

Knee

- The knee connects your thigh bone (femur) to your shin (lower leg or tibia/fibula).
- The center of your knee is your kneecap (patella).
- The knee joint contains 4 main ligaments
 - Anterior Cruciate Ligament (ACL): located in the center of the knee and controls rotation and forward movement.
 - **Posterior Cruciate Ligament (PCL)**: located in the center of the knee and controls backward movement of the shin bone.
 - **Medial Collateral Ligament** (MCL): located on the middle side of the knee and provides stability to the inner knee.
 - **Lateral Collateral Ligament (LCL)**: Located on the outer side of the knee and provides stability to the outer portion of the knee.
- The Meniscus is a C-shaped padding that acts as a shock absorber in the knee joint, helping to prevent degeneration of the joint.





Anterior Cruciate Ligament (ACL)

- The ACL connects your thigh bone (femur) to your shin bone (tibia) in the center of the knee joint to control rotation and forward movement of the shin bone.
- The ACL is a band of thick connective tissue.
- An ACL sprain or tear is one of the most common knee injuries.
 - **Grade 1 Sprain**: the ligament has been slightly stretched but is still able to help keep the knee joint stable.
 - Grade 2 Sprain: "Partial tear" The ligament becomes loose.
 - **Grade 3 Sprain**: "Complete tear" The ligament has become split into two pieces and the knee joint is unstable.
- Common ways the ACL is injured:
 - Rapidly changing direction
 - Stopping suddenly
 - Slowing down while running
 - Landing wrong after jumping
 - Direct contact or collision (a football tackle)

Treatment

- Once diagnosed by your doctor, through testing and imaging, they will discuss possible treatment plans.
 - Rest, Ice, Compression, Elevation
 - Bracing
 - Surgical intervention
 - Physical Therapy
- An ACL tear will not "heal" without surgery, however for less active patients, bracing and PT may be sufficient to stabilize and strengthen the joint to assist you in restoring function. (Your doctor will decide)



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Physical Therapy

The PT will perform an initial evaluation to test your range of motion, strength, and pain level. The physical therapist will develop a plan of care and establish goals to assist you in:

- Following protocol to assist you through phases of healing and limitations
 - Be patient and listen closely, as you will feel the process is slow!
- Improving range of motion and flexibility
- Increasing strength
- Decreasing pain
- Learning proper body mechanics and techniques to prevent re-injury
- Return to function and physical activities without limitations





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Total Knee Replacement

- During this surgical procedure, the surgeon shaves the bones at the knee joint and replaces the area with a prosthetic implant to ultimately create an "artificial" knee joint, giving you less pain and more function of the joint.
- Reasons for having a knee replacement:
 - Wearing or damage to the joint
 - o Arthritis
 - o Joint deformities or abnormalities



Photo Credit: https://ivanlt.wordpress.com/2009/04/25/minimally-invasive-total-knee-arthroplasty-for-osteoarthritis/



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Following Surgery

- You will remain in the hospital for 1-3 days.
- Once home it is IMPORTANT to:
 - Use the assistive walking device
 - Control your pain with the medication your doctor prescribed
 - Do not stay in one position for extended periods -
 - Example: elevate for 30 minutes, then sit on a higher surface and allow the leg to "sway" back and forth at the knee joint (think of sitting on the tailgate of a truck)
 - Ice frequently
 - Elevate the leg you must elevate the entire leg!





Photo Credit: https://bonesmart.org/knee/how-can-i-manage-pain-after-my-total-knee-replacement-surgery/

Physical Therapy

The PT will perform an initial evaluation to test your range of motion, strength, pain level, and assess the surgical site. The physical therapist will develop a plan of care and establish goals to assist you in:

- Improving range of motion and flexibility
- Increasing strength
- Decreasing pain
- Assist in decreasing use of the assistive walking device as strength increases and the joint stabilizes.
 - Learning proper body mechanics and techniques to restore function of the joint.