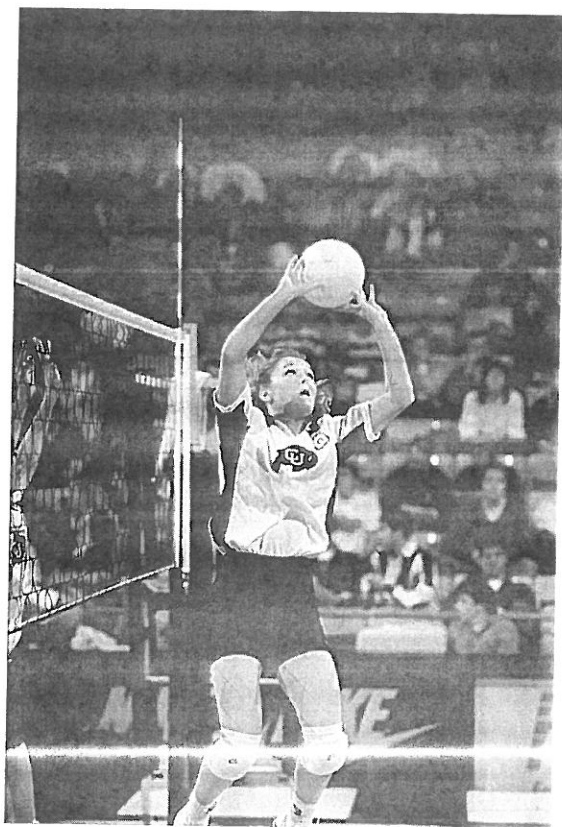


Fig. 38-4. The set.

game. Players should study the opposing team and serve to deep corners, weak players, areas between players (seams), and substitutes. Players should always concentrate on keeping the serve inbounds.

A player should learn to serve accurately and carefully, avoiding trick serves, because a team cannot score unless the serve is made good. The success of a serve therefore depends primarily on accuracy, control, and consistency. Regardless of the type of serve used, the server should attempt to place the ball in the opponent's backcourt, preferably in the corners or to the opponent's weakest receivers or to serve short, just over the net, to cause the front-row spikers to pass the ball.

Types of service

The underhand serve is the easiest to learn and control. The use of the overhand serve can give greater speed to the served ball as well as a floating line of flight deceptive to the opposing receivers. Sidearm serves can also be made.

Underhand serve. The underhand serve is the easiest and simplest for beginners to use to start play.

In executing this serve, the player faces the net with the left foot in front (if right-handed) of the right, rests the ball in the left hand at about knee height, and hits the ball

just after releasing it off the holding hand. The hitting arm swings as in bowling a ball. The hand follows the ball straight through in the direction of the flight of the ball (Fig. 38-6).

Overhand serve. There are two types of overhand serves: the floater and the topspin. The chief asset of the floater is its speed and its weaving line of flight, making it difficult for opponents to return. The topspin serve, while resulting in a more predictable path than the floater, tends to dive toward the floor after it crosses the net.

The overhand serve is executed by tossing the ball 2 or 3 feet (about 0.8 m) in the air above and in front of the right shoulder. The left side of the body faces the net, with the feet in a stride position. As the ball falls to the desired hitting spot, the arm extends from a cocked position to contact the ball. The heel of the hand should be used. Contacting the ball momentarily at its midpoint and with little follow-through results in a floater, while contacting the ball on its lower midsection, snapping the wrist, and rolling the hand over the top of the ball imparts the topspin. The overhand serve is the one most used by players participating in power volleyball (Fig. 38-7).

Sidearm serve. The sidearm serve is infrequently used. Its chief assets are its deceptive curves and the twist that the line of flight often has. Accurate use requires practice, but the serve can be used as a change of pace.

The ball is held at about hip level and is tossed about a foot into the air while the arm swings parallel to the floor. The left side of the body faces the net, left foot forward as in a forehand stance in tennis, and the swing of the arm is similar to the forearm swing.

Jump serve. Hitting the serve while jumping allows the server to contact the ball at a higher point, thus permitting a steeper angle. The similarity of the body actions of this serve to the spike (except the angle of contact with the ball) makes this serve a natural, and its use is increasing in high-level competition.

Receiving the serve

The ball should be advanced from the backcourt to the frontline in preparation for either spiking or placement in the opponent's court. The success of the receiving team depends on anticipating the flight of the serve and then on accurate passing.

