



Fix what hurts. Reduce pain and improve performance.

What are sports injuries?

Sports injuries are most often due to tendinitis, osteoarthritis, sprained ligaments and strained muscles. Over use, repetitive stress and improper warm up or cool down all contribute.

Loss of function, reduced performance and pain can result. For the professional or amateur athlete these injuries can cause years of pain, discomfort and loss of quality of life.

What are tendons and ligaments?

Tendons connect muscle to bone. 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 tendinitis 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 function. Ligaments are the pin that hold the hinge together and tendons allow muscles to move the hinge.

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 each of these problems can relieve pain and improve function.

How are sports injuries diagnosed?

It's no secret: pain is a signal that something is wrong. It could be tendinitis, muscle 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 are sports injuries treated?

By treating the actual structure involved, and those that surround it, function can be restored. Stretching what is tight, re-educating what is inhibited and strengthening what is weak improves performance and prevents further deterioration. Dr. Schwartz uses several methods to achieve this, including injections of special medications that regrow (or proliferate) ligaments.

Much like a scab that heals skin, 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 better.

In addition to repairing weak ligament, percutaneous tenotomy is a relatively painless technique that can be used to repair tendons without ever having to go to the operating room. 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.

For those willing to go the extra mile, nutritional analysis and counseling can also have an important impact. Dr. Schwartz has a vast array of tools to diagnose your sports injury, relieve your pain, and improve your performance.

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



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