

## ***Position Statement***

# **Trampolines and Trampoline Safety**

*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.*

The number and severity of trampoline-related injuries positively correlate with the increased recreational use of trampoline equipment, and those injuries are significant among all age groups. Trampolining, an Olympic sport since 2000, is a popular activity for children and adolescents in backyards, outdoor playgrounds, trampoline parks, and routine physical education classes. Unfortunately, the high speeds and heights experienced by participants who jump and tumble on a trampoline—often while unsupervised—and the use of trampolines by multiple children simultaneously, result in hundreds of thousands of injuries each year. Even trampoline athletes who have substantial training, ideal equipment, and well-trained spotters can sustain serious injuries.

In 2014 in the United States, there were nearly 286,000 medically treated trampoline injuries, according to the Consumer Product Safety Commission, including 104,691 emergency department visits.<sup>1</sup> Most trampoline injuries occur in the home environment, and more than 90 percent are sustained by children,<sup>2</sup> usually those between the ages of 5 and 14 years. Although most injuries to children occur while they are unsupervised by parents or adults, many also occur when adults are present. More than half of injuries occur on the mat of the trampoline and three-fourths of injuries involve two or more children using the trampoline at the same time. No data show a reduction in injury rates for trampolines outfitted with netting and other safety equipment.<sup>3</sup>

Between 2002 and 2011 there were more than one million emergency department visits for trampoline-related injuries.<sup>2</sup> The most common injuries were sprains and fractures resulting from falls on the trampoline mat, frame, or springs; collisions with one or more jumpers; stunts gone wrong; and falls off the trampoline onto the ground or other hard surfaces. Nearly one-third of trampoline injuries involved fractures; 60 percent of fractures were located in the upper extremities, and approximately 36 percent in the lower extremities. Attempting somersaults and flips on the trampoline is among the most common causes of permanent and devastating cervical spine injuries.<sup>2</sup> Medical, legal, liability, work loss, and pain and suffering costs related to trampoline injuries were estimated at nearly \$9 billion in 2014.<sup>1</sup>

Injuries may be minimized by limiting use of trampoline equipment, providing supervision in sports training programs, and following the safety recommendations from the American Academy of Pediatrics Policy Statement<sup>3</sup> and the U.S. Consumer Product Safety Commission.<sup>4</sup>

**To reduce the number and severity of injuries resulting from the use of trampolines, the American Academy of Orthopaedic Surgeons (AAOS) recommends the following guidelines:**

- Provide careful adult supervision and proper safety measures when trampolines are used for physical education, competitive gymnastics, diving training, and other similar activities.
- Provide competent adult supervision and instruction for children at all times.
- Allow only one participant at a time to use a trampoline.
- Ensure that spotters are present when participants are jumping. Somersaults or high-risk maneuvers should be avoided without proper supervision and instruction; these maneuvers should be attempted only with proper use of protective equipment, such as a harness.
- Place the trampoline-jumping surface at ground level.
- Ensure that supporting bars, strings, and surrounding landing surfaces have adequate protective padding that is in good condition and appropriately placed
- Regularly check equipment for safety conditions; discard worn or damaged equipment if replacement parts are unavailable
- Do not rely on safety net enclosures for injury prevention; most injuries occur on the trampoline surface. Do not allow children younger than 6 years of age to use trampolines.
- Remove trampoline ladders after use to prevent unsupervised access by young children.

**References:**

1. Trampolines – Calendar Year 2014, Cost Components for Medically Treated Nonfatal Consumer-Product Injuries by Place of Treatment (2012 dollars), developed for Consumer Product Safety Commission with National Electronic Injury Surveillance System (NEISS) data.
2. Loder R, et al: Fractures from Trampolines: Results from a National Database, 2002 to 2011. *J Pediatr Orthop*, 2014. 34 (7): p. 683-690.
3. Trampoline Safety in Childhood and Adolescence, American Academy of Pediatrics Policy Statement 2012. Available online at: <http://pediatrics.aappublications.org/content/130/4/774.full>. Accessed June 3, 2015.
4. Trampoline Safety Alert, Consumer Product Safety Alert, US Consumer Product Safety Commission, 2015. Available online at: <http://www.cpsc.gov/pagefiles/137868/085%20trampoline%20safety.pdf>. Accessed June 3, 2015.

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Position Statement 1135

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