

# osteoarthritis and ligament pain



## Fixing what's wrong. Relieving what hurts.

### What is osteoarthritis?

Osteoarthritis is a degenerative disorder of the joints that can cause joint pain, loss of function, reduced joint motion and deformity. It occurs when bone-on-bone surfaces become irregular. Also known as “degenerative joint disease,” osteoarthritis can involve any joint but most often affects large joints like the hip or knee and small joints in the fingers. It is so common that nearly everyone past the age of 30 has some kind of osteoarthritis evident on X-rays.

### What are ligaments?

Ligaments are the bands of strong, fibrous tissue that connect bone to bone. In joints, ligaments provide strength and stability.

### What is the connection between osteoarthritis and ligament pain?

At Piedmont Physical Medicine & Rehabilitation, Dr. Robert G. Schwartz compares the joint to a hinge. In osteoarthritis, the hinge's pivoting surfaces become irregular, impeding its normal function. The ligaments are effectively the pin that holds the hinge together and provides its stability.

Ultimately, anything that affects the function of the hinge, or joint, can cause joint pain. This includes bone-on-bone irregularity, weak ligaments, irritated nerves, lack of blood flow and tight muscles. The connection is that treating these disorders often relieves the joint pain.

### How is joint pain diagnosed?

It's no secret: Joint pain is a signal that something is wrong. It could be the result of a spasm, a tight or weak ligament, roughness resulting from bone-on-bone contact or one

of several other possibilities. Dr. Schwartz may use musculoskeletal ultrasound, additional imaging, EMG testing, computerized gait analysis, Doppler analysis of blood flow or other diagnostic studies in combination with a complete medical history and physical examination to pinpoint the cause of the pain.

### How is joint pain treated?

By treating all the structures that surround or affect the joint, lubricating the inside of the joint and helping to restore cartilage integrity, Dr. Schwartz is able to help the joint return to normal. Proper function, in turn, provides relief and prevents further deterioration of the joint. Dr. Schwartz uses several methods to achieve this, including injections of special medications that regrow (or proliferate) ligaments.

Much like a scab that heals, injections of special medications can stimulate (proliferate) the body's own natural wound-healing process to create new ligament. After three injections done at approximately two-week intervals, the ligament is actually 40 percent thicker, and six out of ten say they are at least two-thirds improved or more.

In addition to repairing weak ligament, reeducation of inhibited muscle, stretching what is tight and strengthening what is weak reduces load on the joint by 20 percent. Treating missed nerve damage can reduce muscle spasm further, and improving blood flow promotes endurance while providing oxygen needed for healing.

The results of computerized gait analysis can be used to unload painful joints and slow down the constant wear and tear from repetitive use. New electromedical devices can stimulate cartilage regeneration, and hyaluronidase injections artificially lubricate the joint.

In addition, percutaneous tenotomy is a relatively painless technique that can be used to repair tendons without ever having to go to the operating room. In summary, Dr. Schwartz will think outside of the box in order to keep you pain-free and your joints in motion.

**Resolving even the most complex pain with innovative solutions and proven leadership.**



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