

TOPIC OF THE MONTH FOR MARCH 2008

THE WINNING EDGE IN THE KICKING GAME: SECRETS THAT ALLOW KICKERS, PUNTERS, AND SNAPPERS TO EXCEL

I. Structure of the football and the bladder inside the ball

A. Facts

1. A football is a prolate spheroid (a rounded object with one diameter longer than the other).
2. The bladder should consist of multiple layers and should conform to this same "egg" shape.
3. "Game" balls should be constructed of Horween leather, not microfiber or other composites.
4. Correctly inflated footballs require 13 PSI.
5. The seams of the bladder are not necessarily in line with the seams on the football's exterior.
6. To make the seams more rigid for quarterbacks, football-making companies have sacrificed internal structure of bladders. High school age kickers and punters will experience reduced consistency using these footballs.
7. Footballs with extra strips of leather sewn on the outside (white stripes on some footballs) are harder to kick well.
8. Footballs with plastic laces are hard on the hands of punters and holders.

B. Conclusions for optimum results

1. Never practice or play with underinflated balls.
2. Never insist that kickers and punters practice with poorly-structured, overused footballs.
3. The assumption that a "soft" ball allows greater foot impact is not true. Even a monster hit cannot force enough air activity within the ball.
4. Buy footballs for their internal structure, not just for their "feel." (To test the shape of the bladder, press the panels at the end of a fully inflated football, like testing a melon. No soft spots should be present.)
5. Purchasing composite footballs with high quality bladders for use in the off-season is effective.
6. Allow kickers, punters, and snappers some access to the "new" footballs they will use in the game.
7. Snappers also need access to a "heavy" football for throwing drills and a pocket net or circular target the size of a basketball hoop.

II. Location of the "sweet" spot on the football

A. Facts

1. With the football used in high school and college, striking at roughly the height of the white stripe at the bottom nose of the ball allows greatest impact and greatest control of inside air. (The pro football is the same size without stripes.)
2. This "sweet" spot exists 360 degrees around the ball at this height. It is well below the laces.
3. Punters are impacting the same spot on the ball as placekickers, assuming correct release of the ball and a straight leg swing with pointed toe.
4. Kickers and punters are attempting to force the side of the ball being struck to indent into the ball, losing 1/3 of the space inside the ball and driving the air into the remaining two thirds. This increases internal air pressure to 18-20 PSI.
5. The location of the "sweet" spot does not change when the ball is placed on the ground or on a tee.

B. Conclusions for optimum results

1. In high school, the holder should put the ball down on the tee, not spin the ball for laces out. The time wasted is more harmful than any benefit expected from ball performance.
2. The punter does not need to spin the ball until the laces are directly on the top.
3. To fit the punter's foot, a correctly held and released ball should land on the "sweet" spot, with front nose in and down. The ball will bounce backward on an angle, not straight back.
4. The foot of the kicker or punter should stay still (with toe pointed) while indented within the ball. Any movement of the toe or ankle reduces air compression and changes flight of the ball.
5. The kicking foot should swing straight across the tee from back to front, not angle sideways. The punting foot should swing straight from behind the hip to in front of the same hip/shoulder, not cross the body. As in golf, slicing under the ball widens the pattern of ball flight.
6. The kicking/punting leg should swing toward the target zone (goalpost, corner of the field, down the numbers, etc.), not drift across the body. (A quarterback who throws across his body fights the range of his shoulder joint and loses power. Best use of the hip joint requires a swing "on the face of a clock," instead of a Nike swoosh.)
7. The kicking/punting foot should remain in the ball as long as possible (to keep air compressed/busy).

8. Balance on the plant foot (the foot on the ground) frees the kicking/punting leg to swing.
9. Location of the plant spot should be based on alignment with the expected "sweet" spot.

III. Location of the football on a tee

A. Facts

1. The use of a flat black tee for placements (PAT's and field goals) allows 3 players to focus on the site for the play. Without the tee, the accuracy and the timing for the play vary widely.
2. When a football is correctly placed on a flat black tee, the "sweet" spot will be one inch back of the tee for soccer-style kickers and two inches back for straight-on kickers.
3. The tee compensates for field irregularities, particularly the "hole" at the ten yardline.
4. The tee compensates for balance irregularities as players grow or use muscles inefficiently.
5. The kicker is free to place the tee anywhere on the playing surface, not just between the hashes.
6. Correctly set, the alignment of the tee dictates the kicker's approach to the plant spot.

