

## **THE WHOLE-BODY REACHBACK JUMP SHOT: IDEAL FOR STRONGSIDE LATERAL PULL-UPS FROM MID-RANGE AT BOTH MODERATE AND EXTREME ANGLES – ALSO POST-UP AND WEAKSIDE ADAPTABLE**

*By Robert Tilitz*

*(Sequential pictures featuring Kobe Bryant are on the last page.)*

The whole-body reachback jump shot is perfect for pulling up off strongside lateral moves. Although strongside lateral moves generate physical forces that many jump shots cannot stand up to, the whole-body reachback jump shot gains athleticism and power from them. That's because the whole-body reachback jump shot can first harness and then channel strongside lateral momentum, which generates a fallaway jump, through the shooting shoulder into the reachback release. The outcome is unparalleled separation ability, which is what makes the whole-body reachback jump shot a dominant offensive weapon and the #1 crunchtime option.

Compared to the many forward-oriented moves that work with the whole-body elbow-out jump shot, there are far fewer lateral moves that work with the whole-body reachback jump shot. That's the bad reachback news. The good news is whether pulling up at mid-range or posting up on the inside, the strongside whole-body reachback jump shot is almost unstoppable. That's because the strongside whole-body reachback jump shot, as exemplified by Michael Jordan and Kobe Bryant, reliably creates separation from the defender with its reachback to the shooting position and resulting fallaway jump.

The reachback jump shot works like a lever. First the lever loads. Starting just before but occurring mostly during the jump of the jump shot, the arms swing the basketball up and back to the reachback shooting position, which is forehead-high or higher and one hand length back past the front of the head. The reachback generates backward momentum that partly powers a fallaway jump. The reachback also bends the upper body back at the waist as the legs angle forward for balance. Reversing or unloading the lever helps to power the reachback jump shot's release. More specifically the reachback jump shot's release takes place at the top of the jump when the shooting shoulder rotates forward and the shooting arm extends out and up along with the parallel extension of the off-arm. Reversing or unloading the lever also powers the resulting, body-leverage sequence that reverses the fallaway jump, pulls the upper body forward and returns the legs underneath the body. The forward leverage of the upper body produces power that supplements the power of the reachback jump shot's release.

The setup, that is, the shot preparation process, of the reachback jump shot starts when the dominant hand grabs the basketball off the strongside dribble and then secures a firm and flexible double-whole-hand grip with the off-hand. Then a crucial ballhandling routine, which is described elsewhere, sets up a bent-back half-hand grip on top of the basketball. The bent-back half-hand grip on top of the basketball quickly evolves into an underneath bent-back half-hand shooting grip when the basketball is raised to the reachback jump shot's forehead-high-or-higher, one-hand-length-back-past-the-front-of-the-head shooting position for the start of the release.

The reachback jump shot can work to perfection with the shooting elbow angled out or angled in. When angled in, the shooting elbow aligns it with the basket. So it does not matter whether the initial bent-back half-hand grip on top of the basketball sets up angled in, which angles the shooting elbow out, or sets up angled in, which aligns the shooting elbow with the basket. Either way, the bent-back half-hand grip on top of the basketball quickly evolves into an underneath bent-back half-hand shooting grip as the basketball is raised to the reachback jump shot's

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forehead-high-or-higher, one-hand-length-back-past-the-front-of-the-head shooting position. Just know that the shooting hand's original position on top of the basketball and the resulting position of the shooting elbow should remain the same throughout the reachback jump shot.

Although both the elbow-out and the elbow-in reachback jump shot can work equally well, one does pose a greater risk of injury. That's because the elbow-in reachback jump shot's midair leg action kicks farther forward, which results in more extreme one-foot landings. That said, West and Jordan and Bryant shot their strongside reachback jump shots with the shooting elbow angled in. So the risk is not prohibitive.

The reachback jump shot's shot preparation process starts on the ground but finishes in the air. Setting up a bent-back half-hand grip on top of the basketball at about waist-high or a little lower is part of the gather for the jump of the reachback jump shot. At the same time that the ballhandling to set up a bent-back half-hand grip on top of the basketball is taking place, a two-step stop should brake and start to pivot the strongside pull-up. The inside leg, with the first step, applies the main brake and starts the pivot. The outside leg's step into the jump shot, the second step of the two-step stop, powers most of the pivot. During the two-step stop, the knees should bend, which drops the jumpshooter into a semi-crouch and completes the gather for the jump of the reachback jump shot.

