

Preventing Youth Sports Injuries



Pitching a ban on Little League breaking balls

The breaking ball is a devastating weapon in a Little League baseball game. To even the best players, the pitch is nearly unhittable. Unfortunately, the pitch's nasty effect goes beyond baffling opposing hitters.

Overuse Abuse

Among pitchers younger than 12 years of age, nearly 45% complain of chronic elbow pain. According to a study published by the *Journal of the American Academy of Orthopaedic Surgeons*, overuse and incorrect throwing mechanics are the primary causes of elbow injuries in young pitchers.

"In youth baseball, there are certain motions that are repeated over and over again that are likely to create an overuse injury," says Bernard R. Bach Jr., MD, Director of Sports Medicine at Midwest Orthopaedics at Rush. "Even in a normal throwing motion, the elbow is under a tremendous amount of stress. Factor in abnormal mechanics, such as the motion used to throw a breaking ball, and the stress is multiplied."

Boys are often able to learn the curve ball at 10 or 11 years of age, which is, according to Dr. Bach, well before their arms are ready for the strain. Competitive coaches encourage their pitchers to throw breaking balls and also exhibit a tendency to overuse their better hurlers.

Patrick McKune, Treasurer of Oak Park Youth Baseball, has witnessed the trend of injury and overuse. "In the Little League World Series, it was reported that 60% to 65% of the pitches thrown were curve balls," says McKune. "You just have to shake your head. Another wake-up call for me was last year when I witnessed my son throw six straight curve balls in a game."

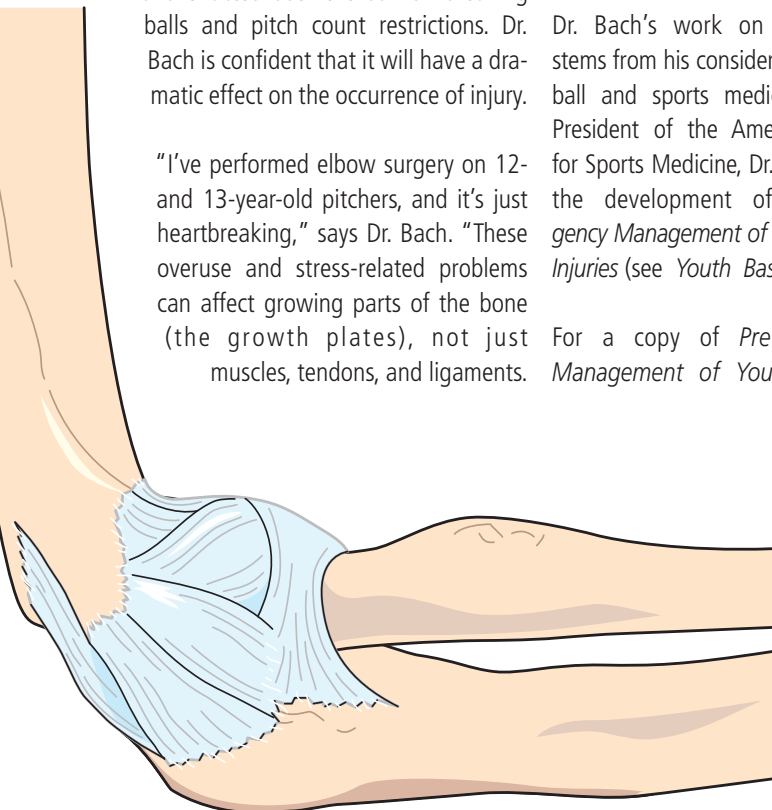
Taking Action

Disturbed by this growing trend, McKune decided to take action. Along with Dr. Bach and representatives from AthletiCo, McKune arranged a meet-

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ing with the Oak Park Youth Baseball board, making the case for a ban on breaking balls combined with a mandatory pitch count. The board agreed with Dr. Bach's medical opinion and enacted both the ban on breaking balls and pitch count restrictions. Dr. Bach is confident that it will have a dramatic effect on the occurrence of injury.

"I've performed elbow surgery on 12- and 13-year-old pitchers, and it's just heartbreaking," says Dr. Bach. "These overuse and stress-related problems can affect growing parts of the bone (the growth plates), not just muscles, tendons, and ligaments.



Overuse and stress-related problems can affect elbow ligaments (shown above), muscles, and tendons, possibly leading to long-term problems.

When the condition is not treated, it can cause long-term problems."

Dr. Bach adds, "It seems that every parent thinks his or her kid is on the fast track to a Division I scholarship, and, ultimately, a professional baseball career. There is a 'graveyard' of talented kids whose careers ended prematurely because of throwing-related elbow and/or shoulder injuries. We advocate throwing a fast ball and a change up but no curve balls until approximately 13 or 14 years of age. The kids should focus on pitching mechanics and control. Kids mature at different rates, and mechanics can change dramatically when adolescents go through rapid growth spurts, which may result in significant muscle imbalances."

McKune initially thought enforcement of the new rules might be an issue, but to date, no infractions have been observed. To his knowledge, the ban enacted by Oak Park Youth Baseball may be unique to the area. "It's my hope that other leagues will adopt similar rules to protect the health of their young players."

Injury Prevention

Dr. Bach's work on the breaking ball issue stems from his considerable interest in youth baseball and sports medicine. Serving as the Vice President of the American Orthopaedic Society for Sports Medicine, Dr. Bach was instrumental in the development of *Prevention and Emergency Management of Youth Baseball and Softball Injuries* (see *Youth Baseball Safety*).

For a copy of *Prevention and Emergency Management of Youth Baseball and Softball Injuries* or for more information on youth baseball safety, visit the American Orthopaedic Society for Sports Medicine online at www.sportsmed.org or call Midwest Orthopaedics at Rush at (877) MD-BONES. 🌐

Youth Baseball Safety

Prevention and Emergency Management of Youth Baseball and Softball Injuries provides guidelines on youth baseball safety to help coaches and parents to:

- be familiar with basic sports injury terminology;
- be aware of up-to-date techniques for preventing sports injuries;
- be able to differentiate between mild, moderate, and severe injuries;
- know appropriate first aid techniques for the injuries they will encounter;
- be able to design an emergency plan for their league to use when severe injuries occur; and
- know specific techniques to determine whether an injured player is ready to practice and play again.



Bernard Bach Jr., MD, Director of Sports Medicine at Rush since 1986, has developed a nationally recognized sports medicine program. Dr. Bach has published more than 240 scientific papers, abstracts, and book chapters. He serves on numerous national sports committees and editorial boards and is an educator of residents, fellows, and his patients. Dr. Bach is board certified (1989) and recertified (1999) by the American Board of Orthopaedic Surgery. Dr. Bach has served on the national boards of the Illinois Special Olympics, the Orthopaedic Research and Education Foundation, and the American Orthopaedic Society for Sports Medicine. He is the Editor of the *Journal of Knee Surgery*. Dr. Bach was selected as one of Chicago magazine's "Top Doctors" in 1996, 2000, 2004, and 2006, and is recognized nationally and internationally as a leader in sports medicine. He was inducted into the Illinois Athletic Trainer's Hall of Fame in 1995. Along with the other members of the Sports Medicine Division, he was selected as a Team Physician for the Chicago White Sox baseball team in 2004 and 2005.