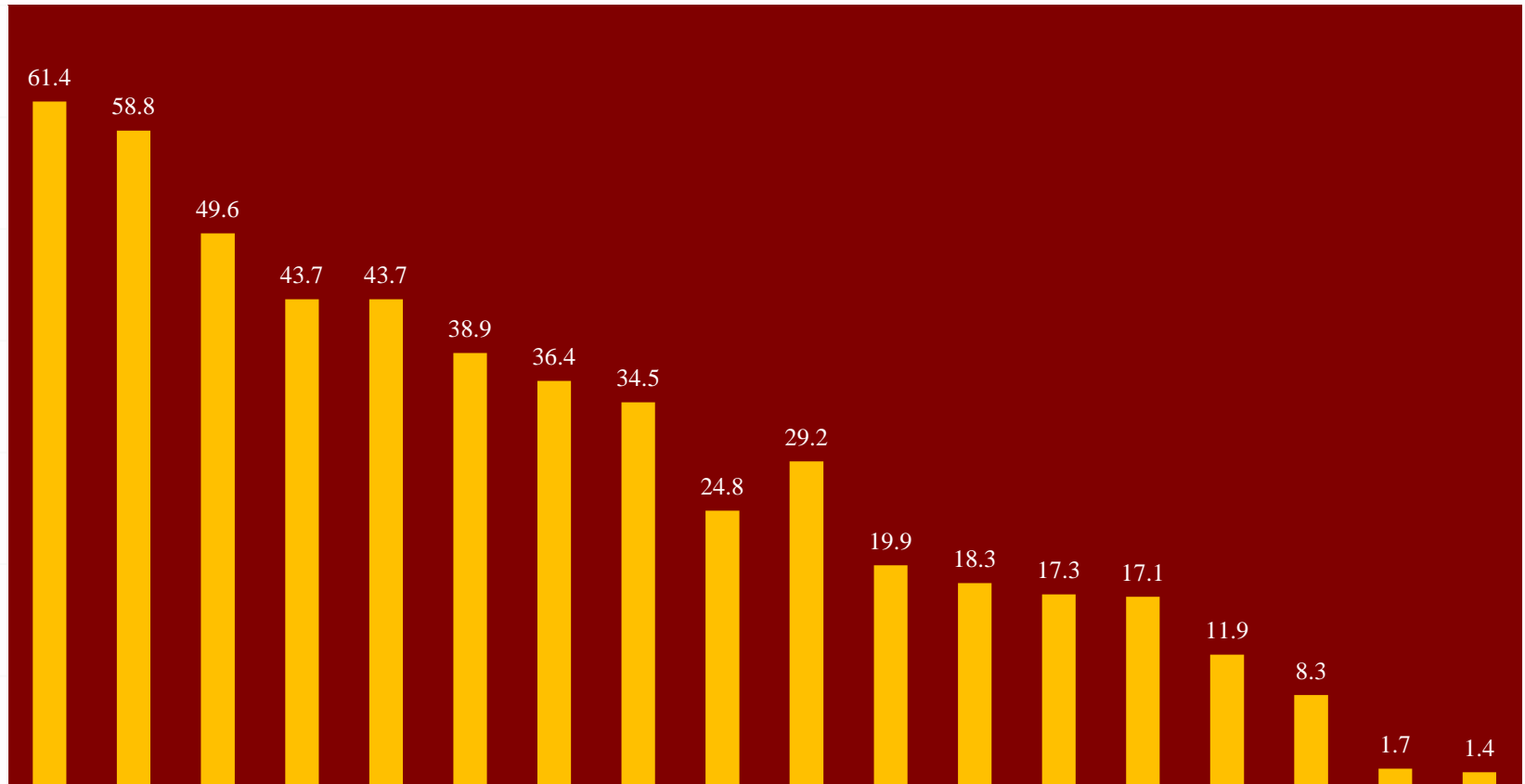


# Risk of Injury



Risk for injury higher for females than males



*“ A few examples of what’s happening to  
our youth”*

The adolescent throwing arm,  
cheerleading/gymnastics, and football  
are good examples to discuss!



