

Phases of the Attack Movement

By Jim McLaughlin, head women's volleyball coach, University of Washington

To the casual observer, attacking is the most identifiable skill in volleyball, especially for spectators. To the players, attacking is often the most fun and dynamic skill. Undeniably, attacking is the most explosive part of the game and garners the most attention. To the coach, however, attacking is more than just the excitement of the terminated play. It is about the numbers. In an average NCAA Division I women's collegiate volleyball match, the average number of swings in a 30-point game is approximately 40, and the average number of kills in a game ranges from 15 to 20. That equates to about 50 to 67 percent of points being scored on the basis of a team's ability to kill the ball. When reminded that the average number of kills per game and hitting efficiency are the two highest coefficients to winning, one might ask the question, "What do the truly great hitters do?" In other words, what are the correct phases of the attack movement to ensure an attacker is on the right track?

There are six basic movements inherent in any good attack, including the approach (which encompasses the plant or step close), the jump, the armswing, ball contact, the followthrough, and landing. How a player executes each movement during the attack leads either to success or failure. If executed properly, the attack terminates a rally, gains a point, and swings momentum in your team's favor. The object of a good offensive attack is to put the ball where the defense is not. It all begins with the approach.

The Approach

The most tried-and-true method to teach a solid attack is to instruct hitters to use a four-step approach that starts slowly and ends quickly. In serve-receive situations, all hitters (outside and middle) should use four steps. (In transition, this might not always hold true, but that will be addressed later.) For most volleyball teams, no matter the level or gender, the most prevalent attack is made by the outside hitter. In this case, the hitter approaches from the left front of the court.

The outside attack is most popular because of the longer approach to the net, a better angle, and the setter is often positioned much closer to the right side of the court. As a result, the set ball travels farther to the outside hitter, providing more time for a proper approach.

If the outside hitter is right-handed, the hit is commonly called an "on-hand spike," in which the player hits the ball before it travels across the body. A right-handed hitter's step progression will be right-left-right-left, providing an angular approach (see Figure 1). A right-handed hitter who is hitting offside from the left has a bit more of a challenge because the ball must cross her body – which is why all coaches love to have a left-handed offside hitter. For a left-handed hitter, the approach pattern is left-right-left-right (see Figure 2).

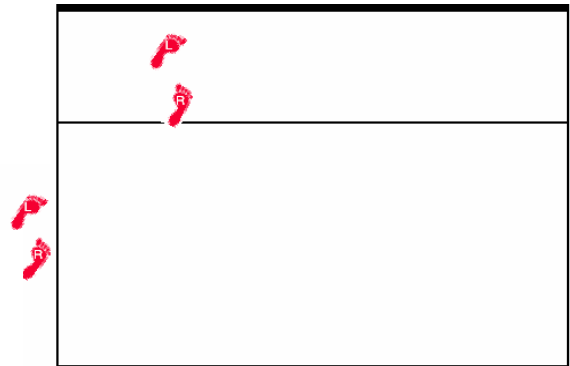


Figure 1 - Right-handed approach pattern.

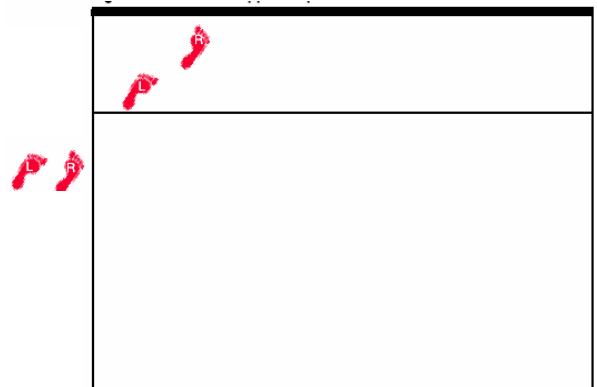


Figure 2 - Left-handed approach pattern.

Because the goal of the approach is to build momentum, a player must accelerate as she progresses through the approach. Building momentum at this point increases speed, which, in turn, converts to a much higher vertical jump. We might then think of the steps of the approach as "slow, faster, fastest" or perhaps even "small, bigger, biggest." The last two steps are the fastest and result in a two-footed approach jump.

