Five Links in the Chain

By Cal and Bill Ripken

As a coach, sometimes you’re looking at the pitcher and all you see are arms and legs coming at you. It can be tough to decipher exactly what’s going on. What the coach has to do is break it down and look at the motion piece by piece.

We break the pitching motion down into five sections and we call them the Five Links of the Chain. Mechanics is one continuous motion, but there are five links to that motion, and if one of those links breaks down, it can affect the chain. So, as a coach, it’s best to look at the overall windup and then make it easier on yourself by breaking it down into the following five parts:

- Footwork
- Balance position
- Power position
- Rotation
- Follow-through

Let’s take a look at each link in more depth so you know how to identify problems in each piece of the pitching motion.

Footwork

Like so many athletic moves, the pitching motion begins with footwork. Your pitcher should begin by standing on the rubber comfortably. There’s a lot of debate over whether a pitcher should stand on this side of the rubber or that side depending on whether they’re left-handed or right-handed. We throw all that nonsense out the window. A pitcher should stand where he is comfortable and can throw strikes. The middle of the mound is a good starting point - pitchers can discover their comfort level with either side of the rubber by starting there.

It’s a good idea for the pitcher to start with his heels on the rubber and his toes in contact with the ground.

The first movement is a slight step backward with the glove-side foot. This step should be very small, and it doesn’t have to go straight back. A lot of pitchers step off at a 45-degree angle. The head should remain over the pivot foot.

Next, the pitcher should pivot their throwing-side foot so that it is parallel to the front edge of the rubber.
**Balance position**

The footwork provides the foundation for the balance position. The pitcher raises his glove-side leg and points his front shoulder toward his target.

In the balance position, the pitcher’s hands should be together above the raised leg. This is the point at which a pitcher gathers all of his power, but it is achieved under control. A pitcher with sound mechanics will move into the balance position with control and be able to hold that position for some time without tipping over.

The raised leg should be slightly closed off toward home plate. If it opens up too much at the balance point, the pitcher is already taking his momentum away from the catcher and reducing the velocity on his pitch.

**Power position**

The power position is formed when the pitcher does three things almost simultaneously: (1) removes the ball from his glove; (2) gets the front shoulder and arm on the target; and (3) strides toward the plate.

The ball comes out of the glove in a downward motion, starting what will eventually be a circular movement. It’s important that the hand and fingers are on top of the ball at this point, as that creates arm action. Arm action is created when the hand goes from above the ball to behind the ball when a pitcher is throwing. If a pitcher has his hand underneath the ball to begin with, the result is a throwing motion that resembles a pitching machine: very straight with little torque.

The front shoulder and arm should point straight toward the target. If the front side doesn’t line up with the target, it’s going to be a lot harder for the pitcher to throw strikes consistently. And this isn’t just for pitchers. For any player at any position attempting an accurate throw, the front shoulder and arm should point toward the target.

Pitchers shouldn’t over-stride and they should keep their back foot planted against the rubber. This will help build energy for the weight shift that takes place in the next link of the chain.

**Rotation**

Everything up to this point is about storing energy. The pitcher has kept his weight back in order to create torque and momentum. Now all of that energy starts coming forward.

During rotation, the hand goes from above the ball to behind the ball. As the arm comes forward, the pitcher should keep the elbow slightly above the shoulder in order to create an L with the throwing arm.

While the throwing arm is rotating forward, the front arm retracts. With the two arms working in coordination, the pitcher generates the torque and momentum that not only allows him to throw hard but also to maintain a level of consistency throwing strikes.

The hips should rotate in sync with the upper body, and the front foot should point towards the target. The back foot should still be in contact with the rubber.
Throughout rotation, the pitcher should maintain good posture - he should stay tall so he can work downhill toward the plate.

This chain ends at the release point. Once the ball is released toward the plate, the back foot should break away from the rubber a split-second later. If it comes away too early, momentum is lost and it shows in a decreased velocity.

**Follow-through**
In the first four links in the chain, the pitcher is building up energy and then releasing it toward the plate. A lot of that energy is transferred into the baseball as it flies toward the strike zone, but a good deal of energy remains in the body.

If the pitcher has executed all of the other links properly, the follow-through should take care of itself. The momentum that the pitcher has created will naturally lift his back leg up and cause him to bend forward toward the target.

**Identifying problems**
The best thing about the Five Links of the Chain is that it enables us as coaches to identify what needs work in a complex motion. If your pitcher is having trouble throwing strikes, you might have trouble identifying exactly what is going wrong. But with the Five Links, you can look at each link individually in order to spot problems for easily.

The important thing to remember is that you may spot a problem in the rotation or follow-through, but it’s very likely that the root of the problem exists in one of the earlier links.

A small error in an earlier link will produce a much bigger error in one of the later links.

For instance, if your pitcher is having trouble staying upright in one of the later links, you might discover that his exaggerated footwork is the culprit.

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