After the bent-back half-hand grip is set up on top of the basketball and the two-step stop is completed, the shot preparation process continues in the air during the jump of the jump shot. That's when the basketball should be swung up and back to the reachback jump shot's forehead-high-or-higher, one-hand-length-back-past-the-front-of-the-head shooting position. The arm action that swings the basketball up and back to the shooting position also helps to power the jump of the jump shot. The basketball should be swung up and back on the dominant side about midway between the shooting shoulder and the middle of the body. Raising the basketball to the shooting position while simultaneously rotating it backward by half a turn automatically sets up the underneath bent-back half-hand shooting grip. The forehead-high-or-higher, dominant-side reachback shooting position opens an unobstructed line of sight to the basket.

To complete the setup of the whole-body reachback jump shot's forehead-high-or-higher, one-hand-length-back-past-the-front-of-the-head shooting position, the basketball must be swung up and back. The setup of the reachback shooting position, especially the reachback, automatically rolls the shooting shoulder back. The rolled back shooting shoulder activates as a source of whole-body athleticism and whole-body power by way of engagement with the release mechanism. The activated shooting shoulder is the key to whole-body jumpshooting. The rollback, the engagement and the activation of the shooting shoulder should take place on the rise during the jump of the reachback jump shot as the basketball is being raised to the forehead-high-or-higher, one-hand-length-back-past-the-front-of-the-head shooting position. The setup of the reachback shooting position should be completed as the top of the jump is reached, which is when the release of the whole-body reachback jump shot should begin.

The reachback is especially important because it swings the reachback shooting position back over the body, which encourages the rollback and the activation of the shooting shoulder. There must be a full reachback for the shooting shoulder to roll back and activate by way of

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engagement with the release mechanism. That's because the full reachback rolls the shooting shoulder back and pulls the release mechanism back. Given the ample clearance of the up-and-back swing of the reachback over the shooting shoulder, it does not matter whether the shooting position for the reachback jump shot sets up with the shooting elbow angled in or angled out. A full rollback will occur either way.

The completion of the setup of the shooting position marks the end of the shot preparation process and the beginning of the release. The transition between the setup for the reachback jump shot's forehead-high-or-higher, one-hand-length-back-past-the-front-of-the-head shooting position and its top-of-the-jump release is marked by a reversal of the reachback arm action. The reversal, which signals the end of the shot preparation process and the start of the reachback release, takes place within the scope of the jumpshooter's body. The setup for the reachback jump shot's shooting position consists largely of reachback arm action that swings the basketball up and back and also helps to power the fallaway jump of the jump shot. The transition from the reachback arm action to the reachback jump shot's top-of-the-jump release should be a redirection of the arms, which reverses the reachback and the fallaway jump.

The length of time that it takes for the reachback to swing the basketball up and back to the reachback shooting position and the following immediate reversal of the reachback is too long for shooting the reachback jump shot on the rise. So reachback jumpshooters shoot at the top of the jump, not on the rise. By shooting at the top of the jump, reachback jumpshooters lose access to leg power from the jump of the jump shot. But reachback jumpshooters do utilize leg power to anchor or stabilize the whole-body jump shot theory's body-leverage sequence, which, in combination with the reachback jump shot's release, reverses the fallaway jump with leveraged forward movement of the upper body. The body-leverage sequence also produces supplementary power for the release.

The release of the whole-body reachback jump shot is sourced from the shooting shoulder and develops as a leveraged straightstroke-pull. The reachback jump shot's leveraged straightstroke-pull release consists of forward rotation of the shooting shoulder, out-and-up full extension of the shooting arm including a stretched-out forearm stroke and, toward the end of the extension of the shooting arm, hand action by the shooting hand that brushes the basketball for control. The resulting abundant power not only results in great range, it also reduces the effort required, which makes the whole-body reachback jump shot easy to control.

If the reachback shooting stance is mistakenly mismatched with the weak and athleticism-killing strokesnap release, the athleticism and the power of the whole-body reachback jump shot bite the dust. The stark visual contrast between the plodding hybrid reachback-strokesnap jump shot and the whole-body reachback jump shot's spectacular and unstoppable fallaway athleticism illustrates the strokesnap's detrimental effect.

The forward rotation of the shooting shoulder during the whole-body reachback jump shot's release does more than serve as a primary power source for the release. The forward rotation of the shooting shoulder channels the athleticism and the power of the jump of the jump shot into the whole-body reachback jump shot's release. The forward rotation of the shooting shoulder is also a primary power source for the square-in-the-air rotation of the jump of the jump shot that

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many strongside pull-up jump shots require and all could use. And the forward rotation of the shooting shoulder during the reachback release is the motor for gun-turret adjustability.