B. Conclusions for optimum results

1. Regardless of the skill of the kicker or the pressure from college coaches, high school players should never make transition to the ground until after the senior playing season.
2. The football should always be set with the "sweet" spot exposed (over ground, not over the tee).
3. On a flat black tee, the bottom nose of the ball should be centered at the very back of the grid.
4. To assist the holder, the spot for ball placement should be marked plainly on the grid of the tee.
5. To take best advantage of the shape of the ball, lean it slightly back but not tipped to either side. (Older kickers who set the football leaned to left or right are compensating for irregular leg swings. Getting a high school holder to lean the ball sideways consistently is not realistic.)
6. Each kicker should set the tee before each play.
7. For right-footed soccer-style kickers, the front of the tee should align to the right upright, not the middle of the goalpost. Left-footed soccer-style kickers aim the tee to the left upright. The plant spot is far to the side of the tee, so this alignment aims the body down the middle.
8. Any kick-off tees used should allow the kicking foot to strike the ball before hitting the tee.

IV. Role of the holder

A. Facts

1. The holder is the most important player in any placement kick (PAT or field goal).
2. Regardless of the skill of the snapper, the holder must handle the ball with the same timing on each play. Perfect balance is essential.
3. Moving the shoulder to catch like a wide receiver prevents the holder from seeing the tee.
4. The holder must be able to look up into the face of the kicker and under the stance of the snapper.
5. From his stance, the snapper cannot see the tee.
6. With his hands, the holder defines the size and location of the target zone for the snapper.
7. The holder must be able to rise easily on broken and fake plays.

B. Conclusions for optimum results

1. The chest of the holder should face the sideline, not the snapper.
2. The "stance" of the holder should be compact, with the butt as low as possible. For soccer-style kickers, the helmet of the holder can safely end up directly over the tee and ball.
3. For high school and youth, putting the back knee on the ground provides better balance and ball-handling. College and pro football holders must leave the back knee up because, without a tee to determine ball placement, they jamb the back elbow against that knee after the catch to set the ball.
4. Once the kicker sets the tee, the holder should immediately place his back hand (left hand for right-footed kickers) on the tee, palm towards the snapper. This defines the width of the snap zone.
5. The snapper should see the holder's hand on the tee, not the body of the holder.
6. Once the holder verifies that the kicker is ready, he leaves the back hand on the tee and signals the snapper by extending the other hand directly in line between the tee and the football no more than 12 inches above the ground, with palm down. This puts a "roof" over the narrow snap zone. (Turning up the palm of the "asking" hand creates an upward signal, leading to high snaps.)
7. The holder's hand should leave the tee after the ball is snapped. This signals the kicker to start forward and standardizes the timing of the play.
8. Handle the ball as little as possible. Bringing the back hand under the ball is most effective.
9. Choice of holding hand depends on player comfort.

V. Location of the plant spot

A. Facts

1. For proper ball flight, the bottom of the kicking leg's swing path must coincide with the location of the "sweet" spot on the ball. When the hip is back, the leg swing reaches the bottom before getting to the ball, and foot-on-ball contact is too high in the ball. (This is like a golf club hitting the ground before getting to the ball.)
2. When a football is correctly placed on a flat black tee, the "sweet" spot is back of the tee.
3. The location of the "sweet" spot on the football does not change when no tee is used. Since the "sweet" spot is closer to the ground, getting the foot through the ball requires better balance.
4. Power for kicking comes from muscles in the hips and lower back, not from the quads on the front of the leg. (The quarterback uses power from the back, even though the arm delivers the ball.)

B. Conclusions for optimum results

1. For soccer-style kickers, the instep of the plant foot belongs on the line with the "sweet" spot, regardless of shoe size. The hip on the kicking side should then be directly over the ball at foot contact, with the leg locked at knee and ankle.
2. For straight-on kickers, the toe of the plant foot belongs on the line with the "sweet" spot. Both hips must be parallel at foot-on-ball impact for the kicking leg to go straight across the tee.
3. If the tee has been correctly placed, the plant foot should always be parallel to the tee, not aligned with the markings on the field.
4. The distance of the plant foot from the tee should be based on body build. Standing on the plant foot, the kicker should be able to swing the kicking leg across the tee from back to front without losing balance. Since there is no correlation between foot length and body width, standing one shoe length from the tee is not a valid choice for most soccer-style kickers.
5. When no tee is used, establish the plant spot by aligning the body down the middle of the goalpost. Without shifting weight off the plant leg, use the toe of the kicking foot to show the holder where to spot the ball. Bring the kicking leg back next to the plant leg before taking steps.
6. For all kickers, the steps should be taken from the plant spot, not from the tee. Kickers working without a tee must focus on plant during steps.