# The Adolescent Throwing Elbow

*In youth baseball, our stats at  
ASMI indicate that there is a 5-7  
fold increase in throwing arm  
injuries since 2000*

**For example:  
Year 'round baseball is producing  
an epidemic of injuries to the elbow in young  
baseball players.**

**This 15 year old pictured with  
his parents is a typical example.**





# Epidemic of Youth Pitching Injuries



14 Press Enterprise • Sunday, April 23, 2006 **BIG CHANGES FOR LITTLE LEAGUE**

## 'Alarming' how many kids need to have surgery

Study: Pitch counts main problem

By MITCH RUPERT  
Press Enterprise Writer

Glenn Fleisig is disturbed at the number of youth pitchers requiring Tommy John surgery.

But Fleisig, co-founder of the American Sports Medicine Institute (ASMI), knows exactly what the cause of the elbow problems is. Now, he's trying to fix the problem.

Fleisig, the research director at ASMI, has been working closely with Dr. James Andrews, a renowned orthopedic surgeon and medical director at ASMI, to help prevent young pitchers from finding themselves on Andrews' operating table.

The two were key contributors in a study for USA Baseball that pointed at rising pitch counts as the main problem for youth league pitchers. Fleisig, who has a doctorate degree from the University of Alabama in biomechanical engineering, said players who pitch past the point of fatigue are 35 times more likely to eventually require surgery.

"It's really alarming how many young pitchers are needing surgery," Fleisig said. "Youth and high school athletes were just a tiny slice of the patients before. But that slice is growing, meaning the average

### Rehabilitation regimen

The following is a rehabilitation regimen given to Major League Baseball players who undergo Tommy John surgery. The regimen was outlined by Kevin Wilk, national director of research and clinical education for the HealthSouth Sports Medicine and Rehabilitation Center, and published by USA Today in 2003.

**FIRST FIVE TO SEVEN DAYS**  
The elbow is immobilized at 90 degrees in a hard brace. Patients can move the hand and start light grasping exercises immediately.

**SECOND WEEK**  
Arm is in an adjustable brace that allows limited movement. Patients can begin everyday movements, such as using the arm to eat. Elbow extension is gradually increased, and the brace can be eliminated at four to six weeks.

**WEEKS THREE TO EIGHT**  
Emphasis on range of motion exercises for the elbow, plus isometric and light weights for the shoulder. Heavier resistance to elbow work added at about eight weeks.

**10 WEEKS**  
Simulating a throwing-type motion with a medicine ball, making two-hand overhead lifts and chest passes.

**12 WEEKS**  
Can start to swing a golf club.

**12 TO 14 WEEKS**  
One-hand throwing motion with a one-pound medicine ball.

**16 WEEKS**  
Begin throwing program. Start on flat ground with soft tosses from about 45 feet. About 25 tosses, max, then 25 more. End with 10. Throw every other day; distance and repetitions are repeated two or three workouts before being increased. Build to 150 to 160 feet.

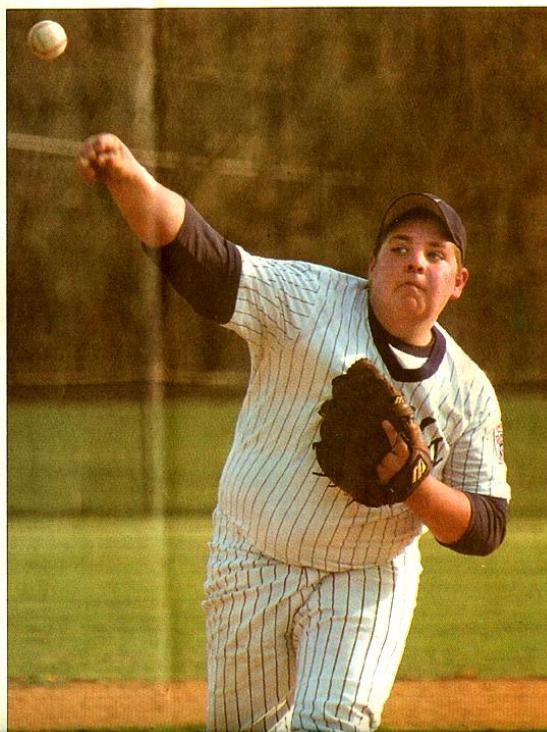
**FOUR TO FIVE MONTHS**  
Bunting practice, slow.

**SIX MONTHS**  
Begin to throw off mound. Start at about 50 percent speed/effort, with no curveballs or specialty pitches, and gradually increase the number of pitches and intensity.

