

# BASEBALL INJURIES

## THE FACTS:



of adolescent baseball injuries occur due to throwing.



5x

increase in the amount of high school pitchers needing Tommy John elbow reconstructive surgery between 1995 and 2010.

## THE PROBLEM

The most common baseball injuries in young athletes stem from overuse, and are often preventable. Injuries to the shoulder and elbow are two common examples; these are usually caused by throwing too much and from improper throwing technique. Pitchers, catchers, and players who throw overhand are particularly susceptible to overuse injuries of the shoulder and elbow.



## WHAT CAUSES OVERUSE INJURIES?

**Multiple leagues per season** - When an athlete plays in multiple baseball leagues in the same season, it can be difficult to monitor pitch counts and throws during practice time.

**Playing baseball year round** - Young athletes should play only eight months of the year, and should be resting their throwing arms otherwise.

**Lack of cross training** - Serious athletes can sometimes focus so much on one sport that they don't cross train. Encourage athletes to play other sports as well!

**Pitch type** - There has been a lot of discussion about certain pitch types being harmful to young athletes. Focus less on what kind of pitches a player throws, and more on the intensity and frequency with which the athlete is throwing to reduce overuse injuries.

**Fine line between soreness and pain** - If an athlete is sore after pitching, the player should rest and not throw again until the soreness has decreased. Do not pitch if sore or fatigued!

**No guidelines for other positions** - Infielders and outfielders don't have throwing counts or guidelines, so they should personally monitor their pain and see a medical professional if there is no resolution.

## INJURY SYMPTOMS

- Pain and/or loss of motion
- Swelling
- Weakness
- Clicking, popping, or catching within the joint
- Feeling of 'looseness'
- Gradual onset of discomfort
- Decrease in throwing velocity
- Decrease in throwing accuracy

## COMMON THROWING INJURIES IN ADOLESCENTS

- Growth plate injuries of the shoulder and elbow
- Ulnar collateral ligament injuries of the elbow
- Rotator cuff strains
- SLAP tear
- Tendinitis

## Any sports injury, anytime

The EMMC Sports Health Injury Helpline is the fast, convenient way to get help for sports injuries: **207.974.7400**

# PREVENTION STRATEGIES

## Environmental Safety

- Ensure the field of play is as safe as possible. Players should wear proper safety equipment at all times, including a helmet while batting or catching. Sliding into a stationary base can hurt base runners, so using breakaway bases that move when the runner hits them decreases the risk of injury.
- Adhere to new guidelines about using composite bats and other safety equipment.
- Coaches should ensure players communicate to minimize collisions on the field.

## Conditioning and Flexibility

- Reduce soreness in the muscles and joints while strengthening the areas around the shoulder and elbow by ensuring athletes properly warm up and stretch.
- Encourage athletes to cross train in multiple sports to diversify muscle strength and give overused muscles a break.
- Facilitate participation in a preseason arm conditioning program, such as a Thrower's Ten Program, to strengthen the shoulder, elbow, and wrist joints.

## PITCH COUNTS

To prevent overuse injuries in pitchers, USA Baseball and Little League Baseball have developed a pitch count system to limit the number of pitches a player throws.

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

## REST TIME

### 7-14 years of age

To ensure proper time for rest and recovery, follow these guidelines:

Pitches in a day	Rest Time
1-20	0 days
21-35	1 day
36-50	2 days
51-65	3 days
66 or more	4 days

### 15-18 years of age

Pitches in a day	Rest Time
1-30	0 days
31-45	1 day
46-60	2 days
61-75	3 days
76 or more	4 days



## Proper Throwing Mechanics

Ensure athletes use the correct throwing mechanics:

- Have appropriate pelvic tilt in early windup.
- Keep the hand strong and on top of the ball.
- Have the elbow high at the time the forward foot hits the ground.
- Ensure the stride foot goes toward the target, rather than off to the side.
- Avoid (or limit) throwing curveballs or sliders until the recommended age — generally, 14 years old for a curveball, and 15 to 16 years old for a slider.

## Did you know?

Pitchers are 36 times more likely to get injured when pitching with soreness or fatigue.

If an athlete experiences any ongoing shoulder or elbow pain, consultation with a sports medicine physician or a certified athletic trainer to discuss treatment options is recommended. Treatment rarely requires surgery, but recovery can require extended rest, physical therapy, and home exercises, with a very careful and gradual return to throwing.

**Contact us:**

Email: [sports@emhs.org](mailto:sports@emhs.org)  
 Web: [sports.emmc.org](http://sports.emmc.org)  
 Phone: 207.974.7400



**Sports Health**