

# Overuse Injury Prevention in Youth Sports

- Approximately 35 million children between the ages of 5 and 18 participate in organized sports each year.
- More than 3.5 million kids under age 14 receive medical treatment for sports injuries each year.
- Overuse injuries are responsible for nearly half of all sports injuries to middle and high school students

## Warning Signs of Potential Overuse Injuries (Risk Factors)

Children and teens are at a greater risk for overuse injuries due in large part to growing bones, uneven maturation and inability to detect warning signs.

Pain, Fatigue, Decreased Performance and Discomfort that linger for more than a few days after activity are major indicators of potential overuse injuries. Other risk factors include:

- Prior injuries
- Growth spurt
- Higher training volumes
- Inadequate rest and overscheduling (more than one sport and/or league at a time)

## Recommendations for Prevention

**1. Injury Surveillance** –Parents, coaches, athletic trainers and others in charge of young athletes need to be aware of injury potential and report all injuries.

**2. Pre-participation Physical Exams** – Student athletes are urged to undergo a physical examination prior to beginning a new sport (or prior to the start of a new sports season), to screen for potential risk factors.

**3. Avoid Early Specialization** – Youth athletes are encouraged to participate in multiple sports and recreational activities throughout the year, to enhance general fitness and aid in motor development. Year round training in one sport has been linked to increased potential for overuse injury and burnout. Furthermore, diversified sports training for youth athletes has been shown to be more effective in developing elite level athletes

**4. Moderation** – The volume of sports activity is the most consistent predictor of overuse injury. Efforts should be made to limit the total amount of repetitive sports activity engaged in by youth athletes to prevent/reduce overuse injuries. Training intensity, load, time, and distance should only increase by 10 percent each week, to allow the child's body to adapt and avoid overloading muscles and joints.

**UCDAVIS  
HEALTH**

Sports Medicine

**Sports Performance  
and Wellness**

[sportsmedicine.ucdavis.edu](https://sportsmedicine.ucdavis.edu) (916) 734-6805

**5. Adequate Rest** – Athletes should take at least 1 day off from organized sports per week. Additionally, young athletes should only participate in one team of the same sport per season. They should also take time off between sports seasons and take at least two to three non-consecutive months away from a specific sport.

**6. Adequate Preparation** – Proper conditioning, including a preseason and in-season preventative programs reduce the risk of overuse injuries. Download the following handouts for example programs that have been demonstrated to significantly reduce injury:

FIFA 11+ Program: <https://health.ucdavis.edu/sportsmedicine/download/FIFA11.pdf>

PEP Program: <https://health.ucdavis.edu/sportsmedicine/download/pep-program.pdf>

## **Burnout**

Over reaching/overtraining has been defined to occur as a result of chronic stress that causes a young athlete to cease participation in a previously enjoyable activity.

- The primary cause of burnout is inadequate rest
- There is also a large psychological component related to burnout adult supervised activities. The top three reasons given for wanting to drop out of sports are: adults, coaches and parents.
- Data suggest that athletes who had early specialized training withdrew from their sport either due to injury or burnout from the sport.

## **Preventing Burnout**

- Keep practice fun and age appropriate
- Focus on overall wellness, teach how to listen to their bodies
- Young athletes who participate in a variety of sports tend to have fewer injuries and play longer, maintaining a greater level of physical activity than those who specialize before puberty.
- Success for younger athletes should be for children to play different sports and develop athleticism (vs. sport-specific skills) and love of sports

**UCDAVIS  
HEALTH**

Sports Medicine

**Sports Performance  
and Wellness**

sportsmedicine.ucdavis.edu (916) 734-6805