

Overuse Injuries in Baseball/Softball

What causes overuse injuries?

Because of the popularity of youth sports injuries on the rise, but elbow and shoulder injuries in children are on the verge of becoming an epidemic.

Thousands of young athletes are seen every year complaining of shoulder and or elbow pain. Damage to the ulnar collateral ligament is the most common injury suffered and is often caused by pitchers throwing too much. The issue is that this ligament is the main stabilizer of the elbow for the motion of pitching. It can be a difficult to repair and rehabilitate when it is damaged.

How can overuse Baseball/Softball injuries be prevented?

Overuse injuries can be prevented, especially those related to the ulnar collateral ligament and shoulder. Here are some tips to do to prevent elbow and shoulder injuries.

- Warming up by doing a whole body warm up such as jogging for 3-5 mins. is good. After that stretching and gradual throwing is recommended
- Rotating playing other positions besides pitching
- Concentrating on age-appropriate pitching, Nolan Ryan didn't start pitching until he was in high school
- Following the pitch count guidelines set by Little League Baseball
- Avoid pitching for multiple teams with overlapping seasons
- Do not pitch with elbow or shoulder pain; if pain persists see an orthopedic surgeon
- Not pitching on consecutive days
- Communicating to your coaches and letting them know how your arm is feeling
- Developing skills that are age appropriate
- Focus on control, accuracy, and good mechanics with your young pitchers
- Try mastering the fastball first, change up second and then consider breaking pitches

How is an elbow or shoulder injury diagnosed?

If a young athlete is throwing too much, too hard, too early and without rest a serious elbow or shoulder injury can occur. If an athlete is complaining of elbow or shoulder pain the day after throwing, or having painful or restrictive movement of a joint they should see an Orthopedic surgeon that is familiar with sports injuries. An exam and radiographs should be done. An MRI would also be helpful.

Maximum Pitch Count

Age	Pitches/Game
7-8	50
9-10	75
11-12	85
13-16	95
17-18	105

Source of Little League Baseball

Rest Periods Required:

Ages 7-16	Ages 17-18	Required Rest
Number of Pitches	Number of Pitches	
61+	76+	3 calendar days
41-60	51-42	2 calendar days
21-40	26-50	1 calendar day
1-20	1-25	No day of rest required

Source of Little League Baseball

Age Recommended for Learning Various Pitches

Fastball 8+ or Minus 2

Slider 16+ or Minus2

Change-up 10+ or minus 3

Forkball 16 + or minus 2

Curveball 14+ or minus2

Knuckleball 15+ or minus3

Screw ball17+or minus 2

How is an overuse elbow or shoulder injury treated?

The most obvious treatment for overuse injuries is rest, especially from the activity that created the injury in the first place. Ice is the best first choice to aid in reducing soreness and inflammation. An anti-inflammatory such as ibuprofen can be taken to help with any pain. If the symptoms do not decrease and or go away an Orthopedic surgeon who is familiar with sports injuries should be contacted. Usually a rest approach would work but at this point it would not be enough to solve the problem. Even though it would allow the symptoms to decrease, it also creates loss of muscle bulk, tone, flexibility and endurance. Once the pain is gone and full range of motion is attained a throwing rehabilitation program can be started. The worst case scenario would be the need of surgery to correct a problem. Overuse and stress-related problems can affect growing parts of bone (growth plates), not just soft tissue (muscles, tendons and ligaments). If the condition is not treated; it could cause a deformity of the limb and permanent disability.

References:

Prevention and Emergency Management of Youth

Baseball and Softball Injuries, American Orthopaedic Society for Sports Medicine, 2005.

Little League Baseball. http://www.littleleague.org/Assets/old_assets/media/pitchcount_faq_08.pdf

American Sports Medicine Institute. www.asmi.org

