



Volleyball ACE™ Power Tips

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The Dynamics of Net Saves

By Eugene Burt, head girls' volleyball coach, Nathan Hale High School, Seattle, Wash.

One of the most difficult situations volleyball players face involves a ball that must be played after it comes in contact with the net. This situation can develop under two distinctly different circumstances. One is when the opposing team hits the ball in such a manner that it grazes or even bounces off and over the net, often referred to as “working (or playing) the tape.” In this circumstance, the movement of the ball becomes far less predictable than a clean hit and can radically alter the rhythm of the volley (analogous to the fastball pitcher occasionally throwing a slow pitch). The other kind of ball-net contact occurs when, on the first or second contact by a player, the ball touches the net and must be played by another teammate. The play that attempts to remedy this situation is commonly called the “net save.”

The net save is difficult to accomplish because the movement of the ball after contact with the net is unlike any other aspect of the game. Reading the movement of the ball through the air is difficult enough, but ball-net contact also involves so many unique dynamics that it is a major challenge to most players. Beginning players usually have no clue about dealing with the situation, while even the most experienced players often have difficulty performing a net save. Accomplishing a net save is most frequently the job of the setter, but any player will, at some time, need to execute it properly. This article will analyze the major dynamics of the ball-net contact and will suggest ways to execute the net save successfully. It is vitally important to understand that for the purposes of the article, each dynamic of ball-net contact is being isolated for analysis. In reality, however, they interact (adding to the complexity) and happen simultaneously!

The Net

To be sure, it would be nice if every net on every volleyball court were exactly the same, but, alas, that is not true. In fact, the net can have a significant effect on the action of the ball, and knowing the characteristics of your team's net is a major factor in “home-court advantage.” The main factor is the tautness or springiness of the net's surface. The more taut the net, the more the ball will respond on contact. Conversely, the looser the net, the less active and predictable the ball's movement will be. Usually, the top of the net is the tightest area, while the bottom edge of the net may be so slack that a cupping effect can be detected. Similarly, the web of the net is generally the tightest around the



Accomplishing a net save is most frequently the job of the setter, but any player will, at some time, need to execute it properly. Photo courtesy of FIVB.

edges and a bit more slack toward the middle. Considering all of these variables, it is recommended that players should test the net during warm-ups by throwing a ball into the net at various points in order to study its characteristics. Any observations or conclusions about the net should then be shared with the rest of the team.

Point of Contact on the Vertical Plane of the Net

Where the ball contacts the net on the vertical plane is probably the single most important factor in predicting the behavior of the ball and is perhaps the easiest to recognize. In general, if the ball makes contact high on the net (yet not contacting the top cable), then it normally drops nearly vertically. As a result, the responding players need to drop very low as quickly as possible directly below the point of contact in order to get under the ball.

Contact low on the net is more likely to result in the ball rebounding off the net. The distance of that bounce is determined by such factors as lower net tautness, ball velocity and the angle of the ball path before net contact. To play low net contact, the players should not move too close to the net. Typically, 3 to 4 feet allows for adequate space to move in.

Ball contact in the middle of the net is less predictable, depending on the tautness of the webbing at that point (loose = quick vertical drop; tight = bounce away from the net).

Learning to read the ball reaction based on the point of net contact can be practiced by having a coach or fellow player toss balls into the net while players attempt to perform net saves. Some common techniques for playing the ball out of the net include:

- Play the ball from the side to avoid being jammed when it rebounds further than expected
- Play the ball as low to the floor as physically possible to have the maximum time to read the rebound, and
- Use an aggressive "J" stroke motion to get the ball up and away from the net without lifting it.

Ball Path on the Horizontal Plane

Anyone who has played pool (billiards) will recognize the action of the ball striking the net on the horizontal plane. Basically, the ball rebounds from the net at approximately the same converse angle as it traveled into the net. If the ball comes from the right at a 45-degree angle, it will rebound to the left at 45 degrees. Of course, because the volleyball net is not a reliably firm surface, the rebound angle will not be as predictable as it is on a pool table. Factors that can affect the rebound angle include net condition, net tautness and ball spin. Nevertheless, the basic principle that the rebound angle mirrors the incoming angle when describing the path of a volleyball on the horizontal plane is true. The principle is most applicable when the ball is traveling nearly parallel to the floor. It is less significant when the ball is descending or ascending at a severe angle. Players need to practice reading the ball path angle in order to position themselves in the most advantageous spot to handle the ball.

