Training two-handed players

Recommendations and drills for all phases of the physical game

As I travel the world training players, I see a steady increase of two-handed players, a direct reflection of the success of Osku Palermaa and Jason Belmonte. In fact, as I write this, Brian Valenta, another two-hander, won a PBA Regional title and a two-hander from Ireland is bowling at Junior Gold and is in the top 15. In the past few years, I have worked with two-handed players in Germany, Mexico, Guernsey, Italy, Ireland, Poland, Bulgaria, Romania, Serbia, and the United States. My twelve year old son Max has decided to become a two-handed bowler and I continue to help him develop.

Over my career, I have had the opportunity to work with more than 20 two-handers including three women and a professional. Through these experiences, as well as research on two-handed biomechanics, I have developed a specific training program unique to two-handed players.

Focus points

For all bowlers, the goal is to reduce unnecessary physical movements as well as to maximize energy transfer from the body to the ball. With this in mind, here are my recommendations for phases of the physical game.

Set up

In the set up, the initial position of the hand, feet, elbow, shoulder, and hip can impact the physical game in the approach. Specifically, the set up can impact the swing line, hand position in the swing, hand position at the release, as well as hip and shoulder rotation.

The ultimate objective of the set up is to help keep the balance arm shoulder in front of the ball side shoulder for the entire approach and release by pre-establishing body position.

- **Step # 1** – Set the slide foot parallel to the intended target line.
- **Step # 2** – The trail leg foot should be behind the slide foot. Specifically, place the trail leg foot toe behind the halfway point of the slide foot. Angle the foot at approximately 30 degrees, which will help open the hip angle.
- **Step # 3** – Be sure your ball-side hip is behind your non-ball side hip.
- **Step # 4** – Let the upper body match the open hip angle to open the shoulder and keep the ball-side shoulder behind the non ball-side shoulder.
- **Step # 5** – Place the balance arm hand just above the inserts which will provide support as the ball moves back into the swing. Place the ball near your belly button.

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Swing start

I strongly recommend a five-step delivery. This will help keep the ball-side shoulder behind the non ball-side shoulder for the entire approach, increasing fluidity. When and how the ball is moved into the swing start has a direct influence on forward spine tilt as well as foot speed. Ideally, the ball-side elbow should not move past the hip/stomach and the ball should move below the elbow as it is moved into the swing start to create a rounded movement.

This will help to create earlier forward spine tilt which moves the center of gravity forward, increasing foot speed and fluidity. It also contributes to accuracy. The ball should move in a downward rounded movement (hand under elbow) as soon as the first step is completed in a five-step delivery. From my review of Osku Palermaa's forward spine tilt, due to this rounded start with the elbow remaining on the body, the forward spine tilt increases throughout the approach in this manner: (articulated as a five-step approach)

- **Step # 2** – 20 degrees
- **Step # 3** – 36 degrees
- **Step # 4** – 45 degrees
- **Release** – 80 degrees

Lateral spine tilt is essential to becoming an elite two-handed player. As with many top one-handers, the head is outside the hip as the ball passes the leg into the upswing. From my experience, one simple thought helps players achieve a great lateral spine tilt position. Keep your head outside of your hip. You can see how early the head is outside the hip in the Osku sequence images.