Because the overhand serve is such a potent offensive weapon, formations for receiving the serve are necessary. An effective approach called "the W formation" is for the two frontline outside players to move back and toward their respective sidelines and the frontline center player stay near the net with the right shoulder turned slightly toward the net. The backline center player becomes the primary serve returner by being positioned in the center of the court approximately 12 feet (3.7 m) ahead of the backline. The backline outside players move back to about

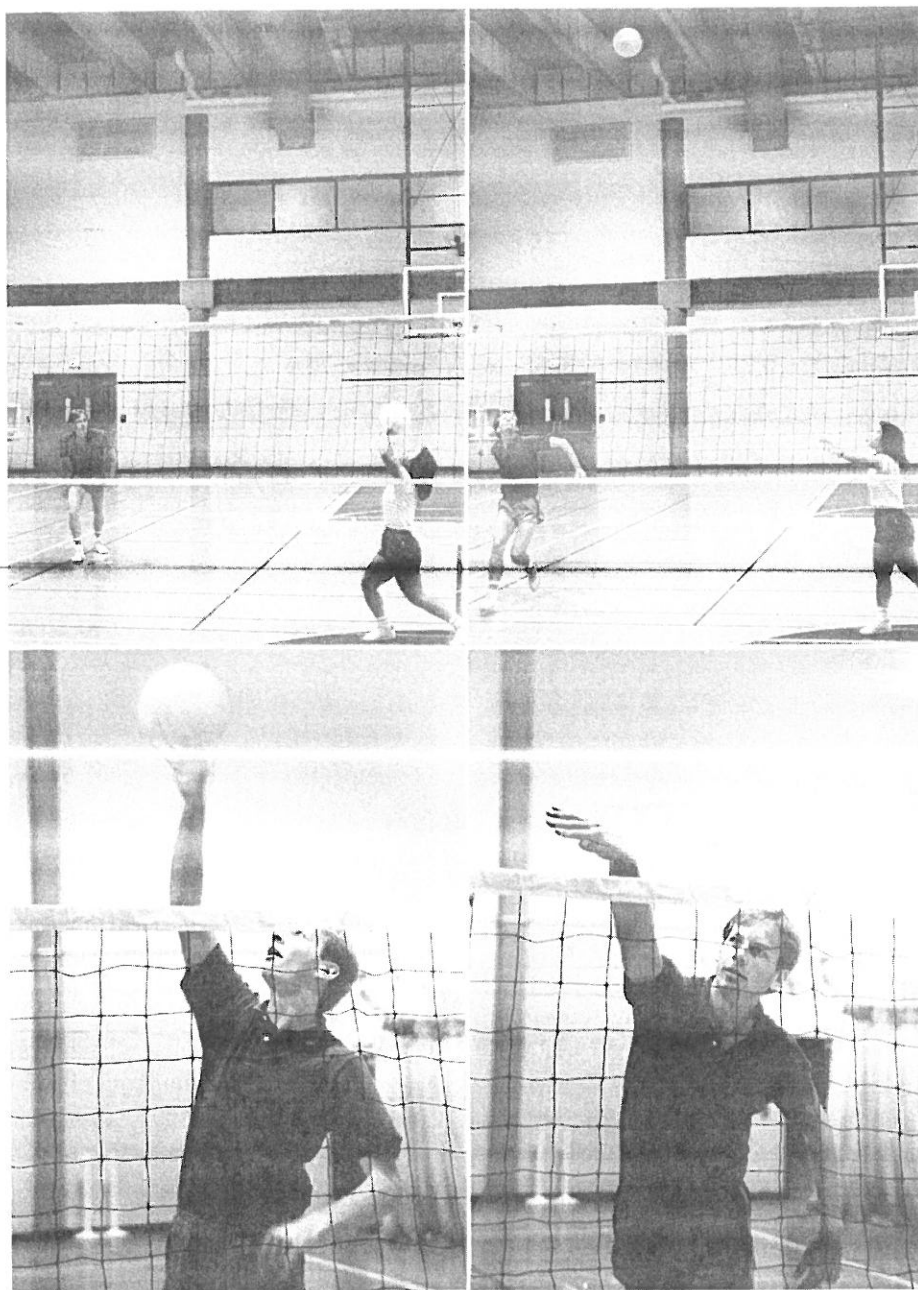


Fig. 38-5. Spiking.

6 or 7 feet (about 2 m) from the backline. In this formation the receiving team is best prepared to react to the rebound from the center back player, whose job is to nullify the effects of the opponent's serve.

