



BASEBALL INJURIES

Injuries in young athletes are on the rise, but elbow and shoulder injuries in children are on the verge of becoming an epidemic. Thousands of children are seen each year complaining of elbow or shoulder pain. Damage or tear to the ulnar collateral ligament (UCL) is the most common injury suffered and is often caused by pitchers throwing too much. This ligament is the main stabilizer of the elbow for the motions of pitching. When it becomes damaged, it can be difficult to repair and rehabilitate.

HOW IS AN ELBOW OR SHOULDER INJURY DIAGNOSED?

If a young athlete is throwing too hard, too much, too early, and without rest, a serious elbow or shoulder injury may be on the horizon. If the athlete complains of elbow or shoulder pain the day after throwing, or movement of the joint is painful or restricted compared to the opposite side, see a physician familiar with youth sports injuries immediately.



BASEBALL

HOW CAN OVERUSE BASEBALL INJURIES BE PREVENTED?

Overuse injuries — especially those related to the UCL and shoulder — are preventable. Some tips to keep you in the game throughout your life include:

- Warm up properly by stretching, running, and easy, gradual throwing
- Rotate playing other positions besides pitcher
- Concentrate on age-appropriate pitching
- Adhere to pitch count guidelines, such as those established by Little League Baseball (See tables)
- Avoid pitching on multiple teams with overlapping seasons
- Don't pitch with elbow or shoulder pain, if the pain persists, see a doctor
- Don't pitch on consecutive days
- Don't play year-round
- Never use a radar gun
- Communicate regularly about how your arm is feeling and if there is pain
- Develop skills that are age appropriate
- Emphasize control, accuracy, and good mechanics
- Master the fastball first and the change-up second, before considering breaking pitches
- Speak with a sports medicine professional or athletic trainer if you have any concerns about injuries or prevention strategies

Maximum Pitch Counts

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

Source: Little League Baseball

Rest Periods Required

| Ages 14 and under | Ages 15–18 | Required # of Rest Pitches |
|-------------------|------------|----------------------------|
| 66+ | 76+ | 4 calendar days |
| 51–65 | 61–75 | 3 calendar days |
| 36–50 | 46–60 | 2 calendar days |
| 21–35 | 31–45 | 1 calendar day |
| 1–20 | 1–30 | None |

Source: Little League Baseball

Age Recommended for Learning Various Pitches

| Pitch | Age |
|----------|--------|
| Fastball | 8 ± 2 |
| Slider | 16 ± 2 |

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| | |
|-------------|--------|
| Change-up | 10 ± 3 |
| Forkball | 16 ± 2 |
| Curveball | 14 ± 2 |
| Knuckleball | 15 ± 3 |
| Screwball | 17 ± 2 |

Source: From work by James R. Andrews, MD, and Glenn S. Fleisig, PhD

HOW IS AN OVERUSE ELBOW OR SHOULDER INJURY TREATED?

The most obvious treatment for overuse is rest, especially from the activity that created the injury. Ice is also used to reduce soreness and inflammation. Ibuprofen can be taken to help with any pain. If symptoms persist, it is critical that a physician be contacted, especially if there is a lack of full-joint motion. An examination and radiographs should be done. An MRI scan may also be helpful.

Usually a simple “rest cure” approach will not be enough, because even though it allows symptoms to subside, it also creates loss of muscle bulk, tone, flexibility, and endurance. Once pain is gone and full motion is present, a throwing rehabilitation program can start.

Under some circumstances, surgery may be necessary to correct a problem. Overuse and stress related problems can affect growing parts of bone, not just the soft tissue (muscles, tendons, and ligaments). If the condition is not treated, it could cause deformity of the limb and permanent disability. The athlete should return to play only when clearance is granted by a health care professional.

EXPERT CONSULTANTS

Mary Lloyd Ireland, MD
James R. Andrews, MD
Glenn S. Fleisig, PhD

REFERENCES

Prevention and Emergency Management of Youth Baseball and Softball Injuries. American Orthopaedic Society for Sports Medicine. 2005.

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

American Sports Medicine Institute. www.asmi.org

Sports Tips provide general information only and are not a substitute for your own good judgement or consultation with a physician. To order multiple copies of this fact sheet or learn more about sports injury prevention, please visit www.STOPSportsInjuries.org.