The first two steps, slower than the last two, help to generate timing as the hitter observes and pinpoints the location of the set. The first step shifts the attacker's body weight forward, allowing her to stay balanced and prepare to execute the second step. The second step should always be quicker and longer than the first, allowing the attacker to adjust to the speed, height and set trajectory of the ball. The last two steps, which are often referred to as the "step close," are the fastest and most explosive. It is important that when taking the final two steps, the feet are pointing in the direction that the player is traveling so that horizontal speed is not inhibited. This enables the hitter to jump up to the ball and create a good relationship to the ball.

In addition, during the third step (also known as the "plant" or "hop"), the attacker should be about 12 inches (30 centimeters) from the ball with the hitting arm lined up behind the ball. At this point, the attacker transfers forward velocity and the resulting momentum into

vertical velocity. By the fourth step, where the attacker jumps depends primarily on how far she can broad jump. Indeed, the ability to hit balls that are not perfectly located where you want them at the net is what separates elite hitters from simply good ones. This is why it is imperative that the approach be slower at the beginning and fastest at the end. A player at full speed at the beginning has a more difficult time changing direction and adjusting to sets. Also, a player who is slowing down with each step loses horizontal velocity and thereby vertical velocity. Thus, we encourage our players to go slow at the beginning, which allows them to “chase” the ball.

The only variation to the habitual movement patterns just described occurs when time is reduced (i.e., in transition). Given sufficient time, there should always be the attempt to take a fourstep-approach. Lacking time, a three-step approach might be necessary instead. A hitter running from the net after a block or from a 10-foot x 10-foot (3-meter x 3-meter) position will sometimes have to abbreviate the approach. However, most of the time after turning and running, players can make an adequate four-step approach.

Proper Armswing

Of course, once the proper approach has been executed, the ball must be hit over the net – preferably over a weak or nonexistent block or into an unoccupied area of the opponent’s court. Here arm work is the key. Once a player has built speed with the proper fourstep approach, the arms become the key to converting horizontal momentum into vertical height. Teach and learn “hands down, not up and not out” on the second step of the approach. The second step should be on the spiking line, and the swing begins on this step. At this point, the arms should be forward (not facing up), no higher than the waist. Then, on the third step, the hands go straight back as the arms swing as far as possible. On the fourth step, the feet are parallel to the net, and the hands and arms go up in front of the body, using a double-arm lift. As the body ascends, the hitting arm elbow is drawn back and down to about shoulder height while simultaneously opening the shoulders to the ball. This position resembles a bow-and-arrow shooting position (elbow above the shoulder) and prepares the body to torque rather than pike when hitting.

Ball Contact

Once the four-step approach has been completed and the hitting arm is in the proper position, teach attackers to contact the ball as high as possible and in front of the body. As the body begins to torque, the hitting hand swings up and over the top of the ball, making contact in front of the hitting shoulder just outside the ear. The combination of the shoulder rotation, along with some slight hip rotation, generates the torque that produces power.

Use a fast armswing with an equally powerful wrist snap. The hand should be open and firm, with fingers apart, giving the attacker more surface area on the ball. This results in much better ball control.

Landing

Many coaches overlook teaching the landing phase of the attack, but a player who lands incorrectly certainly knows the difference. (Injury to the ankles or knees can result.) The most important thing to remember is to bend the knees slightly to absorb the shock of hitting the hard floor. The attacker should land with the body weight distributed uniformly on both feet and knees slightly flexed. When possible, avoid an awkward, one-foot landing.

Timing

Appropriate timing is one of the most difficult – yet important – factors that regulate spiking and thus requires a closer look. Timing for the act of hitting is a function of a four-step approach relative to when the setter has the ball. Several different tempos are possible, depending on the level of play, but no matter what the system might be, success depends on proper eye work. All hitters must track the source, trajectory, and location of the pass and then use one of the following four natural movement patterns:

- Pass, hit fast – Use after a successful pass by the player who is going to attack, which immediately allows her to begin the fourstep approach.
- No pass, hit fast – Use when a teammate passes, allowing the hitter to release and get ready to attack via the four-step approach.
- Pass, shuffle, hit fast – Use after a pass that is high in trajectory and does not allow the hitter to begin her approach right away.
- Pass-no pass, hit slow – Use when passes are poor. The offense runs at a slower tempo to ensure the hitter gets a good swing.