**SEVEN MONTHS**  
Start throwing breaking balls, first from short deliveries on flat ground and with little torque. Build up intensity and distance gradually.

**EIGHT TO 10 MONTHS**  
Introduction to game conditions: batting practice, then a simulated game, then a game at a lower level.

**11 TO 12 MONTHS**  
Return to competition; it often takes a full season of action before the pitcher returns to maximum effectiveness.



## Coaches like idea of pitch counts

Longtime Danville Little League coach Dave Ross would be surprised if any 11- or 12-year-olds would reach the maximum 85 pitches in a day under Little League's pilot pitch count program.

"Eighty-five is a long time for an 11- or 12-year-old to pitch," said Ross, whose two oldest sons, Justin and Pat, were pitchers. "If they throw six innings, you're talking almost 14 or 15 an inning and that's a lot."

Ross is one of a number of local Little League coaches who like the idea of tracking pitchers by pitch counts instead of the current innings-pitched rules.

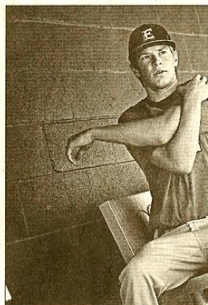
Berwick is the only local league to sign-up for the optional program, but Danville president Chuck Fausnaught Jr. said Danville may talk about implementing the program next season.

Berwick Little League board member and coach Steve Pinterich likes the idea of tracking pitch



6C • FRIDAY, AUGUST 18, 2006 • USA TODAY

Hurting: Nathan Lewis pitched in last year's Little League World Series with a fractured and dislocated growth plate.



## How much is for adolescent

Injuries induce review of rules on pitching limits

By Johnnie Whitehead  
and Dick Patrick  
USA TODAY

When pitchers take the mound for the Little League Baseball World Series, starting today in Williamsport, Pa., something of greater value than a championship could be on the line: their arms.

Increasingly, age 11- and 12-year-old hurlers are developing overuse injuries — most noticeably in their growth plates, a soft tissue area between the shoulder and arm.

While Little League rules limit the number of innings a player can pitch to six a week in the regular season, those rules are relaxed in postseason play when all-star teams of stronger, top-level players compete.

## For safety's sake, parents should count pitches

There are three necessities for a youth pitcher to stay healthy, according to former major league pitcher and coach Tom House.

The only hope a young pitcher has is to make sure you match up his workload — which is pitch totals — with functional strength and sound mechanics," says House, who has produced books, videos and DVDs on the topic.

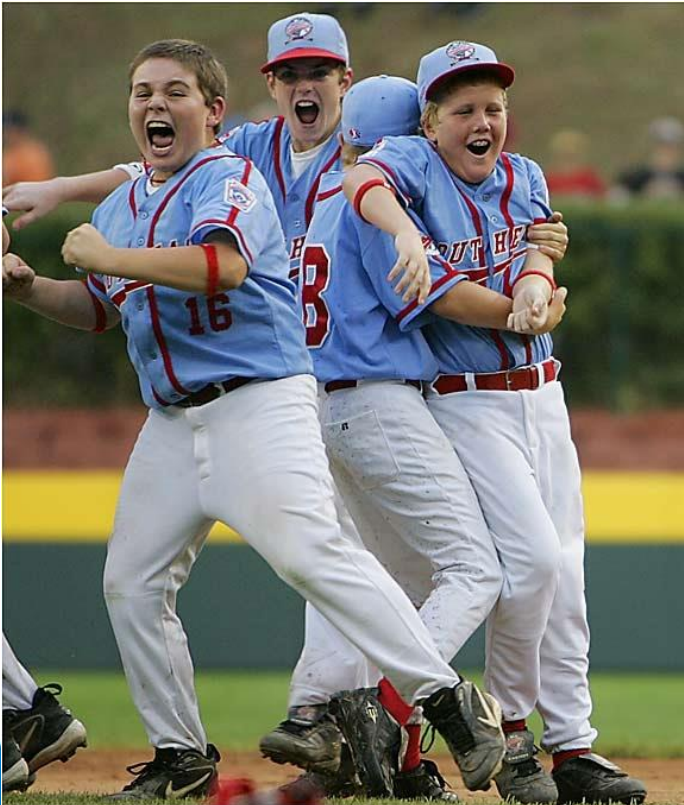
The easiest task for a parent is monitoring pitch count. A \$10 tally counter works fine, though





