

## *Orthopaedic Connection*

### **Knee Ligament Injuries**

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#### ***Transforming patient information into patient understanding.***

Any doctor seeing sports injuries (me!) will tell you that knee injuries are a big problem. The knee is so vulnerable because it is out in the middle of the leg balanced by ligaments with no muscles directly covering it for support. The poor knee envies the hip joint at the other end of the femur, which has strong muscles covering it. Hip injuries to the joint itself are rare compared to the frequently injured knee. This probably has something (not the only thing) to do with why we do 7 – 8 times as many total knee replacements as hip replacements.

#### **Ligaments**

Do you really know what your ACL is and what it does? The letters have become very common in the vocabulary of our patients. It stands for anterior cruciate ligament. To simplify things, think of the knee as supported by two sets of ligaments. Ligaments (totally different from tendons!) function like short ropes to hold the knee together during bending and straightening.

Cruciate ligaments, anterior and posterior located deep in the knee comprise one set. Cruciate ligaments cross each other in the knee, one arising near the front of the knee and one arising from the back or posterior aspect. They prevent the shin bone or tibia from sliding forward and backward on the femur.

The other two knee ligaments are the collateral ligaments, medial and lateral which control side to side movement of the knee joint.

Anterior cruciate ligament knee injuries are very common during sports. Why you ask? Read on.

#### **How the ACL is injured**

It can happen in several ways, but these are the most common ways.

1. Cutting, meaning to change direction rapidly
2. Suddenly stopping
3. Landing from a jump as in gymnastics
4. Direct collision from the side of the knee
5. Other less common mechanisms

#### **Symptoms of ACL injury**

Injured persons frequently report hearing a snap.

Pain may be severe or slight.

Swelling (blood) in the knee occurs in one or two hours and increases overnight.

The knee feels unstable and weak and will not support full weight.

#### **Diagnosis of ACL injury**

As with anything else I do, starting with a careful history and physical exam is the most important part. There are several tests I can do when the knee is examined to tell me if there is an ACL injury.

The third thing to do is order plain x-rays of the knee to be sure there is no hidden fracture. Now MRI x-rays of the knee are used extensively to aid in the accuracy of the diagnosis.

### **Management of ACL injury**

Having run out of space for this week I will continue next time with information about how the injury is treated depending on the findings.

*My patients put their trust in me and what I do improves the quality of their lives.*

### **Office Website and Gratiot County Herald Archive**

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It contains a world of musculoskeletal information you and your family and friends can use! Website, Your Orthopaedic Connection, Archive of all previous GCH articles.

Please check it out. Be well.

Good health, good life, all the best to you.

Dr. Haverbush