Conclusion

The best players reproduce these habitual movement patterns over and over and, through countless repetitions, understand which to use at the appropriate time. Above all, it is important to understand what pattern the pass will allow the hitter to employ.

Clearly, there is an advantage in running the offense at a faster tempo, but you must first stress that the hitter gets a swing. At the University of Washington, we know that speed can kill, but we also know that when not run correctly, speed can kill you.

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VOLLEYBALL ACE™ DRILLS

You Go, I Throw

Jim McLaughlin, University of Washington

Number of Players: 6-12

Number of Balls: Steady supply

Objective:

To increase an attacker's coordination and timing on the approach.

Directions:

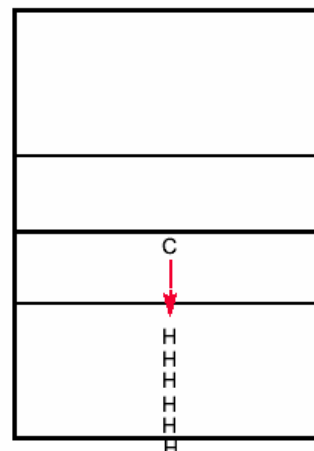
1. Each attacker (H) stands in a line in the middle of the court, ready to engage in the approach.
2. A coach (C) positions near the net to toss the ball.
3. Individually, each player begins the approach with the second step on the spiking line.
4. If the attacker has performed the four-step ap-

proach properly, the coach then tosses the ball.

5. Players need to come to the coach, and the coach tosses the ball just as they jump. Players should actually jump a couple of feet back from the net and make sure they are placed directly in front of the coach.
6. The coach ensures the toss is only high enough for the attacker to take a swing, which eliminates considerable problems with timing.
7. The toss can't be too tight to the net (1 to 2 feet away) so that the attacker has room to swing without hitting the net.

Variations:

1. Vary the height of the toss.
2. Toss from far off the net.
3. Run the drill with the middle and right-side hitters as well.



Free Ball Pass, Quick Hitting and Outside Hitting in Transition

From *101 Winning Volleyball Drills From the AVCA* (2000)

Number of Players: 12-15

Number of Balls: 20-30

Objective:

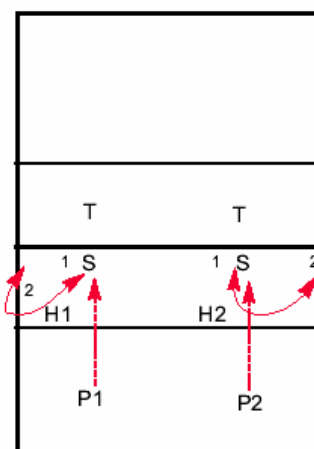
To provide structured opportunities to hit a first-tempo set, followed immediately by an outside, higher set.

Directions:

1. Begin the drill with two receiving lines (P), two setters (S), two tossers (T) and two hitters (H).
2. Balls are tossed to passers (P1, P2) in the receiv-

ing line who pass the ball to S. Coaches should stress receiving with the overhand pass for passers.

3. Hitter 1 (H1) and Hitter 2 (H2) hit two times consecutively. The first set is quick. The second set is high and outside. Coaches should stress good movement off the net and a good approach for the hitters.
4. Tossers must toss the second ball immediately after the hitters land from the first attack.
5. Passers become hitters. Hitters retrieve two balls.
6. Tossers switch into receiving lines after 10 tosses.



Left Versus Left Attacking

Mary Wise, University of Florida, From *Volleyball Drills For Champions* (1999)

Number of Players: 8

Number of Balls: Steady supply

Objective:

To teach hitters to kill a ball against two blockers.

Directions:

1. One left-side attacker on each side of the net (OH) starts at that player's base position.
2. One setter (S) on each side of the net starts at base position.
3. Each attacker will receive a total of 10 sets from the setter on the attacker's side of the net.

4. The coach (C) alternates tossing to the two sides of the net.

5. The object of the game is to see which attacker can terminate the most balls out of 10 versus an opposing block (BB). The player with the most kills is considered the winner.

Variations:

1. Add diggers behind the block.
2. Play a continuous game with every ball being set to the outside hitters.
3. Have only one blocker.
4. Have no block and two defenders. Play right versus right or middle versus middle.

