Anterior Cruciate Ligament (ACL) Injury

WHAT IT IS

The anterior cruciate ligament (ACL) is located inside the knee, and crosses from the back of the femur (thigh bone) to the front of the tibia (shin bone). This ligament stabilizes the knee by limiting anterior (forward) movement and inward rotation of the tibia. There are 3 grades of all ligamentous injuries. A Grade 1 (mild) sprain involves slight stretching of the ligament, a Grade 2 (moderate) sprain refers to partial tearing, and a Grade 3 (severe) sprain is a complete tear of the ligament.

HOW IT HAPPENS

The ACL is usually injured while twisting with your foot planted. Around half of all individuals feel and/or hear a “popping” at the time of the injury. Some common causes of ACL injury include:
- Twisting, cutting, or pivoting on a planted foot
- Landing awkwardly from a jump
- Slowing down suddenly
- Hyperextending (overextending) the knee

WHERE IT HURTS

Since the ACL is located deep in the center of the knee, pain is often hard to localize. Some people experience pain deep inside the knee, while others will feel it mostly in the lateral (outside) and posterior (back) sides, or even anteriorly (in the front). Swelling will most likely accompany the pain within a few hours after injury. As the swelling increases the knee may feel tight or harder to bend and straighten.

IMMEDIATE TREATMENT

- PROTECT the knee from further injury by using crutches and/or a knee immobilizer.
- REST the knee from all activities until severity has been determined.
- ICE the knee for 15-20 minutes to decrease pain and swelling. Ice may be applied as often as once per hour.
- COMPRESSION wraps can be used to decrease swelling and provide minimal support.
- ELEVATE the knee above the level of the heart to decrease swelling.
- IBUPROFEN can help decrease both pain and swelling. Take NO MORE than 1200mg per day following the label’s recommended amounts.

RIGHT KNEE - ANTERIOR VIEW (KNEECAP REMOVED)
<table>
<thead>
<tr>
<th>REHABILITATION EXERCISES</th>
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<tr>
<td><strong>Seated Heel Slides</strong></td>
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<tr>
<td>Place a towel under your heel and slide your heel towards your backside, causing your knee and hip to flex. Return heel to starting position. Repeat 30 times.</td>
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<td><strong>Straight Leg Raise</strong></td>
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<td>Perform a quad set (see previous exercise) and then raise your heel 6-8 inches off the floor, keeping your knee straight. Hold for 3 seconds, gently lower the leg, and then relax the quadriceps. Repeat 10-30 times.</td>
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**PHYSICIAN REFERRAL**
While an ACL injury is not a medical emergency, a physician referral is needed to determine the severity of injury. Since the ACL cannot be seen on an x-ray, the physician will likely order an MRI (Magnetic Resonance Imaging) to be done on the knee. The MRI will allow the doctor to see the structures inside the knee and determine the type and severity of the injury.

**Injury Prevention & Care - A Campus Recreation Program**
http://crec.unl.edu/ipcare

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