

## ***Position Statement***

# **Use of Breakaway Bases in Preventing Recreational Baseball and Softball Injuries**

*This Position Statement was developed as an educational tool based on the opinion of the authors. It is not a product of a systematic review. Readers are encouraged to consider the information presented and reach their own conclusions.*

Softball and baseball are popular recreational sports for children, teens and adults. An estimated 8.6 million children, ages 6 to 17, participate annually in organized and recreational baseball.<sup>1</sup> More than 2 million girls between the ages of 12 and 18 compete in fast pitch softball annually.

The two sports account for a large number of sports injuries, including sprains, fractures and dislocations. Although lower extremity injuries are the most common, upper extremity injuries also occur. According to the U.S. Consumer Product Safety Commission (CPCS), in 2014, more than 629,000 people were treated for injuries related to baseball and softball.<sup>2</sup>

Better injury prevention strategies are essential to increase the safety of these sports. A study conducted at the University of Michigan found that using breakaway bases in recreational softball games reduced sliding injuries by 98 percent and associated medical care costs by 99 percent.<sup>3</sup>

A traditional stationary base is bolted to a metal post and sunk into the ground. This becomes a rigid obstacle that the athlete encounters while sliding. In contrast, a breakaway base is snapped onto grommets attached to an anchored rubber mat, which holds it in place during normal play. Although a sliding runner can dislodge it, the breakaway base is stable and will not detach during normal base running.

***The American Academy of Orthopaedic Surgeons (AAOS) believes the deployment of breakaway bases at all levels of baseball and softball could dramatically reduce injuries to athletes, including posterior cruciate injuries (behind the knee), improving the safety of both sports as well as reducing healthcare costs due to medical injuries. The AAOS recommends that breakaway bases be installed on all playing fields and further recommends that physicians involved with sports activities around the country actively promote the use of breakaway bases in their local community.***

AAOS also recommends the following tips for safe base running and sliding:

- Players under age 10 should not be taught to slide.
- Proper instruction in sliding technique must be provided and players must practice sliding, beginning with a sliding bag, before being allowed to slide during a game.
- The "obstruction" rule—the fielding player cannot obstruct the path of the runner—must be taught and observed. Getting in the way of the runner or blocking the base without possession of the ball is dangerous to both the runner and fielder.
- To prevent foot and ankle injuries between the runner and fielder at first base, a "double bag"—a separate bag for each team (one white, one orange so both the runner and first baseman have their own base)—should be used.
- Players should always wear shoes with a snug heel, roomy toe box, good traction, flexibility in the sole, and plenty of ankle support and coverage. Shoes also should breathe so as not to encourage bacteria or fungus growth.
- Always break in a new pair of cleats before wearing them during a game, and check shoes periodically for signs of wear and tear. Children often outgrow their shoes before they wear them out!

#### References:

1. Lawson BR, Comstock RD, Smith GA. Baseball-related injuries to children treated in hospital emergency departments in the United States, 1994-2006. *Pediatrics*, 2009; 126(6). [www.pediatrics.org/cgi/content/full/123/6/e1028](http://www.pediatrics.org/cgi/content/full/123/6/e1028)
2. U.S. Consumer Product Safety Commission. NEISS data. Accessed June 2015. <http://www.cpsc.gov/en/Research--Statistics/NEISS-Injury-Data/>
3. Your Orthopaedic Connection, Baseball Injury Prevention. <http://orthoinfo.org/topic.cfm?topic=A00185>
4. Janda DH, Wojtys EM, Hankin FM, et al. A three-phase analysis of the prevention of recreational softball injuries. *Am J Sports Med* 1990; 18:632–35.

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