Blocking

Blocking is a defensive play by a player or players against the spike or any other placement play near the net. Essentially, the block consists of a defensive player or

players jumping into the air directly in front of the spiker, with arms extended in an effort to block the ball and at the same time to rebound it off the arms back into the spiker's court (Fig. 38-8). This results in the receivers forming into a W arrangement as shown in Fig. 38-9. To block effectively, one should time the jump with that of the spiker. Multiple contacts by a player(s) participating in a block are legal, provided they are during one attempt to intercept the ball.

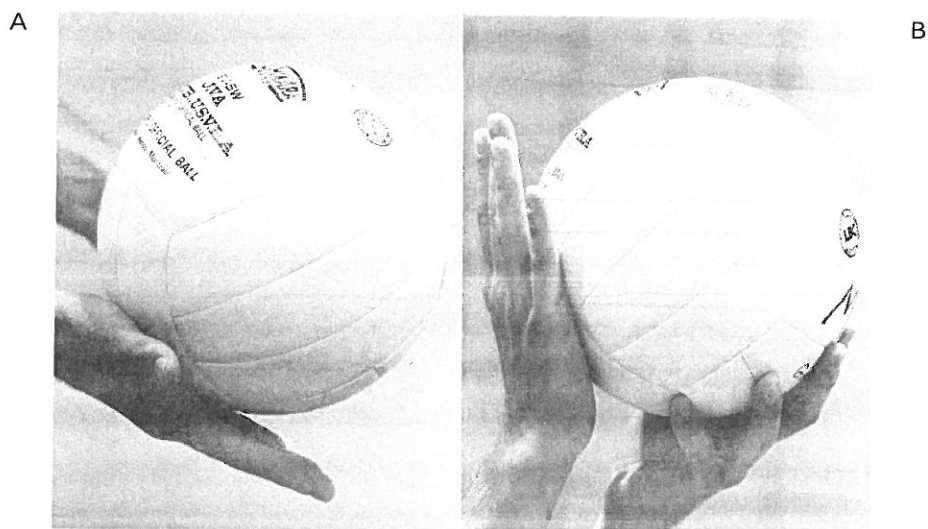


Fig. 38-6. Contact for the underhand (A) and overhand serve (B).

