

# Youth, Sports and Injuries

By Rosemary Schultz, M.D.  
*Orthopaedic Surgery & Sports Medicine*

Over the last 10 years, there has been a dramatic increase in the participation of youth in sports and other athletic activities. Children as young as six years old can now play organized sports such as hockey, soccer and swimming. Just like their heroes in professional sports, children can also suffer painful and sometimes physically limiting injuries. With many years of growing left, special precautions need to be taken to avoid and treat these sports-related injuries.



Rosemary Schultz, M.D.

## Before Your Child Starts

Most high school athletic programs require that your child receive a physical examination before participating in extra-curricular sports. While not usually required of children in grade school, it is recommended that they too receive a thorough exam before playing organized sports. Once your child has passed a physical exam, there are some rules-of-thumb that need to be followed. As a safety measure, all sporting events and related practices need to be supervised by an adult who is knowledgeable about proper athletic techniques and training. It is also important that coaches set a limited pace when training children. In general, children need to be conditioned slowly to achieve safe, continuous progress in their physical abilities. Too much too soon can be damaging to a young body. Following are general age ranges for youth to begin and increase their degree of physical activity:

- Up to 5 years old - play activities which incorporate a variety of different exercises
- 5-8 years old - introduction to organized sports which involve greater intensity
- 8-18 years old - introduction to strength training, specific sports training and conditioning

## Preventing Injuries

Nearly half of all injuries sustained while playing organized sports are preventable. There are five significant physical factors that contribute to sports injuries: strength, flexibility, endurance, coordination and body weight. Children who lack these physical abilities or have a weight problem may be prone to injury.

The best way to counter these weaknesses is to

improve upon them. This may include a routine of specific aerobic activities for endurance and weight loss, calisthenics for strength and coordination, stretching exercises for flexibility, and weight training for strength and endurance. The selection and combination of activities depends on which areas a child needs to improve.

Sometimes training equipment can be used. While elaborate and costly equipment is available, many simple and inexpensive alternatives work just as well. Some suggestions range from jogging to improve endurance to lifting gallon jugs of sand or water to increase

strength. For more examples like these, talk to your child's coach or gym teacher. Improvements can be fast or slow depending on a child's current state of physical fitness. However, any increase in a child's activities should be gradual. Extreme changes can place too much stress on a child's body, resulting in other physical problems. For example, a child who isn't very active shouldn't begin running three to five miles each day. Most likely, this would harm the child rather than help. In general, older children can handle a 10 percent increase in duration until a desired level is attained.

With young children up to 8 years of age, physical activities need to be more varied. Since few children are required to set specific athletic goals when they're young, a variety of activities may help to improve motor skills, teach athletic values and keep children from becoming bored too quickly.

Lastly, flexibility is a key component in a child's physical program. Because of rapid growth spurts, bones tend to grow faster than muscles and tendons. Regular stretching before and after physical activity allows muscles and tendons to remain more flexible as a child grows.

## When Injuries Happen

The most common injuries include sprains, strains and fractures. A sprain occurs when a ligament is torn, while strains are tears in a muscle or tendon.

Fractures can be

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cracks in a bone or occur when a tendon detaches from a bone.

In children, 10 percent to 15 percent of all bone injuries involve problems with growth plates. These are located at the very ends of bones where new bone material is added during growth. Because growth plates are bones which are not fully developed, they are susceptible to injury.

Three other severe injuries fall under microtrauma. Microtrauma occurs when repetitive stress to a bone, muscle, tendon or ligament inhibits the tissue from properly healing. Injuries associated with microtrauma include tendinitis, bursitis and chronic inflammation. Tendinitis is the inflammation of a tendon. Bursitis is the inflammation of bursa which are special pockets of tissue between bone and tendons. Bursa protect skin and tendons by reducing friction over bony projections. Chronic inflammation simply means a body part is aggravated from excessive movement. This can occur almost anywhere in the body.

For immediate relief from any of these injuries, children should apply the R.I.C.E. technique. R.I.C.E. stands for Rest, Ice, Compression and Elevation. If an activity is causing extreme pain, children should immediately stop and give their body a rest. If pain persists and swelling develops, ice should be applied. Ice applications can reduce pain, muscle spasms and swelling. Compression is another way to reduce swelling. This can be done by wrapping an Ace bandage around a limb or injured area. Elevation also relieves pressure and reduces swelling by slowing the flow of blood to injured limbs.

In cases where it may be difficult to determine whether a child needs professional medical attention, there are a few guidelines to follow:

1. If pain is extreme, the child's physician should be contacted or the child should be taken to an urgent care center.
2. All joint injuries should be looked at by a physician. If not treated, joint damage can lead to other severe problems later in life.
3. If a child is unable to move a limb or the range of motion is impaired, it's recommended that a doctor look at the injury.
4. Your child should see a doctor if pain persists and the injury doesn't heal within two to three weeks.
5. Infection or signs of an infection should alert you to take your child to a physician.

In any of these cases, never let too much time elapse before seeing a physician. What appears to be a

minor injury can actually be worse than you think. Orthopaedic injuries of muscle and bone are usually better diagnosed using x-rays or other types of imaging equipment.

For more information, call Advanced HealthLine at (262) 512-2880 or toll-free at 1-888-709-2080 outside metro Milwaukee, or log on at [www.ah.com](http://www.ah.com).

*Rosemary T. Schultz, M.D., is an Orthopaedic Surgeon who specializes in Sports Medicine. Dr. Schultz has office hours with Aurora Advanced Healthcare's Cedar Creek Clinic (215 West Washington Street, Grafton, 262-375-3700), East Mequon Clinic (12203 N. Corporate Parkway, Mequon, 262-387-8300) and Good Hope Clinic (3003 W. Good Hope Road, Milwaukee, 262-387-8300).*

*The physicians in the Department of Orthopaedics at Aurora Advanced Healthcare include:*

*Shari Buske, D.P.M. - Podiatry*

*R. Sean Churchill, M.D. - Orthopaedic Surgery & Shoulder Elbow Surgery*

*Omar Darr, M.D. - Orthopaedic Surgery & Sports Medicine Arthroscopic Surgery*

*Thomas Doers, M.D. - Orthopaedic Surgery & Surgery of the Spine*

*Bruce Fauré, M.D. - Orthopaedic Surgery & Joint Reconstruction Arthroplasty*

*Eric Gaenslen, M.D. - Orthopaedic Surgery & Hand/Upper Extremity Surgery*

*Todd Greenfield, D.P.M. - Podiatry*

*James Hackett, M.D. - Orthopaedic Surgery & Surgery of the Spine*

*John Konkol, M.D. - Joint Reconstructive Surgery & Sports Injuries*

*Kurt Konkol, M.D. - Orthopaedic Surgery of the Lower Extremities (Hips, Knees, Ankles, Feet, Bunions & Toes, including Foot Ankle Subspecialty Surgery)*

*Philip Konkol, M.D. - Orthopaedic Surgery & Hand/Upper Extremity Surgery*

*Eric Malicky, M.D. - Orthopaedic Surgery & Foot/Ankle Surgery*

*Paul Miller, M.D. - Orthopaedic Surgery & Sports Medicine Arthroscopic Surgery*

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*Hany Nosir, M.D. - Interventional Pain Medicine*

*John Schlenz, D.P.M. - Podiatry*

*John Schuller, D.P.M. - Podiatry*

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