

Training and Injury Prevention

Checkup on Health

Sports like soccer play a critical role in supporting the physical and mental well-being of children and adolescents. Sports programs can provide young athletes with an opportunity to enhance their physical fitness, improve self-esteem, acquire leadership skills and have fun.

But despite their limitless energy and seemingly rubberized limbs, it's as important for children and adolescents to prepare properly for sports activities as it is for the pros. The wrong approach can mean a pulled muscle, ligament tear, hernia or other injury that not only spoils the fun now, but can follow a young athlete through all sporting days.

Be prepared to play

Despite a child's ability to burn calories at a fantastic rate, just being young in years is by itself not a guarantee that a child is in "playing shape." First, a responsible adult must ensure that aspiring young athletes are prepared for the demands of sports training and competition, in order to avoid a vicious cycle of debilitating injuries that can rob a kid's passion or ability.

In addition to knowing the rules of a game, young athletes need to be in shape to play the game. Establishing general physical fitness should be a prerequisite for participating in youth sports.

Preseason and offseason conditioning programs should be well-designed to enhance the strength and integrity of the musculoskeletal system and to develop general fitness abilities, he says. In some cases children may need to decrease the amount of time playing a sport or practicing sports specific drills to focus on a more general well rounded pre-season conditioning program.

Focusing on sport-specific skills instead of general fitness skills may lead to burnout and serious injury, and limit the ability of children and adolescents to succeed outside a narrow physical spectrum.

Preventing injury

Because aspiring young athletes are often forced to train harder and longer in order to excel in sports, it's prudent for children and adolescents to participate in at least six to eight weeks of preseason conditioning prior to sports participation.

Common risk factors for sports-related injury in the inexperienced pediatric athlete can include:

- improper footwear
- hard playing surfaces
- poor nutrition
- muscle imbalances, and
- limited background level of general activity.

A pre-participation examination may also be an opportune time to identify correctable risk factors such as poor flexibility or physical condition.

Training guidelines

If needed, athletic trainers and qualified youth coaches should prescribe a preseason conditioning program and provide young athletes with specific and detailed information on the type, frequency, intensity and duration of training.

A combination of strength, aerobic and flexibility exercises performed two to three times a week on nonconsecutive days is the current recommendation by the American College of Sports Medicine or ACSM.

It's important to include multi-joint exercises that require balance, stabilization and coordination. In addition, "core" strengthening exercises for the abdominals and lower-back muscles should be performed to help prevent back injuries.

It's also crucial to identify sport-specific injury risks – such as throwing injuries from baseball, soccer-related anterior cruciate knee ligament tears and "gymnast wrist" – and focus some training to prevent them as well.

Strength training

A variety of training programs with different types of equipment (bands, tubes and machines) designed for children have proven to be safe and effective for youth athletes. However, proper guidelines and competent supervision are essential, and the athletes themselves must have the emotional maturity to accept and follow directions.

According to the ACSM, youth strength training programs must be closely supervised by knowledgeable instructors who understand the uniqueness of children and have a sound comprehension of strength training principles and safety guidelines, such as proper support or "spotting" procedures. Kids should receive instruction regarding proper exercise techniques, such as controlled movements and warm-up/cool-down periods.

For more information about repetitions and weight loads, visit the American College of Sports Medicine "Youth Strength Training" fact sheet.

<http://www.acsm.org/docs/current-comments/youthstrengthtraining.pdf>

Key points:

- Proper training techniques reduce injuries by encouraging flexibility, promoting endurance, and teaching correct biomechanics.
- Sports education reinforces the concepts of fitness and a healthy lifestyle along with sport-specific training.
- Once an injury has occurred, early identification and care allows the athlete to rehabilitate the injured area and modify techniques offering the athlete an optimal chance for full recovery and return to full participation.
- Rehabilitation of the injury starts as soon as it has been identified. Early and appropriate care offers the athlete an optimal chance for full recovery and return to full participation.