The reachback setup for the release of the whole-body reachback jump shot largely precludes shooting forward-oriented, to-the-basket pull-up jump shots. That's because the reachback to the shooting position for the start of the reachback release creates backward momentum that would clash with the forward momentum of a to-the-basket move. For reachback jumpshooters to shoot to-the-basket pull-up jump shots a change of jump shot is required. The ideal choice is the whole-body elbow-out jump shot. But when reachback jumpshooters do make a change, it is usually to a reachup jump shot.

The shooting hand should lead the long and powerful out-and-up extension of the shooting arm and its stretched-out forearm stroke straight into the medium-arc trajectory of the reachback jump shot. The out-and-up release reverses the reachback jump shot's signature fallaway jump, which, along with the reachback shooting position, can create instant separation from the defender. The reversal of the fallaway jump is essential for a safe landing. The shooting hand, first bent back early on when the initial half-hand grip was set up on top of the basketball, should remain bent back until near the end of the out-and-up extension of the shooting arm. At that point, near the end of the out-and-up extension of the shooting arm, the shooting hand should brush the basketball to fine-tune distance, to generate backspin for touch and to slow velocity.

During the reachback jump shot's release, the nondominant arm should extend parallel to the shooting arm. The whole-body jump shot theory calls it parallel extension. The off-hand should maintain a whole-hand grip on the basketball until near the end of the parallel extension. At that point, when the shooting hand starts to brush the basketball for control, the off-hand should separate from the basketball. To be clear, although the reachback jump shot is most definitely a one-handed shot, two hands should grip the basketball until near the end of the release when the off-hand separates from the basketball so the shooting hand can start its brush action.

The reachback jump shot merges the jump of the jump shot with the release of the jump shot. The shooting shoulder is crucial to the merge. During the jump, the shooting shoulder should roll back to activate as a source of whole-body athleticism and whole-body power by way of engagement with the release mechanism. During the release, the shooting shoulder should rotate forward. Athleticism benefits from the forward rotation of the shooting shoulder because it channels the athleticism of the jump of the jump shot and the body-leverage sequence into the release and because it rotates the square-in-the-air part of the jump of the jump shot. Power benefits from the forward rotation of the shooting shoulder because it is a primary power source for the release and because it channels the power of the jump of the jump shot and the body-leverage sequence into the release. Control benefits from the forward rotation of the shooting shoulder because the abundant power it produces makes shooting easier. Protection benefits from the rollback of the shooting shoulder, not to mention the reachback and the resulting fallaway jump, because it locates the reachback shooting position up and back past the front of the head, which is exceptionally far away from the defender. Gun-turret adjustability benefits from the forward rotation of the shooting shoulder because it adds about 45° worth of variability to the direction of the jump shot.

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The shooting arm effectively duplicates and reinforces the shooting shoulder's input into the reachback jump shot. For comparison, think of the reachback jump shot's extension of the shooting arm as a downsized overhand throwing motion. The reachback locates the reachback jump shot's shooting position one hand length back behind the front of the head. That's not nearly as far back as the overhand throw reaches back. But both reachbacks encourage a pull-power reversal. The shared reachback and pull-power fundamentals link the reachback jump shot and the overhand throw.

The shooting hand controls the reachback jump shot. The shooting hand controls direction by leading the out-and-up extension of the shooting arm. The shooting hand also controls the reachback jump shot with hand action that brushes the basketball toward the end of the out-and-up extension of the shooting arm. That hand action brushes the basketball with the forward half of the shooting hand to fine-tune distance, to generate backspin for touch and to slow velocity. A solid brush will produce more power and a tangential brush will produce less power. The shooting hand's hand action that brushes the basketball has a super smooth look, which has been mistakenly considered the look of a super smooth wrist snap. In fact, the hand action that brushes the basketball is the whole-body jump shot theory's replacement for the wrist snap.

The angled-in shooting grip for the elbow-out reachback jump shot produces brushing hand action that concludes with a roughly balanced precision. At the moment of release, that is, just before contact between the brush of the basketball by the angled-in shooting hand and the basketball itself comes to an end, the inherently uneven middle finger and ring finger line up with their fingertips and fingerpads roughly both parallel to the ground and equidistant from the basket. As a result, the ends of the middle finger and the ring finger are well-positioned to become the shooting hand's built-in sight and range finder.

