

# Injury Prevention

## Pediatric Sport-Related Injuries: Epidemic or Myth?

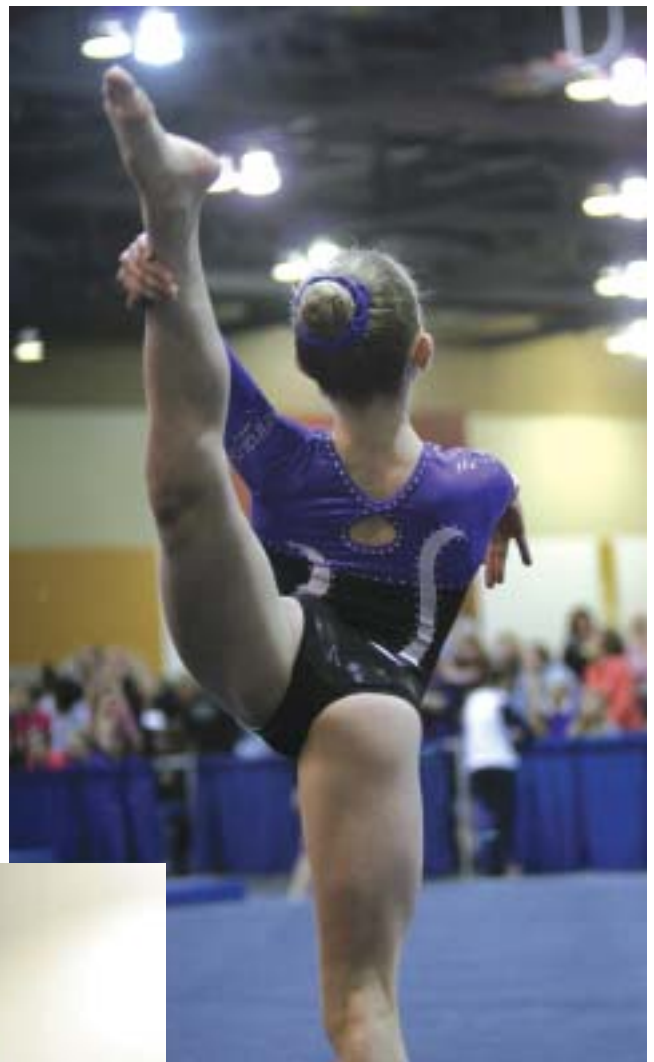
by Kim Rondina, PT, DPT

Participation in youth sports is increasingly popular across the United States. Approximately 30 million children and teenagers participate in organized sports each year<sup>1</sup>, and sports are the leading cause of injury and hospital emergency room visits in adolescents.<sup>2</sup>

The U.S. Centers for Disease Control and Prevention estimate that one half of all sports injuries in children are preventable<sup>2-3</sup>. Why is this number so high? Kids are involved in sports in a more competitive way than ever before. Yet there are many concerns about the pressures of winning being inflicted, and no one seems to be backing down.

Many participants are initiating year-round training and specialization at a very early age. The number of high school seniors who earn an athletic scholarship is estimated as low as 1 in 400<sup>4</sup>, but sports organizations and media continue to deliver a different message to kids and their parents.

From a public health perspective, a physically active lifestyle as a child is paramount, as it will help prevent chronic disease later in life. Physical activity is protective against multiple causes of morbidity including cardiovascular disease, obesity, cancer and diabetes.<sup>5</sup> The benefits of activity far outweigh the risks, although the growing prevalence of adolescent injury confirms its importance as a health problem today. Pediatric sports-related injuries are bound to occur; however, every effort must be made to prevent the occurrence of unnecessary injuries.



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Studies have shown that physical activity patterns track from childhood, through adolescence, and into adulthood.<sup>6</sup> It is estimated that 8 percent of adolescents drop out of recreational sporting activities annually because of injury occurrence.<sup>7</sup> If either injury or the results of injury are responsible, we must ask the question, what can be done to prevent this epidemic from continuing?

A persistent problem in child and youth sports is inadequate recognition and thus, rehabilitation of injuries.<sup>8</sup> It is believed that unresolved symptoms from previous injury predispose the athlete to reinjury at the same and different sites.<sup>9</sup>

Research is driving the development and implementation of injury prevention programs. Interventions to reduce the risk for sports or recreation-related injuries can be classified into three categories: personal countermeasures (eg, use of safety gear), behavioral interventions (eg, proper conditioning), and environmental modifications (eg, use of padded goal posts).<sup>4</sup>

### Too Much Too Soon

A disturbing trend is toward an increase in overuse injuries, for which the reasons are many. If injury has long-term consequences on the musculoskeletal system, the result may be reduced levels of physical activity throughout the rest of an individual's lifetime.

## inside | therapeutic activities

Recent literature highlights the importance of considering how factors interact to influence the risk of injury. As noted previously, recognition of an injury or problem can predispose an athlete to further injury.

### An injury prevention process can take place in four steps.

1. establish the extent of the injury
2. establish the cause of the injury
3. introduce a preventive measure
4. assess effectiveness<sup>10</sup>

If you are concerned about the possibility of a current injury with your child, access the resources available to you! Your primary care physician, orthopedist or physical therapist is qualified at identifying injury.

After the identification of an injury, further understanding of the mechanism of injury, biomechanical components, and evaluation of the individual's intrinsic or host risk factors must be addressed to minimize or eliminate further potential for injury. These factors include age, gender, sport-specific risks, and history of previous injury.

In addition, modifiable components such as strength, flexibility, balance, endurance and neuromuscular control (how everything works together!) are also factors that contribute to injury risk.

To reference aforementioned trend in overuse injuries—this likely represents intrinsic factors of the athlete that are contributing to gradual pathologies with each practice or competition. One should not neglect that these athletes are growing and developing musculoskeletal beings—they are not indestructible.

Numerous studies have shown the effectiveness of preseason conditioning programs or prevention programs in reducing the risk of sports injuries in our youth. The focus of such a program, whether it be directed by a coach or a health care professional, should be on injury prevention and the intrinsic factors that reduce individual risk.

Many programs exist with the promise of “building a better you to beat your competition.” Although many of these programs can physically challenge a person at any level, the components that will protect your

child are simply forgotten in order to create a “one size fits all” program. Do your homework and ask questions to allow you to make a better choice for your child's long-term well-being. Consider this an opportunity to build a relationship with a person invested in the overall health and wellness of your child, rather than just a one-time consultation.

Too often a concept of time for adequate healing or the sport season influences the behaviors of coaches, athletes and parents when it comes to addressing injury. The goal must be to consistently protect the adolescent from injury or harm; therefore, your actions as a parent must support this goal! The responsibility of health care professionals is to provide active measures to reduce the risk for sports injury, and to involve the athlete and the parent in establishing guidelines and parameters.

The development of effective programs to reduce sports injury among youth necessitates a comprehensive approach, including identifying key risk factors for injury, a thorough examination of how various factors interact to affect risk, and the identification of potential barriers to the effectiveness of injury prevention programs. Expect this on your child's behalf in order to lay the foundation for a long-term healthy and physically active lifestyle. **K&S**

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