Ball Path on the Vertical Plane

The most common situation demanding a net save is a first-contact pass that goes further than intended, forcing the setter to deal with a ball that will contact the net on its descent. Depending on the vertical angle of that descent, the ball may or may not rebound from the net. The more vertical the descent, the lesser the rebound. Conversely, the closer to the horizontal plane the ball descends, the greater the rebound. In the former case, the player must get into a position quite close to the net, get down very low and angle the passing arms so that the ball is directed upward and slightly into the court to give a teammate the opportunity to hit the ball. In the latter case, the player must read the descending angle and get into a position in the area into which the ball is most likely to rebound.

Occasionally, a ball is directed into the net from below (i.e., from a dig or diving save). In this instance, the ball will react in a similar manner to that described previously (i.e., vertical ascent = little rebound; angled descent = mirrored rebound), ex-

CALENDAR

Jan. 10 2008 AVP Hot Winter Nights Tour
Ford Center Arena, Oklahoma City, Okla.
Jan. 11 Scottrade Center, St. Louis, Mo.
Jan. 12 Sprint Center, Kansas City, Mo.
Jan. 17 Bradley Center, Milwaukee, Wis.
Jan. 18 Alliant Energy Center, Madison, Wis.
Jan. 19 La Crosse Center, La Crosse, Wis.
(For a full schedule, log on to www.avp.com/schedule/winter_tour.jsp)

April 11-12 2008 Molten Division III Men's Invitational
Volleyball Championship
Blake Arena
Springfield College, Springfield, Mass.

May 1-3 39th Annual National Collegiate Men's Volleyball
Championship
Bren Events Center
University of California, Irvine

Aug. 8-24 Olympic Games
Beijing, China

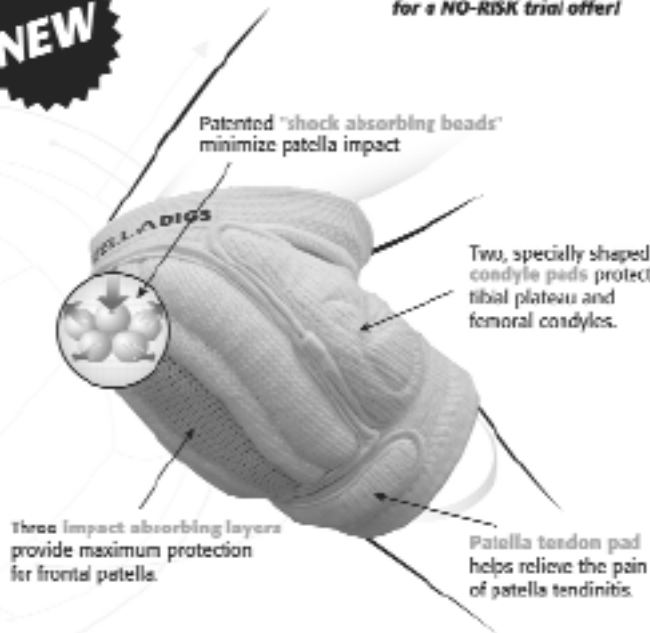
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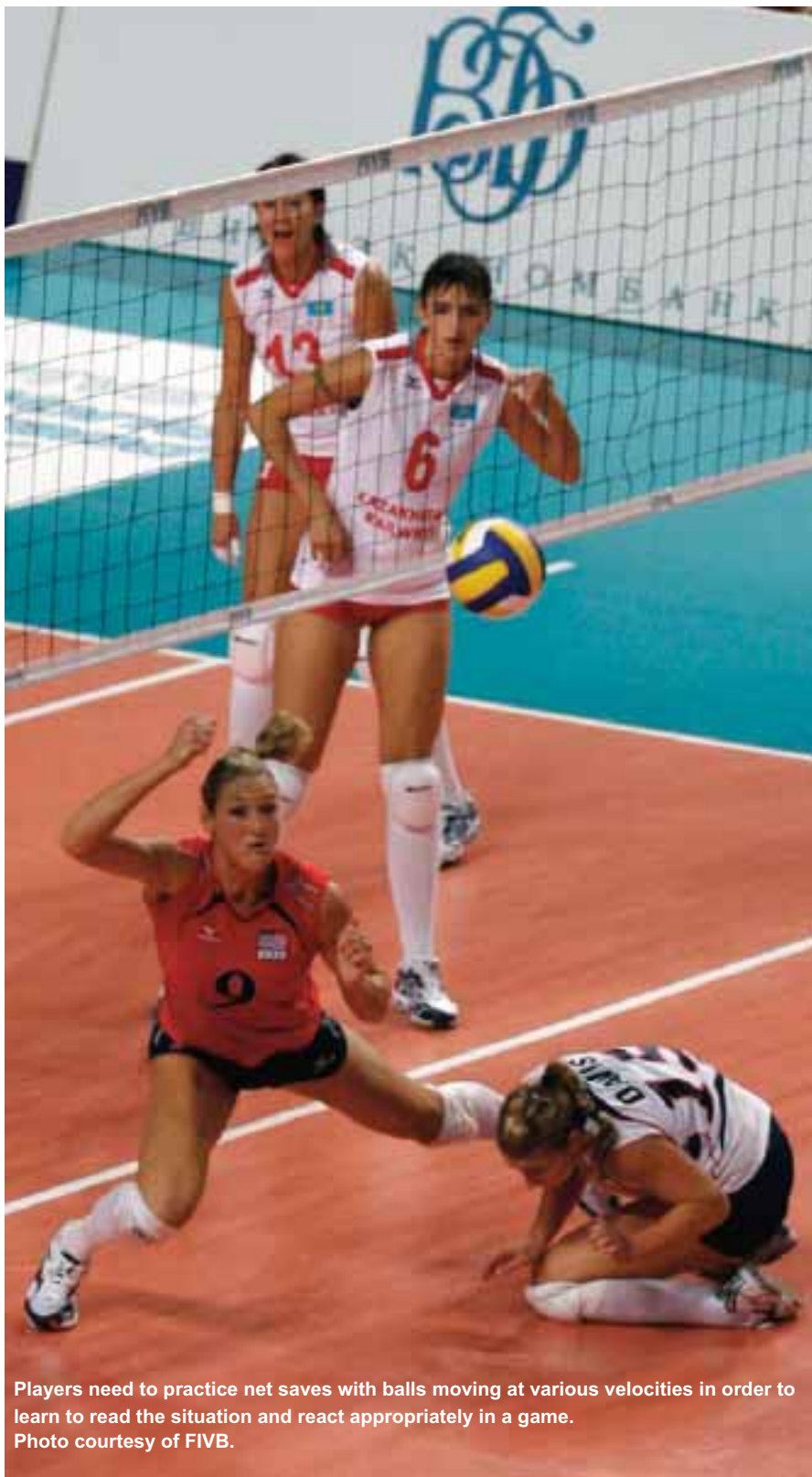
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Players need to practice net saves with balls moving at various velocities in order to learn to read the situation and react appropriately in a game.
Photo courtesy of FIVB.

