## Physical and Sports Therapy

# Knee Pain

The knee joint is composed of the weight bearing union of the femur (thigh bone) and tibia (lower leg bone) with the accessory patella (kneecap) gliding on the front of the joint. Thick cartilage is present on all three bones to withstand the immense forces present in walking, running, and jumping. A C-shaped piece of cartilage called the meniscus is present between the large leg bones and stabilizing ligaments are present on the interior and sides of the knee. The knee is an integral part of function. Unfortunately, challenges at other parts of the body, including the lumbar spine, hip, or ankle, often place undue burden on the knee, causing premature, injury, and pain.

#### Some Knee Issues Include:

Osteoarthritis: The degradation of cartilage in the knee with bone spurring causes pain, limited range of motion, and decreased function. It is responsible for the grinding that you feel (and hear!) with movement of the joint. While arthritis is common in many joints, it is typically most severe in the knees. Unfortunately, most people respond to pain by limiting the use of the joint, which actually speeds degradation of the joint. Exercise is warranted to strengthen and stabilize the knee. Additionally, clearing hip and ankle issues can decrease pain and prolong the life of the knee. Aquatic therapy is a great method to partially unload the joint, allowing people to comfortably transition into exercise. A primary goal is prevent the need for knee replacement surgery.

**Meniscal Tear:** The meniscus can be torn from trauma, such as a sport injury, or breakdown over time. Therapy can improve the stability and health of the joint, often eliminating the need for surgery.



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Patellofemoral Pain Syndrome: Pain at or around the front of the knee, commonly experienced by athletic youth, with a higher incidence in females. Pain commonly increases with sport activity. The condition relates to irritation between the patella and underlying leg bones. It is effectively treated by focusing on knee flexibility and stability, and by addressing neighboring joints, such as the hip and ankle.

#### What can physical therapy do for Knee pain?

Physical Therapy focuses on reducing the irritation of inflamed tissues, the re-establishment of joint stability, and the normalization the mechanics of the knee and the adjacent joints to reduce pain and normalize range of motion and function. While some knee problems demonstrate structural damage that requires surgical repair, many are relieved of pain and avoid surgical intervention through the use of physical therapy.

### **Treatments for Knee pain**

- **Manual Therapy:** Hands-on therapy targeted at the knee, hip, and ankle to normalize mobility. Cross friction massage targeted at the patellar tendon to improve the quality of the tissue and decrease the accumulation of scar tissue.
- **Aquatic Therapy:** Water exercise is a great place to start for those with arthritis who are finding it difficult to tolerate land activities. UR Medicine / Noyes Health offers aquatic therapy in our Geneseo office.
- **Exercise:** Targeted exercise at the ankle, knee, and hip rotators to improve function and unload and stabilize the knee.
- **Ultrasound/TENS:** Ultrasonic waves and electrical stimulation are used for decreasing pain and inflammation to improve tolerance to exercise.
- **Taping:** The use of various types of tape and methodologies, Including Kinesio Taping and McConnell Taping, to enhance joint support, muscular function, and blood flow. This intervention is commonly used by professional athletes.