



Start with the Basics

Kids should start with a solid foundation. "Make sure students get good nutrition, good sleep, and good hydration. Eat good foods and eliminate bad sugars. All those things play a role in how likely they are to get injured," says Eric Ellingson, cofounder of BE Fit Physical Therapy in Hanover and White River Junction. Properly fitting protective gear and a preseason physical are also essential.

Children should experience different sports and also have time for free play and lots of activity outside of sports practices and competitions. The Centers for Disease Control and Prevention recommends that children ages 6 through 17 should have an hour or more of moderate to intensive physical activity each day. Organized sports give children opportunities to explore new interests and be with peers as they are active. Parents should have an eye to a healthy balance of organized sports and play.



Eric Ellingson, cofounder of BE Fit Physical Therapy in Hanover and White River Junction.

"Make sure students get good nutrition, good sleep, and good hydration. Eat good foods and eliminate bad sugars. All those things play a role in how likely they are to get injured," says Eric Ellingson.



Dr. Keith Loud, Children's Hospital at Dartmouth Hitchcock.

"We have to make sure that the right balance is struck to make sure that the sport and the exercise are beneficial and not in and of themselves causes of harm," says Dr. Keith Loud.

Too Much Activity?

Trends of children's sports specialization and high weekly training volumes have been recognized in studies as factors that contribute to increased rates of overuse injuries. Many youth sports have expanded from a local focus with school teams to regional elite teams, training camps, nearly year-round training, and regional and national competition. In some sports, these extend down to elementary-aged children. Overuse sports injuries include tendinitis, shin splints, patellofemoral pain (runner's knee), muscle tears, and stress fractures. Between 60 and 70 percent of sports-related injuries are caused by repetitive stress. These injuries may cause long-term pain and damage and contribute to burnout, along with knocking a young athlete out of her or his sport for extended time.

"We have to make sure that the right balance is struck to make sure that the sport and the exercise are beneficial and not in and of themselves causes of harm," says Dr. Keith Loud, physician-in-chief and an adolescent sports medicine specialist at the Children's Hospital at Dartmouth-Hitchcock.

Diversify Activities

Focusing on one sport to the exclusion of other forms of exercise puts developing bodies at risk. Repetitive stress—throwing, kicking, impact—can irritate and damage growth plates, soft tissue, and bones. Training the same sport and repeating those movements year-round, without allowing the body time to heal, exacerbates the risk.

"You really need to vary sports participation," says Dr. Loud. "Ideally, you have one season off each year from any formally organized sports participation. Also, ideally, during those three seasons, there is participation in three different sports, or at least two so you're not doing the same movement patterns year-round." During the off season and during free time, students should enjoy diverse activities—riding bikes, skiing or snowboarding, or swimming.

Dr. Loud notes that competitive advantages of early sports specialization are disputed. *Sports Illustrated* journalist David Epstein's recent book *Range* considers Tiger Woods's lifetime specialization in golf and Roger Federer's generalist upbringing—playing tennis and other sports with balls, but also skiing, swimming, and skateboarding. Their divergent upbringings both produced world-champion athletes.

Overdoing the volume of sports training is another concern, says Dr. Loud, who notes that a rule of thumb recommends one hour of training per week per year of age. An eight-year-old gymnast should train only for eight hours each week, a 12-year-old soccer player should limit soccer training to 12



Physical therapy can be used to learn exercises to address core and hip weakness that often contribute to sports injuries.

Dr. Loud recommends a 36-hour rule: "If the pain hasn't improved after 36 hours of rest, using ice (20 minutes at a time, at least two to three times a day), and perhaps an over-the-counter anti-inflammatory with parental supervision, then it's time to call the doctor."



STOP Sports Injuries

STOP (Sports Trauma and Overuse Prevention) Sports Injuries was initiated by the American Orthopaedic Society for Sports Medicine (AOSSM) in early 2007. This public outreach program focuses on the importance of sports safety, specifically relating to overuse and trauma iniuries. The initiative raises awareness and provides education on injury reduction and highlights how playing safe and smart can enhance and extend a child's athletic career, improve teamwork, reduce obesity rates, and create a lifelong love of exercise and healthy activity.

STOP Sports Injuries has sport-specific recommendations for safety and preventive measures for young people for more than 30 sports—including baseball, cheerleading, inline skating, soccer, and water polo. Go to www.stopsportsinjuries .org for more information.







"Strength training is one of the best ways to reduce likelihood of injury at any age," says Eric Ellingson.

hours. Again, kids should have time and encouragement for play beyond practice hours.

Eric Ellingson notes that strength training is also vital to safety and conditioning. "We want kids to be participating certainly, but in a safe way that doesn't promote injury. It's not just participating in the sport, which is the fun part. If they want to participate at a high level, they should also be doing core training, hip strengthening, and strength work, particularly in the off season. Strength training is one of the best ways to reduce likelihood of injury at any age."

Address Injuries Early

When injuries do occur, getting care and following through speeds recovery. Overuse injuries are typically less visible than traumatic ones. Dr. Loud recommends a 36-hour rule: "If the pain hasn't improved after 36 hours of rest, using ice (20 minutes at a time, at least two to three times a day), and perhaps an over-the-counter anti-inflammatory with parental supervision, then it's time to call the doctor."

Eric comments, "I think sometimes people hesitate to seek care, kids especially, because they're worried they will be told not to play. Our goal is to keep people doing the things they love. Yes, absolutely there are times when they need to restrict or change their activities for a time period. We're on your side. We want you to be out there on the field as soon as you can safely. Getting things addressed early is important before they become more severe." ❖