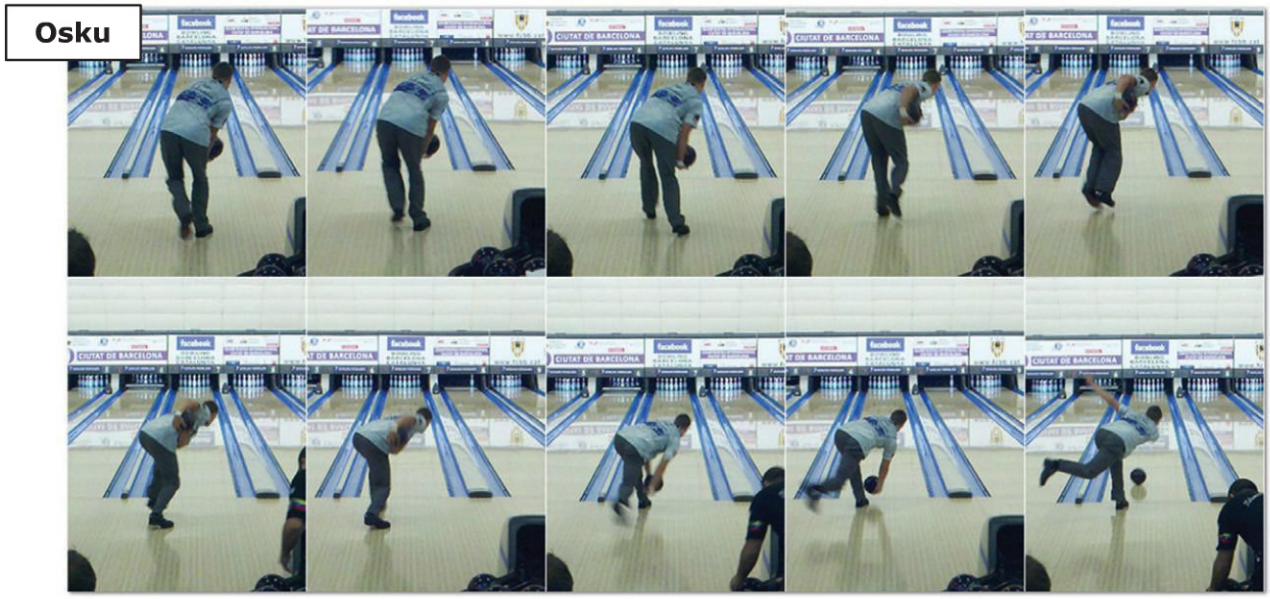
As you move the ball into the swing, move the head outside the hip as you move the non ball-side elbow directly in front of the ball-side elbow. This will help rotate the torso and set the stage for shoulder abduction into the upswing.

Top of the swing

An ideal position sees approximately 45 degrees of forward trunk flexion with the ball-side elbow just above the head and the ball shoulder high. The elbows will be directly aligned and the torso rotated. You can see this in the photos labeled Ball/Elbow Position. One common problem for two-handers is pulling the ball into the upswing, which often leads to the elbow being too high above the head and the ball *above* the shoulder. This position will impact the downswing movement negatively due to increased shoulder tension and a longer swing arc.

Downswing and slide

Keep the balance arm shoulder and elbow directly in front of the ball-side in the downswing. Many two-handed players enter the slide with these misaligned. Specifically, they are too open or too closed in this position.



When the ball-side shoulder and elbow are outside, there will likely be over-rotation at the release point leading to a reduced energy transfer and a follow through off-line from the intended target line.

As the bowler slides, the forward trunk angle nearly doubles from the 45 degree position at the top of the swing to a maximum of 90 degrees at the point of release. With such a movement, a common problem for two-handers is that their head moves upward as they slide rather than remaining low. This can contribute to the non ball-side shoulder moving early and the downswing into the release moving off-line.

With the increase of the forward spine tilt during the slide, the head remains farther outside of the ball. This also leads to a follow through that is under the balance arm side ear rather than under the face/chin.

Release and follow through

Due to the long arc line traveled by a two-handed player's fingers, the rev rate realized is very high. This is equivalent to a large gear. A two-handed player shoulder focus on maintaining the forearm forward with the hand, forearm, and elbow directly through the target line.

The hand should remain under the elbow for a long period of time. This promotes a long extension with maximum energy transfer to the ball. Keep the forearm forward while keeping the hand under the elbow in the follow through. It is critical that the non ball-side shoulder remain forward.

Ball/Elbow Position

Cause and effect evaluation: a session with an elite two-hander

After an initial cause and effect sequence analysis with this player, several potential physical game inefficiencies emerged. Specifically, the assessment revealed that the set up position was impacting the swing line and hand position negatively, impacting the downswing, release, and follow through.