The aligned shooting grip for the elbow-in reachback jump shot uses the fingers to point the way. The aligned hand action uses one finger or a combination of fingers as runners or rails to brush the basketball both to generate backspin for fine-tuning and touch purposes and to guide the basketball out of the shooting hand on a medium-arc trajectory toward the basket. The recommendation here is to use the middle finger and the ring finger together because they form a sturdy, centrally located combination.

The athleticism and the supplementary power production techniques of the reachback jump shot are closely interrelated. The two main athletic components of the reachback jump shot are its jump and the body-leverage sequence. They partially overlap while working together to produce the reachback jump shot's supplementary power. During the on-the-rise stage of the jump, the reachback to the shooting position produces backward momentum that fuels both fallaway action and the backward bend of the upper body, all of which adds up to the setup for the start of the body-leverage sequence. Then at the top of the jump, the reachback jump shot's leveraged straightstroke-pull release, most specifically the forward rotation of the shooting shoulder, starts the body-leverage sequence by pulling the bent-backward upper body forward, which in turn channels the athleticism and power of the body-leverage sequence into the reachback release.

Now returning to the start of the body-leverage sequence, when it bends the upper body backward at the waist the legs angle forward for balance, which is a natural reaction that the

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whole-body jump shot theory calls the Kobe kick. Then, at the top of the jump, the primary power components of the reachback jump shot's release, which are a forward rotation of the shooting shoulder and an out-and-up full extension of the shooting arm including a stretched-out forearm stroke, leverage and pull the upper body forward. The fulcrum of the body-leverage sequence, which is stabilized by the legs, is at the waist. The leveraged forward movement of the reachback jumpshooter's upper body, which is the power-producing stage of the body-leverage sequence, produces power that supplements the power of the reachback jump shot's release by adding to its force and length. At the same time, the body-leverage sequence returns the legs underneath the reachback jumpshooter's body for a safe landing, which completes the Kobe kick. The body-leverage sequence is highly athletic but even so very doable.

The athleticism and the supplementary power production techniques of the reachback jump shot, which are mainly derived from its fallaway jump and its body-leverage sequence, are maximized by the strongside game. The strongside lateral game's necessary turn toward the basket that starts on the ground and finishes in the air, the airborne phase of which the whole-body jump theory calls squaring in the air, adds rotation to the athleticism and the supplementary power equations. Squaring in the air is also by far the fastest and easiest way to transition from a strongside lateral move to a whole-body reachback pull-up jump shot.

Since the whole-body reachback jump shot is geared for strongside lateral moves, it is not a good fit for the to-the-basket offense favored by most players. But most players should still learn how to shoot the whole-body reachback jump shot as a complementary offensive skill. For one thing, a degree of whole-body reachback competence adds hard-to-defend jump shot diversity to the forward-oriented jumpshooter's game. Plus, the whole-body reachback jump shot's lateral pull-up capability makes it the #1 weapon at crunchtime when defenses pack the middle to prevent easy access to the basket.

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### THE WHOLE-BODY REACHBACK JUMP SHOT EXECUTED BY KOBE BRYANT



**THE SHOOTING POSITION FOR THE START OF THE REACHBACK JUMP SHOT'S RELEASE:** The reachback jump shot works regardless of whether the shooting elbow is angled in, above, or angled out. That's because either way, elbow in or elbow out, the up and back swing of the basketball to the reachback shooting position will roll the shooting shoulder back.



**THE SHOOTING SHOULDER ROLLS BACK AND THEN ROTATES FORWARD:** When the shooting shoulder rolls back the upper body bends back and the legs angle forward for balance, commencing the Kobe kick. Then, to start the reachback jump shot's release, the shooting shoulder rotates forward, leveraging the upper body forward. In reaction, the legs return underneath for a safe landing, completing the Kobe kick.



**THE WHOLE-BODY REACHBACK JUMP SHOT'S RELEASE:** During the shooting position setup, the reachback causes the rollback of the shooting shoulder that activates it as a source of whole-body athleticism and whole-body power by way of engagement with the release mechanism. The reachback release is a top-of-the-jump, reachback to reverse motion, leveraged straightstroke-pull that the shooting hand should lead straight into the -arc of the whole-body reachback jump shot. The whole-body reachback release consists of forward rotation of the shooting shoulder, out-and-up full extension of the shooting arm including a stretched-out forearm stroke and, toward the end of the extension of the shooting arm, a brush of the basketball by the shooting hand to control the jump shot.