

Fast Pitch Softball: The Biggest Misconception in Sports

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We've all heard it before- Fast pitch softball is a natural motion and therefore less stressful on the arm compared to the baseball pitching motion. For this reason, there has been a long-standing belief that softball pitchers are capable of pitching all day, every day. There is a growing body of evidence that proves this to be one of the biggest misconceptions in sports. A recent study found a significantly higher injury rate for girls involved in softball compared to that of boys participating in baseball. The softball pitching motion is far from being "safe" and numerous injuries occur every year due to repetitive stress, faulty mechanics, and/or muscular imbalances. Research has shown that distractive forces on the shoulder joint are equal or greater than that of the overhead baseball pitch. Muscle forces during the windmill pitch have also been found to be much higher. With more and more girls playing year round softball and pitchers pitching multiple games per day over consecutive days, many injuries are associated with overuse. Signs and symptoms of overuse injuries are nagging pain, fatigue, decreased performance, change in mechanics, loss of velocity or control and change in a pitcher's attitude.

Recent research has shed light on mechanical "red flags" that may predispose a pitcher to injury. Trunk rotation, position of the throwing arm as the stride foot comes into contact with the ground, stride length and throwing arm position at the instant of ball release are important. As the stride foot comes in contact with the ground, the position of the throwing arm is critical. The arm should be close to the body and should be near the top of the backswing. If the arm is out of the windmill plane or too far into the downswing, shoulder force will increase. The angle at the knee joint is also important as the stride foot touches down. The knee should be bent about 30 degrees short of full extension. A pitcher with a stride knee bent at more than 35 to 40 degrees will put additional stress on the throwing shoulder. The length of the stride should be about 80 to 100 percent of body height to reduce shoulder distraction. It appears that a longer stride reduces the stress at the shoulder. At ball release, the position of the throwing arm is again important for reducing stress on the throwing arm. The elbow should be bent about 20 degrees short of full extension. The straighter the elbow, the more force on the shoulder joint. Finally, and possibly the most important factor in reducing shoulder distraction force, is that the hips should be closed at about a 45 degree angle at the instant of ball release. Pitchers who tend to keep the hips open at ball release put a tremendous amount of additional stress on the throwing shoulder.

The highly trained physical therapists at The KOR Physical Therapy / Athletic Wellness utilize high-speed video analysis to identify mechanical faults that may predispose a softball player to injury. This information is one piece of a thorough evaluation that includes strength and mobility measurements of the upper extremity, trunk and lower extremities. Based on these findings, the physical therapist designs a treatment program that includes softball specific exercises focused on reducing injury risk and enhancing performance. To learn more about how The KOR can help you reach your potential please visit www.thekorpt.com.

