

Pitching Mechanics

Stance –

- ✓ Right-handers should line up with both feet, spread slightly less than shoulder width for balance, on the right side of the rubber; left-handers on the left side.
- ✓ The plant foot is slightly forward, and the pitcher stands erect for comfort.
- ✓ The ball should be in the glove, and the glove should be in front of the chest.

Rock –

- ✓ As the mechanically sound pitcher begins his wind-up his focus is on getting to a good balanced position.
- ✓ Most use a short start step, the rock, so that they don't get out of balance. This rock is what gets them going so they have a rhythm during the wind-up.
- ✓ Once the signal has been received, the pitcher locks his eyes on the target and takes a small step back with his lead foot, bringing his hands together and raising them over his head.
- ✓ At the end of the rock, the pitcher's weight should be on his back foot, his arms above his head.
- ✓ An alternative rock will have the pitcher forgoing the raising of his arms over his head. Instead, he keeps his hands together, tight to his chest, shoulder high.

Pivot –

- ✓ At the end of the rock, the pitcher remains focused on his target.
- ✓ He slides his plant foot to the front of the rubber, twisting it so that it is now parallel to the rubber.
- ✓ He begins to transfer his weight to the plant foot.
- ✓ His hands should still be together, with the bare hand gripping the ball deep in the pocket of the glove.

Lift –

- ✓ The weight transfer to the plant foot should now be complete, and the pitcher should be rotating his hips and shoulders parallel to the rubber.
- ✓ He starts to lift his glove side leg, and at the same time bring his arms down and back.
- ✓ Many youth pitchers will swing their lift leg up and get out of balance, particularly if they try to implement a high leg kick.
- ✓ For balance sake, it is best to keep the lift foot under the knee. At the balance point the weight should be on the ball of the foot and the chin should be slightly forward so the chin is out over the pitcher's belt.
- ✓ The knee of the plant foot should start to bend for balance and to gather power for a powerful thrust forward toward the plate.
- ✓ Once the pitcher reaches his balance point his shoulders should be lined up between home and second base.
- ✓ The upper body should not be over-rotated i.e. a right-hander should not turn his front shoulder over toward third base. If he does, he will have to make an adjustment to get back on line.

Stride –

- ✓ Proper timing can simplify the delivery.
- ✓ As the lift leg starts down and out, the throwing arm goes down, back and up - "leg down - arm up."
- ✓ The pitcher strides directly toward the target with his lead foot, eyes still locked on the target.
- ✓ The hips rotate towards the plate as the plant leg thrusts forward, initiating a transfer of weight to the lead foot.
- ✓ The pitcher must avoid the tendency to push off the rubber, for by keeping weight on the back foot, the pitcher creates a source of power when his front foot lands.
- ✓ A push off the rubber will rush the motion, and will cause the upper body get ahead of the throwing arm. This causes a loss of power and adds stress to the throwing arm.
- ✓ A controlled lead leg is crucial to maintaining balance and consistent releases.
- ✓ When the pitcher begins moving forward out of this balance position, his lead leg starts down and out so that the pitcher is leading with the side of his shoe. This will help him land in a closed, balanced position.
- ✓ As the lead leg starts down, his back leg or posting leg should slightly flex. This flexing of the posting leg allows the pitcher to maintain balance while at the same time keeping his weight back so he can lead with his front hip and lower body.
- ✓ Pitchers must avoid too aggressive of a swing out with their leg; rather, they should drift out to a flat-footed landing position.