7. The body of the kicker should be aligned toward the plant spot, not toward the tee or the holder. The feet and body should follow a straight line from start to plant. Aligning toward the tee will produce a curved approach path, taking the foot diagonally across the tee.
8. Before the football is snapped, the kicker should focus on the plant spot. Peripheral vision allows the kicker to see the holder's fingers leave the tee. The kicker starts toward the plant when the holder's hand rises to catch the ball.
9. EXPECT TO LAND ON THE PLANT WITH PERFECT BALANCE ON EACH REPETITION!!

VI. Parts of the foot used for kicking and punting

A. Facts

1. The hardest part of the foot is the big bone back of the big toe. This should be the contact point for punters and soccer-style placekickers.
2. Pushing the toes down against the sole of the shoe makes this bone more prominent.
3. If the kicking/punting shoe has a narrow sole and fits snugly through the arch, the shoe enhances foot impact into the ball.
4. No one company makes "kicking" shoes. Selection should be based on the feet involved.

B. Conclusions for optimum results

1. Kickers and punters who play other positions must use the shoes appropriate to those positions (and accept that ball impact may suffer). Players who specialize in kicking and punting should dress each foot for best results and may wear mismatched pairs of shoes.
2. Kicking/punting shoes should never be worn for other activities or other sports. Replace them when they fail to offer proper foot/body support.
3. Straight-on kickers should use a square-toed shoe or an attachment which protects the toes.
4. The plant foot needs more support ---- wider sole, coverage of the ankle bone, and an ankle brace.
5. Use chalk to determine foot-on-ball contact. For placekicking, chalk the "sweet" spot of a ball on a tee. Straight-on kickers want the mark centered on the toe of the shoe. Soccer-style kickers should find the mark behind the big toe. For punting, chalk the entire bottom seam. The line should appear diagonally across the top of the shoe from the second eyelet on the inside to the fourth eyelet on the outside.

VII. Position of the head

A. Facts

1. A fully-loaded head weighs about 7 pounds. A football helmet can weight up to 7 more pounds.
2. Moving the head forward or side-to-side radically affects balance, particularly when standing on only one foot.
3. Quarterbacks are taught to keep the helmet over the shoulder pads. Whatever works for them is also appropriate for kicker and punter balance.
4. Quarterbacks never look at the football. Control of the ball depends on body control, developed through drillwork. Successful kickers and punters must focus on body control, not on the football.

B. Conclusions for optimum results

1. Never drop the helmet or "put the head down" at impact. This motion forces the butt backwards and pulls the kicking leg out of the ball. Instead, keep the eyes down with the helmet over the pads.
2. Never push the head sideways over the tee. This motion drops the shoulder on the kicking side and forces the hips out on the other side, pulling the kicking foot diagonally across the tee. Instead, the head should remain over the plant foot.
3. When punting, never align the head looking down the arm holding the football. This motion will draw the plant foot across the kicking foot. Instead, observe the football diagonally with the head/helmet over the plant foot.
4. On high snaps, never roll the head backward to watch the hands catch the ball. Roll the eyes upward, and catch in front of the helmet.
5. When working "line" drills, the plant foot should be on the line, not the kicking foot. This keeps the head over the plant foot (and over the line).
6. Step sizes (forward and backward) change with the position of the head. Lowering the head makes the hips shift backward. To standardize step sizes, kickers and punters should keep the helmet over the shoulder pads. Move the eyes, not the helmet.
7. Most kickers and punters practice for months without helmet and shoulder pads, then adjust poorly when fall practice begins. In the off-season, periodically wear the helmet during drills and practices to check potential balance problems.
8. Body language reflects personal self-confidence. Kickers and punters who walk with their heads down cannot inspire their teammates or the crowd.
9. Issue kickers and punters light-weight helmets.

