

Helping Female Athletes Prevent Sports-Related Knee Injuries

By Lauren Butler, PT, DPT, SCS



Today we are seeing an increasing number of girls playing competitive sports, with roughly 200,000 at the collegiate level. This rise in participation has afforded female athletes many social and health benefits including improved physical fitness, confidence, teamwork and a decreased risk of obesity. Along with increased sports participation also comes an increased risk for injury, with girls being at a higher risk for certain types of injuries than boys.

Sports that involve jumping, twisting and pivoting can put tremendous amounts of strain on the knee, which is one of the most commonly injured joints in young female athletes. One of the most serious knee injuries is a torn anterior cruciate ligament (ACL). Nationally, ACL injuries are on the rise in young athletes with an estimated 250,000 ACL injuries each year. Female athletes are of particular concern with four to six times greater risk than their male counterparts.

Fortunately, education and training programs are available in South Florida that focus on preventing ACL injuries. For instance, the Nicklaus Children's Sports Health Center in Pinecrest incorporates muscle strengthening, motor skill coordination, agility drills and other training aimed at reducing the risk of an ACL injury.

Prevention is vital because an ACL injury will typically result in surgical reconstruction and up to 12 months of rehabilitation. Even after your daughter is back in action playing sports there can be long-term consequences, including a 50 percent risk of developing osteoarthritis within a decade and a 25 percent chance of re-injury.

The signs of a knee injury include pain, swelling and difficulty moving the leg or walking even a short distance. If your daughter is injured, seek medical care right away for diagnosis of the problem, which could be a torn ACL, a broken bone, or other muscle or ligament injury. If surgery is needed, it is important to see a pediatric specialist so that the injury can be treated appropriately with regard to your child's future bone growth.

Surgical reconstruction of the ACL, followed by a well-planned physical therapy program, has a very high long-term success rate, according to the American Academy of Orthopaedic Surgeons (AAOS). The initial goals are to stabilize the knee, strengthen the muscles, and restore the full range of motion. Advanced training is often needed to improve motor skill coordination, balance, speed and confidence prior to returning to sport. Once the rehabilitation program is completed, your daughter may be able to return to sports.

Tips for protecting the knee

Here are some tips for protecting the knee and preventing ACL injuries:

- ▶ Perform a proper warm up prior to sports participation that includes dynamic activities such as skipping and side shuffling.
- ▶ Participate in 6 to 8 weeks of pre-season conditioning to physically prepare for the sporting season and reduce the risk of injury.
- ▶ Wear properly sized footwear with the right tread pattern. For instance, running shoes may "grip" the court too much when playing tennis. If your daughter is wearing shoes with cleats, be sure they are the right length for the condition of the field.
- ▶ Inspect the field or court prior to games or practices for any potential hazards such as spilled liquids or potholes.
- ▶ Be mindful of fatigue, tell your daughter to listen to her body. If her knee "doesn't feel right," or she feels exhausted, it is ok to pull out of the game.

Remember that it is far better to prevent a knee injury than to reconstruct a torn ACL. Be sure that your child puts safety first!

Lauren Butler is the physical therapy supervisor at the Nicklaus Children's Sports Health Center in Pinecrest, which offers a comprehensive ACL injury prevention program including group injury prevention classes.