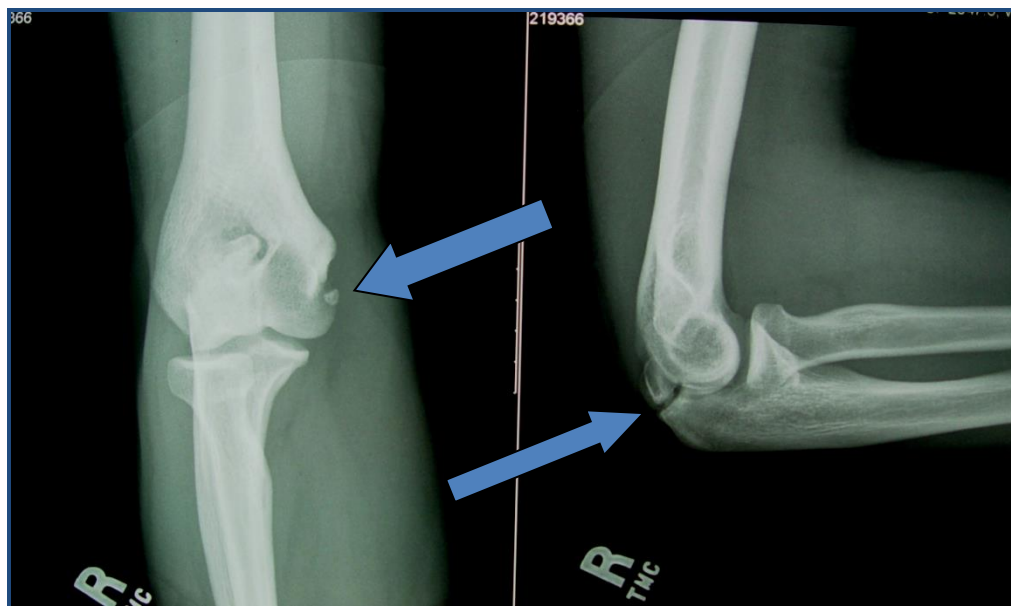


**Kids should be  
playing on the field, not coming in for surgery**

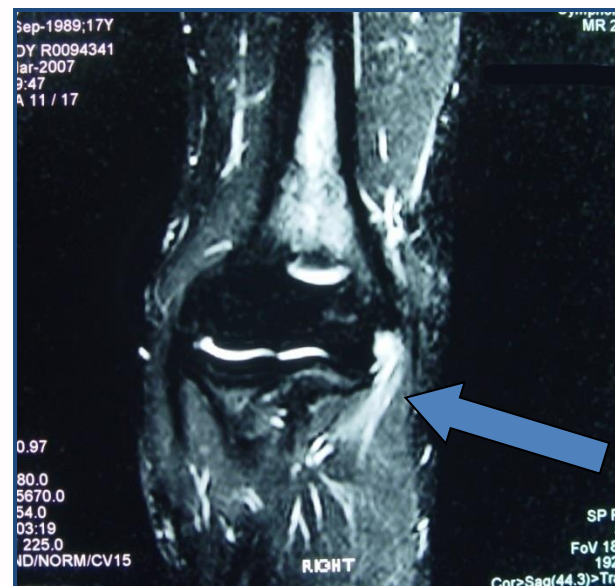




- 15 yo pitcher / catcher “year round baseball”
- Hx of 2 yrs of chronic elbow pain
- Now unable to play



X-Ray of elbow with chronic spurs



MRI of elbow with chronic UCL injury



# The Adolescent Throwing Shoulder

*Some young throwers also have unbelievable extensive damage to the shoulder associated with year-round and seasonal overuse*







## Prevention Studies in Baseball

*Both at ASMI in Birmingham and at the Andrews Research and Education Institute in Pensacola have worked closely with USA Baseball and the Int. Little League Assoc. to help prevent injuries in youth baseball*



From these studies we have identified the following “risk factors” associated with overuse in youth baseball

- Year round baseball
- Seasonal & event overuse
- Playing in more than one league at one time
- Showcases
- The radar gun
- Early breaking pitches ( the curveball)
- Poor mechanics