



SPORTS TRAINING TIPS: BASEBALL

U W H E A L T H S P O R T S M E D I C I N E

BASEBALL INJURIES

There are over 2.5 million baseball players in the United States and 80% of those players are age 14 and younger. The number of injuries in young baseball players has increased dramatically over the past decade. From 1995 to 2000, one prominent surgeon averaged five ulnar collateral ligament reconstructions per year on adolescents. However in 2004, there were 61 of these surgeries performed on kids in the same age group (Petty AJSM 2004). There is evidence that these numbers continue to grow.

How can you detect when a serious injury may be present?

When young baseball pitchers throw too hard, too often, without proper mechanics, without proper conditioning and preparation or without adequate rest, they significantly increase their chance of injury. The early warning signs of injury are shoulder or elbow pain the day after throwing, shoulder or elbow pain while throwing, stiffness or swelling in the elbow, change in performance, or in some cases the athlete saying, "it just doesn't feel right." Many throwing-related injuries are made worse by continuing to throw despite these warning signs. If any of these signs are present, the player should avoid throwing and see a sports medicine specialist.

How can baseball injuries be prevented?

There is strong evidence to suggest that following certain guidelines can significantly reduce the chance of arm injuries in baseball players—especially pitchers. These guidelines include:

- Use an appropriate dynamic warm-up program
(see our video example; web address on back page)
- Do not pitch or play through pain—see a sports medicine specialist
- Develop and maintain proper mechanics
- Develop the fastball first and the change-up second
- Avoid throwing breaking pitches in competition until puberty
- Learn the appropriate technique for breaking pitches and practice under appropriate supervision well in advance of using in competition
- Pitchers—Do not participate in any competitive throwing or stressful throwing drills for at least 2–3 months each year
- Pitchers—Do not pitch for more than one team in overlapping seasons
- Commit to year-round physical conditioning
- Avoid using a radar gun for young pitchers
- Players and coaches—Follow maximum limits for safety
(see back page)



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Pitch counts should be monitored and regulated in youth baseball. Recommended limits for youth pitchers are as follows:

Age	Pitches/Game	Pitches/Week
9-10	50	75
11-12	75	100
13-14	75	125
15-16	95	*
17-18	105	*

** The USA Baseball Medical and Safety Advisory Committee does not use pitches/week maximums for these age groups, but it is vital that these ages not exceed pitching more than twice a week and follow individual game pitch counts*

Recommended minimum rest after pitching:

	1 day rest	2 days rest	3 days rest	4 days rest
Age	Number of Pitches			
9-10	25	35	45	50
11-12	25	35	55	60
13-14	30	35	55	70
15-16	30	40	60	80
17-18	30	40	60	90

Age recommended for learning pitch types:

Pitch	Age
Fastball	8
Change-Up	10
Curveball	14
Knuckleball	15
Slider	16
Forkball	16
Splitter	16
Screwball	17

How are baseball injuries treated?

The treatment needed will vary from injury to injury and athlete to athlete. At the UW Health Sports Medicine Center we take a comprehensive approach to treatment. This involves starting with an evaluation by a sports medicine physician or sports rehabilitation specialist (physical therapist or athletic trainer) and x-rays or MRIs if needed. Following this evaluation, most athletes will undergo specialized rehabilitation that may include strengthening exercises, flexibility exercises, mechanical throwing drills and manual physical therapy treatments. Early on, it may be appropriate to rest from throwing and use ice to control inflammation. Often times during this phase the player is still allowed to work on hitting and fielding drills.

In a small percentage of injuries, surgery may be required. UW Health has specialty-trained orthopedic surgeons who can perform the surgery needed to get the baseball athlete back on the field. After surgery, the athlete will work with rehabilitation staff to recover fully and recondition the arm and body for a safe return to baseball.

References

asmi.org/asmiweb/usabaseball.htm

STOPSportsInjuries.org

Lyman S, Fleisig GS, Andrews JR, Osinski ED. Effect of pitch type, pitch count, and pitching mechanics on risk of elbow and shoulder pain in youth baseball pitchers. *Am J Sports Med.* 2002 Jul-Aug;30(4):463-8.

Petty DH, Andrews JR, Fleisig GS, Cain EL. Ulnar collateral ligament reconstruction in high school baseball players: clinical results and injury risk factors. *Am J Sports Med.* 2004 Jul-Aug;32(5):1158-64.

For more information about sports rehabilitation services, please visit uwhealth.org/sportsrehab or call (608) 263-4765.