VIII. Ball-handling techniques

B. Facts

1. Because it is filled with air, the ball responds to all external motion and pressure.
2. For efficient ball-handling and release, a punter must always catch within the frame of the body.
3. Flipping a football causes the air inside to tumble, much like water sloshing inside a washing machine or a bottle turned upside down.
4. No one grip is right for all punters. Hand size, finger length, and ball surface affect the choice.
5. The hands can maneuver the ball more efficiently when the head stays still. Watching the hands move the ball prevents the brain from controlling body motion. (The quarterback never looks at the football. Drivers do not focus on the steering wheel. Dribbling a basketball requires no vision.)
6. Foot-on-ball contact in punting happens below knee height. This allows the foot to remain in the ball for the greatest amount of time.
7. The desired handle time (catch to foot-on-ball contact) during a punt is only 1.2 seconds.
8. Taking 2 steps and using only 3½ yards from catch to toe extension improves ball-handling efficiency and punting accuracy/hang time. (Secret=balance)
9. Releasing the ball early (before the plant foot hits the ground) causes the punter to hold the hips back and decreases kicking leg speed/height.
10. The desired get-off time (snapper's first motion to foot-on-ball contact) is roughly 1.3 seconds.

B. Conclusions for optimum results

1. Handle the football as little as possible before a kick or punt. Once the ball is caught, keep it as still as possible.
2. The choice of grips should not break the following guidelines:
 - No one hand should be in three panels.
 - Never squeeze the ball.
 - Neither wrist should be "broken."
 - If using two hands, the non-dominant hand cannot be on the far end of the ball.

When extending the arm, a "broken" wrist will straighten and change alignment of the ball. For a right-footed punter, if the left hand is on the front of the ball, the right arm cannot extend fully, and the shoulders will turn to the right.

3. Regardless of the distance from the snapper, the punter should stand with the kicking leg directly in line behind the ball on the ground. Both hands

should be palm down at waist height to provide a "roof" for the snapper.

4. The snapper should never see the chest numbers or the helmet of the punter. Focus the snapper on 25% of the punter (from the waist down on the leg that kicks) to increase accuracy/decrease times.
5. Decide as the football leaves the snapper's hands where to go to receive the ball with the body square. Both feet and the head/helmet must have stopped moving before the catch.
6. Unless the snap is very high, catch palms up, with the elbows bending to absorb incoming ball speed.
7. Never squeeze or clutch the ball between the hands at the catch. Use finger-tip control to move the ball in front of the kicking-side hip. Do not immediately extend the ball before taking steps.
8. For a right-footed punter, the ball should move to "hand-shake" position (waist height in front of the right hip, right elbow bent). Do not push the ball across the body with the non-dominant hand. This turns the shoulders and forces the punter to step to the side. The dominant hand can position the ball while the other hand adjusts alignment.
9. The blocking zone for punts is 10 yards back from the line of scrimmage; the punter's kicking toe must never enter this area. Taking two normal size steps straight toward the target zone will keep the kicking toe within the 3½-yard "box."
10. Release the football at waist height with the arm fully extended when the body can balance on the plant foot. Front nose should be in and down to fit the shape of the foot. Never throw the ball at the foot. Do not turn the wrist during release.
11. If the punter forgets to step in front of the ball and turns the shoulders to catch, that punt should go straight as the shoulders are aligned at catch. Do not attempt to move the ball across the body.
12. Practice ball-catching and ball-handling drills daily without punting. These drills can become part of strength training but can also be done indoors at home.
13. To standardize the timing for PAT/FG plays, the kicker, snapper, and holder should come early on summer weight lifting days and work inside the gym or in a baseball batting cage. The kicker does not need to kick, but he must start forward as the holder's hand leaves the tee to catch the ball. The snapper works on accuracy, the holder becomes efficient in ball-handling, and the kicker seeks perfect balance on each plant.

IX. Ball flight and visualization of success

A. Facts

1. Because of its shape, a football needs height in order to travel greater distances. The optimum trajectory for distance is a 45-degree angle to the ground.
2. Any time a kicker or punter gains an inch or a pound, balance and ball flight will deteriorate.
3. Kickers strive for exactly the same process and the same trajectory on all kicks, regardless of distance. This equates to a golfer's swing, but the kicker uses only a 5 iron. With maturity, the angle to the ground and the distance improve.
4. To be non-blockable, a PAT kick must be 11 feet above the ground as it crosses the snapper's butt, making it a minimum of 33 feet above the ground at the goalpost. Working on a 45-degree angle, the football would be 60 feet above the ground and climbing as it crosses the goalpost.
5. The high school goalpost is roughly 8 yards wide. That means that placekickers focus on accuracy to less than 1/6 the width of the field.
6. A good kick-off will be 70 to 80 feet above the ground at mid-flight (more than twice the height of a 30-foot goalpost). Desirable hang time is a minimum of 4.00 seconds, which gets kick-off coverage runners past the plus 30 yardline.
7. Distance is a poor measure of punting excellence. To be good, a punt must get off smoothly, go where the coverage is running, stay up long enough for the coverage to arrive, and allow no return.
8. The desirable hang time for a 40-yard punt is 4.50 seconds ---- if the coverage can run 40 yards in 4.5 seconds.
9. Assuming a punter is reasonably competent, a good punt that tumbles will stay in the air longer than a good punt that spirals.
10. The path of a punted ball that spirals is easy for the opponent return specialist to predict.

