

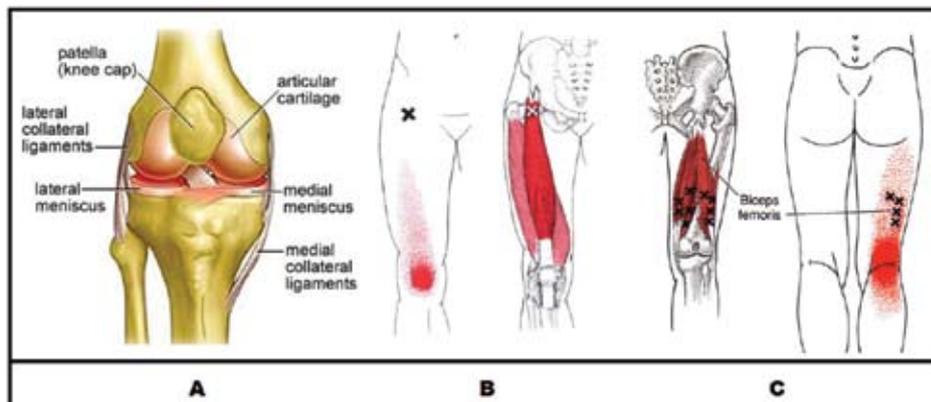
Knee Pain

Providing a "Team Approach" to pain relief since 1994

MyoRehab



“When it comes to knee pain, why is it that we can ‘fix’ the x-ray but not the patient?” This question is frequently raised by patients and often echoed in medical circles. After knee surgery or any joint surgery for that matter, the injury that shows up on the x-ray may be repaired but the pain often persists. Is something being overlooked? What caused the knee pain to begin with? Let’s take a closer look.



Our knee is a complex joint made of three bones; the femur (thigh bone) and tibia (shin bone) which forms the main part of the knee joint and the patella (kneecap) which serves as a moving anchor for several muscles. It is enclosed in a capsule with ligaments providing stability and strength. (Illustration A)

Ligaments on either side of the joint (collateral ligaments) are joined by others crossing within the joint (cruciate ligaments). Between the femur and tibia is the meniscus, a thickened cartilage pad that acts as a shock absorber and a smooth surface for motion.

The knee is controlled by the large muscles of the thigh. In front, the quadriceps muscles extend (straighten) the knee. In back, the hamstring muscles flex (bend) the knee. The knee also rotates slightly under normal conditions.

The most common knee injuries involve ligament and/or meniscus damage. Joint degeneration and arthritis, the Latin word for joint (arthro) and inflammation (itis) due to joint wear are also quite common. While ligament and meniscus damage usually require surgical repair, mild cases of joint inflammation are treated with medication. Severe cases of joint degeneration and inflammation are corrected with joint replacement surgery.

In general, our joints withstand a lot of wear and tear in the form of ligamentous sprains and meniscus compression. This abuse often produces transient pain easily resolved with rest or over the counter medication. On the other hand, injuries from trauma to the knee and muscle strain produce an accumulation of minute contractures in the large muscles that cross the knee.

These contractures are called Myofascial Trigger Points and as they accumulate, they

slowly ratchet-up the compressive force in the joint causing accelerated joint wear and increased inflammation.

Myofascial Trigger Points are self-sustained contraction knots that develop in muscle. They cause a shortening in the muscle called a taut band which in turn restricts range of motion we experience as stiffness. When these taut bands are stimulated by contracting or stretching the muscle, pain is triggered from the Trigger Point within and referred in predictable patterns away from the Trigger Point. This ‘triggered’ or referred pain is combined with and is indistinguishable from the pain produced by the injuries within the damaged knee joint itself.

When taut bands in muscles that cross the knee become numerous, the smooth movement of knee function becomes restricted and painful. This increases the chance of ligament and meniscus injury. When the pain of ligament sprain, meniscus injury and/or inflammation from increasing joint wear reaches an intolerable level, surgical solutions are employed. After successful surgery, if the joint pain persists, perhaps the cause is Myofascial Trigger Points that have yet to be addressed.

The rectus femoris is one of the strong muscles crossing the front of the knee called the quadriceps or quads for short. (Illustration B) When this muscle harbors trigger points it produces pain directly over the knee as well as excessive compressive force within the knee joint. Over time, the excessive compressive force produces its own pain due to accelerated joint wear and resultant inflammation.

The hamstrings cross the back of the knee. One of them, the biceps femoris (Illustration C), also produces excessive compressive force within the knee joint while producing referred pain at the back of the knee. It is common for the quads and hamstring muscles to develop Myofascial Trigger Points simultaneously due to the fact that they work together.

Proper treatment begins with a proper diagnosis. When x-rays, MRIs and joint evaluation show no evidence of a definitive cause for pain, Myofascial Trigger Points are often at work. Special training is required to identify and inactivate them. Once this is accomplished, the patient is given a specific exercise program to retrain the involved muscles. Factors or behaviors that precipitated the formation of Myofascial Trigger Points in the first place must be identified and corrected. Failure to do so results in perpetuation of the pain and injury even after treatment.

Long before ligament injury, arthritis or meniscus damage takes place, Myofascial Trigger Points in the large muscles of the thigh produce pain and stiffness that is often ignored or turned off with medication. Pain referred to the area of a joint from Myofascial Trigger Points is often the harbinger of more serious injury yet to come and should be properly treated. The knee, owing to its complexity, cannot wait. Once pain begins, the clock is ticking.

Give us a call at **505-872-3100** and make an appointment. Come to MyoRehab and find out how our Team Approach can work for you.