

ACL Injuries

Have you ever heard the phrase before of a “blown out knee?” This phrase often refers to an athlete who tears their Anterior Cruciate Ligament (ACL). The ACL is a ligament that attaches their femur (thigh bone) to the tibia (shin bone) inside the knee joint. The ligament prevents the tibia from moving forward on the femur. A complete tear of the ACL usually requires reconstructive surgery in order to return to sports, or other higher level activities.

Female athletes are 4 to 6 times more likely to suffer an ACL tear than their male counterparts. Structural differences between men and women account for some of the increased risk. In general, the ACL is smaller and has a smaller attachment site as to males. The wider pelvis found in females causes a larger stress on the knee joint.. Hormones also play a role with estrogen causing more joint laxity, which means more movement within the joint.

While neither an athlete nor coach may change the structural predisposition to injury, other major factors can be controlled. Women, in general, are quadricep dominant compared to their hamstrings, meaning their quad muscle is far stronger than their hamstring muscle (which directly supports the ACL). Because of this muscle imbalance, studies have shown that women have a larger degree of internal movement inside the knee joint during jumping, causing an unstable knee joint. When jumping, females will have the tendency to compensate for weaker muscles by absorbing more force inside the knee joint, causing a higher risk for injury.

Female athletes may lessen their risk of serious knee injury by strengthening the hamstrings. A recent study was done placing female athletes in a structured knee-strengthening program, focusing on the hamstring musculature in addition to proper jumping techniques. Remarkably, the rate of serious knee injury in females who participated in this program decreased to almost the same rate as the male athletes.

Common helpful hints to remember when getting ready for a sport season or just play around the house will help decrease the risk of injury. Remember to avoid “hard” landings when jumping. Soft landings, easier heard on a basketball court compared to a hard landing, use more muscle, and less stress on the knee joint. Try to maintain the “athletic stance” with knee slightly bent and feet shoulder width apart while playing sports. Always do adequate stretching prior to exercising or playing sports.

Since recovery following an ACL injury will often result in lost season(s), and time spent in the doctor offices and rehab, prevention is a worthwhile investment.