B. Conclusions for optimum results

1. Never attempt to change form immediately before or during the playing season. Allow four months of practice when modifying kicking form. Resist changes suggested by coaches during the season.
2. Never attempt to gain weight or change muscle mass over the summer. In addition to losing range of motion, kicking/punting form must be modified to "fit" a new personal balance point. Periods of rapid body growth will adversely affect ball path.

3. Expect a perfect process on the first repetition. Practice one play each from many locations, not many plays from one location.
4. Although analyzing a bad play may be instructive, during a game immediately erase all thought of the error. Picture perfect process and ball flight. Continuing to think about what went wrong will cause a similar error on the next opportunity.
5. Immediately change the wording on any order to kick/punt away from a player. Repeating the player's jersey number keys the brain to locate the player and kick/punt directly to him.
6. Rather than counting "makes" and "misses," chart exactly where placekicks cross the goalpost, and award points for height and accuracy. Expect to place all kicks high above the middle 4 yards of the goalpost.
7. Rather than practicing for distance, work for height and accuracy. Practice over tall objects (light poles, water towers, baseball backstops). On the field, move outside the hashes to decrease the perceived width of the goalpost. Kicking from the base line, where the poles appear to be one behind the other, is even practical with "live" snap or "live" snap and hold.
8. Always define a narrow target zone for kick-offs and punts. Plan to "lead" the fastest runner on his route downfield. Picturing the path of the ball increases height and hang time. Focus on the landing distance (touchbacks) flattens the ball path and decreases hang time.
9. Punters should practice across the field, charting how many punts land in the desired 5-yard lane.
10. Practice all phases of special teams play during inclement weather days to judge changes in ball flight. In general, anticipate the changes rather than changing form to compensate. Shorten step sizes and concentrate more on balance than on the ball. Expect to get the ball up quickly to overcome wind drift in a stadium.
11. Analyze body balance and ball flight by watching practice and game tapes one frame at a time.

X. Stance and balance of the snapper

A. Facts

1. The sense of balance in the human body is located in the inner ear.
2. When a player leaves his head (and helmet) lower than his butt, he has severely reduced balance.
3. Desired trajectory for all PAT/FG and punt snaps is a flat line angled upward from the ground, not an arc or "rainbow."
 - On 7 yards of distance, PAT/FG snaps should arrive at 12-18 inches above the ground.
 - On 14-15 yards of distance, punt snaps should arrive at waist height (3 feet above the ground) in less than 0.8 seconds.
4. Most snappers are not equally flexible in both shoulders. This affects arm/hand positions during ball releases and capacity to block a gap after placement snaps.

B. Conclusions for optimum results

1. From side view, a snapper should look like an upside down triangle, with back flat and shoulders and butt equally distant from an imaginary line drawn upwards from the ankles.
2. Never drop the helmet over the ball while settling into a stance. Butt will not be low enough, and opponent players have time to study weaknesses.
3. Never rest elbows on knees when preparing to snap. Knees will be too narrow to allow for arm motions.
4. Always check shot alignment, flatten the back, and finish all body movement before putting the hands on the football. Never carry the ball down while establishing a stance.
5. Never attempt to watch the ball reach the holder or the punter. After the hands release the ball, roll the hips and bring both arms forward.
6. The stance for placements (PAT/FG) must be narrow enough that the guards fill the center-guard gaps easily. With knees out over ankles, the snapper has room for both arms to extend backward freely.
7. Never move the feet on PAT/FG snaps. Do not raise the hips. The guards are stepping behind the snapper's heels. Raising the hips carries the ball high and restricts the range the arms can move in the shoulder joints.
8. Practice arm circles daily to improve shoulder flexibility. Practice throws from overhead (up to a distance of 20 yards from a stationary target) to maximize use of back muscles.