



## BUILDING THE YOUNG PITCHER

- Proper warm-ups
- Efficient mechanics
- Consistent, safe throwing routine
- Post-use arm care
- Developing functional strength
- Proper mental approach

### Proper Warm-ups

Warming up, or prehab, is the most important aspect of keeping a pitcher of any age healthy. A proper pre-pitching routine will ensure that all the muscles and ligaments in the body are fully prepared to perform. Negligence of prehab is the most common culprit in pitching injuries, especially to young pitchers. The following are the necessary steps to ensure that a young pitcher is ready to perform. These steps should be followed closely before any round of throwing.

1. Cord/ Band Work – Vitally important in the strengthening and flexibility of the upper body. These should be done daily and resistance should be set according to age. Make sure that the shoulders blades are pinched during all exercises and good posture is maintained.
2. Dynamic Stretching – Movement stretching is scientifically proven to be far superior to traditional stretching. The body is able to properly stretch out when blood is flowing and the core is heated up. This cannot happen during traditional, static stretching.
3. Catch/ Toss – Player should toss out to tolerance daily. Proper mechanics and posture must be maintained while playing catch. Once a player loses mechanics while long tossing, he/she is trying to throw too far.

### Efficient Mechanics

The following are the 6 foundations of proper, efficient mechanics. Proper mechanics significantly reduce the amount of injury in pitchers, while optimizing velocity and location.

1. Balance and Posture – Proper balance is the key to good mechanics. The head must be aligned with the belly button and inside the front side throughout the entire motion. Good posture must also be maintained, any bad head movement away from the target will result in an undesirable release point.
2. Stride and Momentum – The stride length of the pitcher should not be taught, it is completely natural. The pitcher should follow his butt down the mound toward the target. This will create the proper momentum and timing of the delivery.
3. Opposite and Equal Arms – The action of the throwing and non-throwing arm should mirror each other through release. This starts after hand break, the arms need to be on same plane and be at same angle.
4. Hip and Shoulder Separation – At foot strike the shoulders need to be aligned and the hips ready to fire towards the target. This is the moment of optimum torque. As the hips fire, the shoulders should continue to stay closed until the pitcher tracks and is ready to release ball.
5. Stack and Track – Having a good posture and tracking on the front leg as far as possible before release is vital to releasing the ball closer to home plate. Releasing the ball 6 inches closer to the plate adds 2 mph on perceived velocity. The front leg should be at 90 degrees at release. The body must track towards target on the front leg with good posture.
6. Swivel and Stabilize – As the shoulders rotate to deliver the pitch, good posture must be maintained. The head needs to be aligned with belly button. The lower back needs to be in an athletic position.

Arm path, release, and follow through are NON-TEACHES. Arm path is genetically programmed and release/follow through are products of solid mechanics.

### **Consistent, Safe Throwing Routine**

The key to a good throwing routine is to do it consistently and doing it the right way. Conditioning a throwing arm is just like lifting weights, if you do it safe and regularly, the arm will get stronger and more resilient. After pitching, a pitcher should make sure to play long toss to tolerance the next day. This will help move lactic acid out of the area and speed up recovery. Only 1 – 2 days a week should be taken off. This will allow the arm to get strong and stay strong. Playing catch is much different than pitching off of a mound. A considerable more amount of stress is placed on the arm when throwing off of a mound. With this in mind, the pitch counts of a young pitcher should be closely monitored. A young pitcher will go into muscle failure after 65 pitches if he/she got there by throwing 15 – 20 pitches per inning. If a pitcher throws more than that in an inning, he/she will reach muscle failure quicker. So not only should the total amount of pitches be counted, the amount per inning should be closely monitored.

### **Post-Use Arm Care**

Post-use arm care is also very important in keeping young pitchers healthy. Traditionalists feel that icing is sufficient in taking care of an arm after pitching, but the effectiveness of ice in keeping an arm healthy is greatly overvalued. More important is to help prevent lactic acid onset by doing anaerobic and aerobic activities immediately after pitching. Lifting 3-5 pound weights in a variety of movements will satisfy the anaerobic requirement, while any cardiovascular activity will do for aerobic. Icing is fine when done correctly (no more than 20 minutes on shoulder, no more than 12 on elbow), but it should be done in partnership with these other exercises. For every minute of icing, there should be 2 minutes of aerobic activity. Combining these three elements of post-use arm care will help the young pitcher recover dramatically better.

### **Developing Functional Strength**

While we want young pitchers to be able to do some of the things we see major leaguers do, the fact is they don't have the functional strength to do so. Something as easy as throwing a changeup can be very difficult for a young pitcher. When teaching mechanics, we need to realize that they might not have the strength to do what we want them to. The ability to stay balanced with good posture or to pronate the arm out for a changeup is something a young pitcher might not physically be able to do.

With this in mind, training a young pitcher should center around core work. The middle of the body is by far the most important in any sport, but it is especially true in pitching. The core of the body is from below the shoulder blades to the middle of the thighs. Young pitchers will not be able to perform their mechanics properly or throw some pitches if they do not possess the proper strength to do so. We should develop pitchers by concentrating on the core and correlating their pitching routine/mechanics with their functional strength.

### **Proper Mental Approach**

Pitching is one of the most unique positions in all of team sports. No other position in any other sport is the one and only to start to the action. A pitcher cannot hand the ball off, nothing can start until he performs his function. Because of this, there are numerous mental strains placed on a pitcher. These mental strains change dramatically depending on the age and level of the pitcher. A pitcher in the pros is pitching for a paycheck, one in college is pitching on scholarship for a university expecting to win, one in high school could be auditioning for those at the next level or just because they like competing on a team, and the one at the lower levels should be pitching for the sheer enjoyment of the game.

Far too much pressure is placed on young pitchers in Pony and Little Leagues. We should let them enjoy the moment, success or failure. Sometimes we need to take a step back and realize that whatever they go on to do, it will be much more important than a Bronco game when they were 12 years old. If the young man is going to go on to be a great pitcher, his development will be more natural if he realizes that he is doing it because he loves to pitch. This love comes from having an enjoyable Pony League experience. On the other hand, a young man or woman can be ruined by failure in what is made to be a "high pressure" situation by the adults. Most young athletes will learn much more effectively and

efficiently if they are left to form their own thoughts based on positive experiences. Keeping this in mind, we should let the kids enjoy the experience of pitching in a low-pressure environment.

If you have any questions, comments, or concerns please do not hesitate to contact the Pearl. Also, please come out to catch a game and see some of the great young student-athletes for the Pearl. Season starts on 1<sup>st</sup>!

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