*Landing Position - *

- ✓ If the pitcher comes out of a good balanced position, keeps his weight back, and drifts forward, he should land in a closed position. What that means is the front shoulder will be closed (shoulders lined up between home and second), and the lead foot will land on or slightly across the mid-line 2-3 inches. The mid-line is a line from the ball of the pitcher's posting foot toward home plate.
- ✓ The lead foot should be planted, knee flexed, before the throwing arm starts coming forward. It should also land flat, with heel and toes coming down evenly.
- ✓ If a right-hander lands too far to the left of this line, he has opened up too early causing a loss of power and additional stress on the arm.
- ✓ If the pitcher lands too far to the right of the mid-line he is throwing across his body. This is very stressful on the shoulder, and produces a power loss since the pitcher isn't able to rotate his hips in time to help his arm.
- ✓ Once the lead foot lands, the pitcher must set a firm base to throw off of. He stops his lower body from moving forward before his upper body begins rotating, by firming up his knee so he doesn't drift toward the plate. If the knee continues to drift forward, the body has nothing to throw against, causing an additional loss of power.
- ✓ The pitcher also rolls his back ankle over - turning the laces down, or 'squishing the bug'. Rolling the ankle happens gradually as the pitcher moves out to his landing position; it is what allows the pitcher to release and then forcefully rotate his hips. If the back foot is still at the rubber or is dragging at the release point, it will slow down hip rotation and decreases power and velocity.

Arm Alignment –

- ✓ The pitcher's hands break in the middle of the body somewhere between the belly-button and the chest, fairly close but not up against the body.
- ✓ The throwing arm goes down out of the glove with the fingers on top of the ball and the thumb underneath. The hands then move to normal throwing positions – the glove hand elbow comes up to point toward the target, the throwing arm extending back and then coming up to shoulder height in the high-cocked or L-position (with a 90 degree bend in the elbow).
- ✓ After going down and back, the arm should stay slightly flexed so that it can immediately go up into the L-position.
- ✓ Pitchers should not go to full extension when they take the ball out of their glove because if they flex their throwing elbows too late they end up in a bad throwing position at foot plant.
- ✓ If the elbow is below shoulder height at foot plant, the pitcher will end up throwing the ball high. This adds stress to the arm.
- ✓ Pitchers should also avoid the tendency to get velocity at the rubber by raring back; oftentimes this causes them to pull their throwing arms behind them.
- ✓ Another common fault is for pitchers to break their hands out away from their body.
- ✓ From the catcher's view, for example, the right-hander will take the ball down out of the glove and then pull it over toward the second baseman. This slows the arm from getting up since it has to take a longer route, and again the pitcher ends up throwing from a low-cocked position. The effect is less velocity, poor control and more stress to the arm.
- ✓ The lead arm and the throwing arm should go almost in sync in opposite directions – it is almost as if a pitcher is doing a 'jumping jack.'
- ✓ Hands break with fingers on top of the ball and thumbs down. Pitchers will either lead with their glove or their elbow. A key is for the pitcher to use his elbow almost as a sight so that when his lead foot lands his elbow and shoulders are lined up with home plate. If the pitcher's shoulder opens up too early, he loses power and puts additional stress on the arm.

Power Triangle –

- ✓ Besides landing closed, the pitcher's upper body must form a triangle – a power triangle - with both of the pitcher's feet as the base. So from the side view, the pitcher's nose is in-line with his belt buckle.
- ✓ If the head is too far forward or closer to the lead leg, the pitcher has rushed his motion and has lost power.
- ✓ If the right-handed pitcher has done everything properly before he gets to landing, he will be in a powerful throwing position.
- ✓ This is what that position should look like:
 - ❖ The lead or glove arm is up at shoulder height and the shoulder is closed.
 - ❖ The lead foot has landed on or slightly across the mid-line, the throwing arm is in the high cocked or L-position with the ball facing back toward the shortstop and the head is level and in the top center of the triangle formed by the two feet.
 - ❖ In this final landing position the pitcher's back foot has rolled over so his shoe laces are tuned down to the ground and his heel is almost facing back toward second base.
 - ❖ A pitcher in this position is ready to produce power.