His set up had his hips nearly parallel to the lane rather than the intended target line. As a result, as he transitioned from step three to four (of five), he over-rotated quickly from being off-line closed to off-line open. This affected both his hand and elbow position (swing) negatively at the top of the swing.

In order to complete the shot, he had to rotate his hips back during the downswing leading to an over-rotation of the left shoulder with the forearm facing off line into the release. This reduced the efficiency of energy transfer to the ball as well as changed the launch angle. Moreover, it was causing a twisting effect on his knee, jeopardizing the longevity of his bowling career.

To resolve this issue, I asked the player to change his set up as described above. We changed the slide foot to be parallel to the intended target line and moved the right foot back and open 30 degrees to open the hips. This had an immediate positive impact on reducing the rotation of the hips and torso in the transition from steps three and four.

As a result, the hand was in a stronger position at the top of the swing and more inside the elbow. The downswing retained the forearm forward leading to better energy through the ball and an improved launch angle. Specifically, the forearm was now moving directly in line with the intended target line as his downswing angle increased.

After this initial set up change and subsequent biomechanical improvements, we were able to

focus on keeping the elbow inside the wrist as well as keeping the head lower through the slide. Before we made these changes, the bowler was moving his head upward in the slide. This was a function of the over-rotation of the left shoulder.

Drills to improve two-handed body position

Drills serve to develop micro placement and movements of the physical game. This allows the development of an increased awareness, altered physical game position, and biomechanical efficiency. To help two-handers develop their body position and movements, I have designed three drills which include a foul line, one-step, and a three-step drill. These will help players and coaches improve and develop an efficient two-handed game. The video of the drills is available on the BTM website at www.bowlingthismonth.com/extras.

Two-handed foul line drill

- **Step #1** – Place the ball on the ground and set the slide foot. Be sure the non ball-side shoulder is facing the pins and the head is outside the ball.
- **Step #2** – Place the trail leg as far away as possible.
- **Step #3** – Pick up the ball and set the balance arm hand's fingers directly above the ball-side hand. The ball side hand should be under the bowling ball.
- **Step #4** – Set the forearm forward. Set the balance arm elbow directly in front of the ball-side (elbows aligned). Be sure the head is well outside the ball and the trunk is rotated with the shoulders and elbows aligned. The ball should be approximately ankle high.
- **Step #5** – Swing the ball forward and then back keeping the forearm forward and the elbows aligned. As the ball moves forward, focus on the hand going down into the lane with the hand remaining under the elbow as you follow through.

Perpendicular foot drill

- **Step #1** – Begin one step from the foul line. Place the trail leg foot 90 degrees from the slide foot. Be sure the top of the trail leg foot is aligned with the slide foot, which is aligned with the lane.
- **Step #2** – Place the hand in the ball and establish the balance arm hand position (fingers above the ball-side hand).
- **Step #3** – Turn your trunk 90 degrees and lower the ball to knee high. Be sure to set your shoulders and elbow directly in front of the ball-side elbow and shoulder. The elbows should be aligned and the ball is parallel with your hips and can swing under your chest/belly button.
- **Step #4** – Swing the ball forward and then back, keeping the elbows aligned. Slide as the ball moves downward in the swing. As the ball moves forward, focus on the hand going down into the lane with the hand remaining under the elbow as you follow through.

Three step skip-step drill

- **Step #1** – Begin three steps from the foul line.
- **Step #2** – Set the slide foot behind the ball-side foot. Specifically, the top of the slide foot should be at the heel of the trail leg foot.
- **Step #3** – Set the hands as described above. Lower the ball to knee high by leaning as well as rotating the torso. Be sure the head is outside of the ball. The elbows should be aligned as well.
- **Step #4** – Swing the ball fully once, keeping the elbows aligned. As the ball passes the leg during the second pass back, take a left step and go forward. This will be a quick skip-step.
- **Step #5** – As the ball moves forward, focus on the hand going down into the lane with the hand remaining under the elbow as you follow through.

Implementing the drills into your practice

- Ten minutes of each drill (30 minutes)
- One foul line drill + one full approach (30 minutes)
- One hour full approach