

# ***The Knee***

## ***Anatomy, Injury, and Exercises***

*This article will help you to identify some of the most common causes of knee pain with tips to help prevent and resolve these potentially disabling conditions.*

*The knee joint is one of the largest joints in the body. It is comprised of two bones, the femur and tibia that are connected by four strong ligaments. These ligaments serve to stabilize and control the motion of the knee joint. The bones are cushioned by a gelatinous cartilage called meniscus that lays between them. All of these structures are at risk for damage.*



*The knee is the most commonly injured joint in all age groups. It is especially susceptible to damage during athletic activities and exercise. Many knee injuries can be treated conservatively with rest, ice, mobilization, chiropractic care and physical therapy. However, other knee injuries will require surgical intervention.*

## ***KNEE ANATOMY***

### ***Anatomy of the Knee Joint***

*The knee joint is medically known as the tibiofemoral joint. It is the largest joint in the body. The knee joint depends on four strong ligaments for stability. Each ligament serves to limit the motion of the knee in various directions. Injury to any of the ligaments of the knee can cause severe pain and discomfort.*

### ***Special Tests of the Knee***

*Chiropractors often diagnose certain injuries through a thorough physical examination. There are a variety of tests, each specific for certain injuries. Four tests to diagnose ligamentous damage of the knee include the anterior drawer, posterior drawer, valgus, and varus tests. Laxity in any of these directions results in a positive test, and thus damage to a specific ligament.*

## ***COMMON KNEE DISORDERS***

### ***The Unhappy Triad***

*The Unhappy Triad refers to a sprain injury that involves three structures of the knee. These are the medial collateral ligament, anterior cruciate ligament, and the medial meniscus. It often occurs when a lateral force to the knee is received while the foot is fixed on the ground. Depending on the severity of this injury, its treatment ranges from conservative physical therapy to surgical repair.*

### **Osteoarthritis**

*Osteoarthritis is the most common form of arthritis. It is often the cause of knee pain in the elderly. Osteoarthritis occurs when the joint cartilage that covers the bone ends gradually wears away. This occurs due to time or overuse. For this reason, osteoarthritis is called the "wear and tear" arthritis.*

### **Chondromalacia**

*Chondromalacia describes a disorder that involves a softening of the cartilage behind the patellar bone, or the kneecap. It is most often a form of knee pain in young adults. Symptoms of chondromalacia include a dull aching in the knee behind the knee cap. It is often worse after sitting for long periods of time or when walking down stairs.*

### **Prepatellar Bursitis**

*Prepatellar bursitis occurs when the bursa sac around the kneecap becomes inflamed and swollen. This results in pain around the front of the knee that occurs with activity. Prepatellar bursitis is commonly found in people who kneel often at work, such as plumbers and gardeners.*

### **Jumper's Knee**

*The patellar tendon, an extension of the quadriceps tendon, joins the kneecap to the shin bone (or tibia). This tendon allows the quadriceps muscle to straighten the leg. With repeated strain, micro-tears occur in the tendon that results in inflammation and pain. This is known medically as patellar tendonitis or jumper's knee.*

### **Patellofemoral Syndrome**

*Patellofemoral syndrome is a medical condition that occurs when the patella, otherwise known as the knee cap, does not glide correctly on the thigh bone, or the femur. This results in pain around the knee joint during activity.*

*If you have experienced any of the above-mentioned conditions or symptoms, you may be a candidate for conservative therapy at our office.*

*Give us a call to find out today **(908) 753-0144**.*