cept it travels upward. When the ball is ascending, a player generally has more time to react and may have more options for handling the ball (passing, setting, hitting, etc.).

Ball Velocity

The velocity of the ball as it moves to the net affects the net save in two ways. First, the faster the ball is moving as it approaches the net, the less time the player has to read the situation and deal with it. All of those mental calculations the player must process to make good decisions about body positioning and ballhandling often must happen in milliseconds, especially if the ball was hit particularly hard. Second, the faster the ball travels, the more energy it has temporarily stored, which, when the net is contacted, results in exaggeration of the kinds of ball movements described

previously. For example, a slow-moving ball descending at a 30-degree angle will strike the net and rebound 1 to 2 feet back into the court. However, a rapidly moving ball may rebound two or three times as far. Players need to practice net saves with balls moving at various velocities in order to learn to read the situation and react appropriately.

Other Factors

Other factors such as ball spin and wind/air currents can also affect the movement of the ball on contact with the net. These secondary factors may modify the movement of the ball, but do not determine the ball action the way the other factors do.

Contact Two or Three?

The player engaged in a net save is usually the setter, who is attempting to handle the second ball contact for the team. Most of the comments made about handling net saves to this point have focused on that second contact.

However, the net save may also be on the third contact. As a result, the player must not only deal with all of the factors discussed so far, but must also send the ball over the net into the opponent's court. This situation can prove to be very difficult if, for instance, the second contact sends the ball very high and it descends nearly vertically into the net and must be played directly under the net.

In most cases, the net save is accomplished below the level of the top of the net and necessitates forearm passing or setting the ball over the net. Only in the case of the ascending net contact would the ball possibly travel high enough to hit. Therefore, the net save practice should not focus exclusively on the setters, but should include all players.

Multiplicity of Factors

As stated previously, the reality of net-ball contact is that all of those factors discussed separately happen simultaneously and interact with each other. A ball rarely contacts the net while traveling precisely horizontally or vertically. In the real world, volleyballs descend or ascend at varying angles while traveling from right to left (or vice versa) at various angles relative to the plane of the net, moving at different speeds with diverse amounts of spin, contacting the net at a variety of points, etc. Is it any wonder that net saves are so difficult to master? The best hope for developing players who can handle net saves is to give them as many net save experiences as possible so that they may develop those seemingly intuitive moves needed to make the play successfully.

Conclusion

The difference between winning and losing a volleyball game typically comes down to which team handles those situations that do not happen as planned. More than once during a game, ball-net contact is likely to occur. Therefore, understanding the dynamics of what happens in that situation provides clues to training players to perform the net save successfully. Indeed, few things thrill volleyball fans more than seeing players execute this aspect of the game effortlessly.