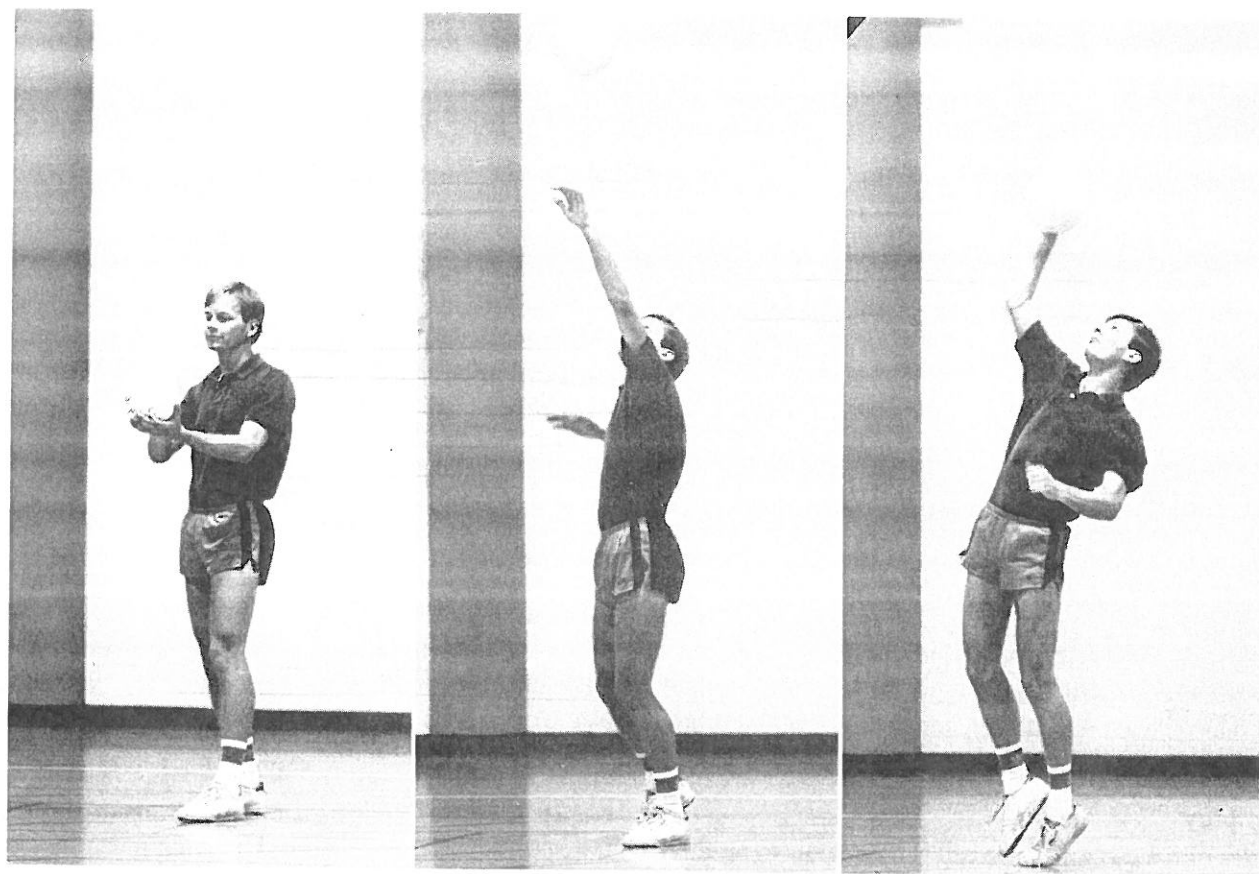


Fig. 38-7. Overhand serve.



Fig. 38-8. Blocking.

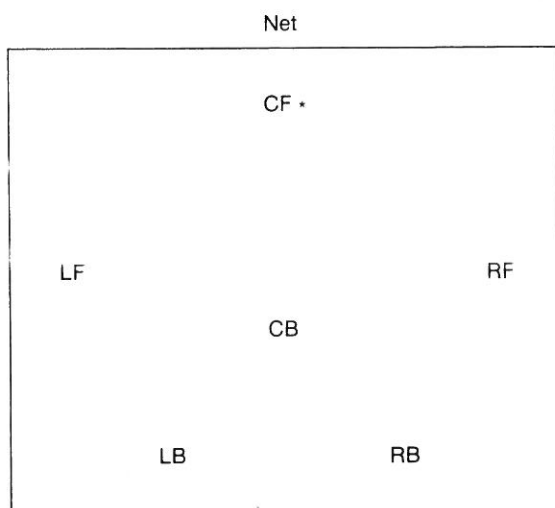


Fig. 38-9. Formation for receiving a volleyball serve (back toward net).

Retrieving the ball from the net

To play the ball from the net, crouch low, legs spread and bent, with the body facing the sideline. As the ball rebounds from the net, use a forearm pass and an upward-backward striking motion so that a teammate may be able to play the ball. If the ball hits the net near the top, it will drop almost straight down. If it hits low in the net, it may rebound several feet, and the retriever must be stationed accordingly.

Team play

The idea of the game of volleyball is not merely to hit the ball back and forth over the net. Essentially, the game offers many opportunities for team play, both offensive and defensive. When these skills are smoothly developed

and executed, a real sense of enjoyment is derived by all players.

Offense

The basic offense consists of passing the ball from the backline to a setter at the net. The setter delivers the ball above and within 2 or 3 feet (about 0.8 m) of the net to the spiker for the attack plays selected to take advantage of the opponent's weaknesses.

The attack is used to develop and establish a playing situation that will deliver to the opponent an unplayable ball. This requires team play. The spiker should aim the ball into an unguarded area of the opponent's court. Sometimes as a surprise play the spiker tips the ball just over the blockers' heads or directs it to either side of the blockers' hands.

The four-two is a simple, basic offense. Four players are designated as attackers and the two best ball handlers as setters. In this system a setter always switches to the center of the frontline. Success depends on the ability of the five remaining players to pass the ball to the designated setter. The service order should be arranged so that the two setters and two best spikers are diagonally opposite each other.

Defense

Primarily, good defensive methods are formation plays to most effectively block or recover a hard-hit or well-placed ball. A block is usually set up by grouping two (or occasionally three) frontline players. The backline players are the secondary line of defense. The diggers must crouch low with hands held waist high, ready for a low, fast spiked ball.

Return quickly to original position when drawn out on a play. The server should assume position immediately after a serve.