Rotation –

- Everything to this point has been about getting to the right landing position. It has all been about set-up – not power. But, as any look at major league pitchers demonstrates, power comes from the use of the lower body. The ankle rolls over (squishes the bug) and just before ball release, the back foot is pulled away from the rubber by the explosive action of hip and trunk rotation. The power pitcher's back foot actually comes off the rubber before he releases the ball. However, the back foot coming off the rubber is not from any pushing off that the pitcher does, but from the pulling action from the hip rotation. So if the pitcher wants to develop better hip and trunk rotation, he must first get into the proper throwing position. That means that his mechanics up until this point must be balanced and in sync.
- ✓ Once a pitcher gets to this proper throwing position, he can accelerate his hip rotation by pulling his glove either to his chest or to his hip and then pulling his back knee forward and then slightly inward toward his front leg to speed up the hips.
 - ✓ The glove should not go back behind the pitcher's body or he won't be able to protect himself.
 - ✓ Getting to ball release from landing requires that the pitcher squares his trunk to the plate before he flexes forward.
 - ✓ Pitchers tend to get this part of the delivery out of sequence.
 - ✓ Often because of poor balance or rushing their motion that they flex forward before their trunk squares itself. This will get the body out ahead of the arm, causing stress and a loss of power.
 - ✓ Also, right-handers tend to swing their back leg out and around toward third base as they are going to finish, instead of pulling their back knee forward and slightly inward toward the front leg. This stops hip rotation.

Release –

- ✓ Pitching accuracy is contingent upon releasing the ball in the same spot – too early and the pitch goes high, too late and it is low.
- ✓ The shoulders are the last part of the torso to rotate toward the plate – this rotation is triggered by the pitcher driving his glove-hand elbow towards his glove-side hip, which will whip the throwing arm forward.
- ✓ The ball should be delivered overhand, and the elbow should precede the wrist on the delivery.
- ✓ The pitcher should extend his arm fully (reach for the mitt), and the wrist should snap on the release of the ball.

Follow through –

- ✓ Proper follow through is key to accuracy, attaining proper defensive posture, and avoiding injury.
- ✓ At ball release, the eyes should be fairly level, and the pitcher should never take his eyes off the ball after it has left his hand.
- ✓ Once the pitcher releases the ball, the trunk flexes forward, the pitcher's front leg begins to straighten as his head and front shoulder get up and over the landing knee.
- ✓ The throwing arm should extend toward the target after the release and then come back across the body to the knee of the lead foot.
- ✓ The throwing hand will finish between the front ankle and knee while the trunk is flexing forward into a "flat back" position.
- ✓ The pitcher finishes by decelerating his arm so that he shows the back of his shoulder to the hitter. This "flat back", long finish helps take the stress from the throwing shoulder and helps protect the arm from injury.
- ✓ The plant leg after completing its push should come forward and land on the same plane as the lead foot, and trigger the pitcher to begin to stand erect and bring his glove into a good fielding position.

Fielding –

- ✓ The pitcher fields bunts as any infielder would, breaking hard to the ball and then slowing for control as he nears the ball.
- ✓ He then aligns himself properly for the throw, striding toward the base he is throwing to.
- ✓ On any ball hit to the right side of the infield, the pitcher breaks immediately toward first base and should be prepared to take a throw and make the out if necessary.
- ✓ Anytime the catcher leaves the plate area, the pitcher should cover the plate. (Skip Bertman, Coaching and Playing, Dick Mills All About Pitching, http://www.pitching.com/pitching_mechanics.php)

Pitches –

- ✓ The 4 seam fastball is the first pitch any pitcher should learn to throw; it is the fastest and straightest pitch that a young pitcher can learn, and therefore easiest to control. It is also the least stressful on the arm.
- ✓ The 2 seam fastball has some movement, so it is a little harder to control, but it too is easier on the arm.
- ✓ Change ups, either the palm ball or the circle change, are harder to develop but are the most effective pitches to pair with a good fastball. And since they use the same arm motion as the fastballs, they also do not overly stress the arm.