(Reprinted from *Coaching Volleyball: Defensive Fundamentals and Techniques*. 2004. Monterey, CA: Coaches Choice.)

VOLLEYBALL ACE™ DRILLS

Queen of the Net

Don Hardin, University of Illinois

Number of Players: 8

Number of Balls: Steady supply

Objective:

To create competitive blocking and incorporate transition attack. The drill also teaches blockers to stay out of the net, or to incorporate net saves.

Directions:

1. Three blockers (B) line up at the net opposite another team of three blockers (B).
2. A setter (S) comes from the back row on both sides of the net.
3. A coach (C) tosses balls to the setter on each

side of the net.

4. Play begins with a toss to the setter on either side. As the ball is tossed, blockers transition back from the net and attack the ball into the opposite court. *Sometimes the coach can simply toss the ball into the net to have the blocker dig it to the setter.*

5. The side of the net the ball lands on dictates the next toss. (If Side A attacks the ball and it lands on Side B, then the coach for the B team tosses a transition pass to the B team setter.)

7. Games can be played to a set number of points. Start out playing to 10 points per game.

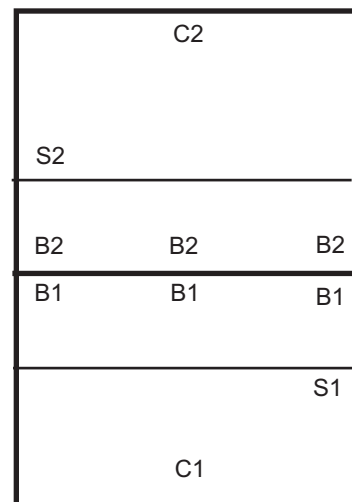
8. Points are awarded as follows:

Stuff block = 2 points

Kill = 1 point

Net violation = subtract 1 point

Tips, roll shots or deflected ball = 0 points



Dig Under Net

Jim Stone, retired from Ohio State University
(From *Volleyball Drills for Champions*, 1999)

Number of Players: 1 at a time

Number of Balls: 12

Objective:

To train players to stay low on defense. This is a good drill for young players.

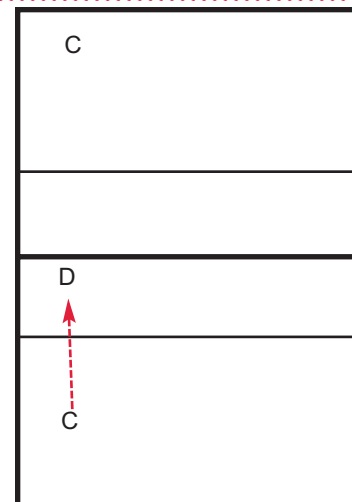
Directions:

1. A defensive player (D) is under the net, with his/her feet on the center line.
2. The coach (C) attacks the ball to the defender, who digs the ball back to the coach.
3. The coach should encourage the player to stay

low, not touch the net, keep his/her feet on the ground with the weight on the toes, and have the hips lower than the ball at contact.

Variations:

1. Have the coach at each endline attacking the ball alternately.
2. The defensive player digs, then turns around to receive the next ball.
3. Toss the ball directly into the net and have the player dig the ball out.



Six at the Net

Joan Powell, Coronado High School, Colorado Springs, Colo.

Number of Players: 12

Number of Balls: Steady supply

Objective:

To cause a team to play out of system and to force players to make the best of a chaotic situation.

Directions:

1. Players (X) play six-on-six with one team at the net facing the same direction and holding onto the bottom of the net.
2. A coach (C) hits the ball to the floor and the team at the net scrambles to get to the ball and play

it three times. This drill calls for considerable communication and effort. Be sure to vary the bounced ball – low, high, far, on the court, off the court and so on.

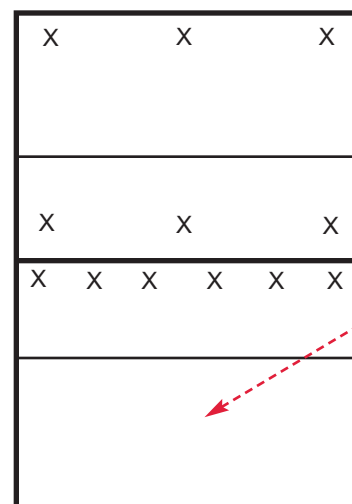
3. Opponents respond to their play and the game continues.

4. The coach changes sides and has the other team scramble from the net.

5. Play to a set number of points.

Variations:

1. Allow the scrambling team only two hits. The bounced ball simulates an errant pass and the team gets two more hits to get the ball over the net.
2. Set the score at 20-20 and play to 25.



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