TEACHING CONSIDERATIONS

1. The overhead set is the basic skill upon which continuous play can be built. Therefore, it should be the first skill taught. Teach the set using the following guidelines:
 - a. Establish consistent good form in simple conditions from either a self-toss or a partner toss.
 - b. Build the progression from:
 - (1) Stationary setting, to moving to receive the ball (stress getting into position before contacting the ball)
 - (2) Returning the ball in the same direction, to returning the ball in a different direction
 - (3) Simple tosses, to balls tossed across the net
2. Once the set is established one-on-one, two-on-two, and four-on-four, cooperative and competitive play can be introduced to teach positioning and basic offensive and defensive strategy. Offensive strategy includes:
 - a. Playing the ball to an empty space on the opponents' court (back and to the sides).
 - b. Changing the direction of the ball.
 - c. Changing the dynamics of the hit (tip or spike).
 - d. Defensive strategy for beginning players includes primarily returning to home base to cover space.
3. The serve can be introduced as court size increases. Introduction of the serve requires introduction of the forearm pass. Progression for the forearm pass is similar to that of the set.
4. Combine practice of the forearm pass with the set and serve until students can receive a serve with the forearm pass from different directions and can set it in different directions.
5. Introduce the spike and dig only after consistency with the set and forearm pass is established.
6. Build new skills into the basic game gradually. Provide opportunities to play the game in modified form through the unit, gradually increasing the number of players, size of the court, and skills used as students develop consistency. Do not permit students to swing at the ball with one hand (make it illegal in game play if necessary). Modify rules to encourage good play (e.g., must be three hits on a side, or use as many hits as needed).

GLOSSARY

- ace** A serve that lands in the opponent's court without being touched.
- actual playing time** Time from the service to dead ball; 8 minutes constitutes a timed game.
- blocking** A defensive play; attempting to block or stop the returning ball over or near the net.
- carrying the ball** It is illegal to hold the ball. It must be batted.
- catch** Allowing the ball to come to rest on any part of the body.
- cover** Being positioned behind a spike or a block to field a ball glancing off a team member.

dead ball Ball that is out of play.

defaulted game Game in which one team does not have six players to start.

delaying the game Deliberately slowing down the game.

dive A defensive maneuver to recover a ball by extending to a prone position to contact it.

double foul Simultaneous fouls.

foot fault To step on or over the endline before or during the serve, or to step completely over the centerline.

game point The last point in the game.

held ball The ball coming to rest momentarily in the hands or arms.

kill A spike that is impossible to return.

liner A ball that lands on the court boundary line. It is considered inbounds.

match To win two of three or three of five games.

point Awarded the serving team for any infringement of the rules by the receiving team or for an unreturned shot.

roll A defensive maneuver to recover a ball. Rolls may be executed in all directions for recovery.

rotation Clockwise movement of the players following a side-out and prior to a team's term of service.

run-through A passing skill used to play a dropping ball while remaining on your feet.

service Putting the ball into play by the right back.

service area Area 6 feet 6 inches (2 m) deep and 9 feet 10 inches (3 m) wide at the right rear of the court from which the ball is served.

set A high pass that is generally the second play by a team to relay the ball for a spiker.

side-out Ending of a team's right to serve because of an infringement of a rule.

spike A ball hit forcibly from a height above the net.

switch A change of playing positions on the court for strategic reasons.

term of service Serving the ball until side-out is called.

time-out Stopping the game for rest, substitutions, or injuries.

tip A change-of-pace attack.

violation A foul, such as a lift, double hit, or four hits on one side.

SUGGESTED READINGS

- Bertucci B, Bertucci T: *Championship volleyball drills*, vol 2, Champaign, Ill, 1985, Human Kinetics. Contains more than 100 drills designed to develop advanced skills.
- Bertucci B, Hippolyte R: *Championship volleyball drills (vol 1: individual training)*, Champaign, Ill, 1984, Human Kinetics. Offers a comprehensive description of volleyball drills designed to develop individual skills.
- Bertucci B, Peterson J: *Volleyball drill book: individual skills*, Indianapolis, 1993, Masters Press. Written for all competitive levels, this book presents 200 drills and includes chapters on serving, receiving, digging, passing, spiking, and blocking.
- Bertucci B, Peterson J: *Volleyball drill book: game action drills*, Indianapolis, 1993, Masters Press.
- Davis K: *Advanced volleyball skills*, Winston-Salem, N.C., 1992, Hunter Textbooks. Specialization of positions, court movement, individual strategy, and gamelike drills are covered, as well as rules, evaluations, rating scales, and resources.