best practices

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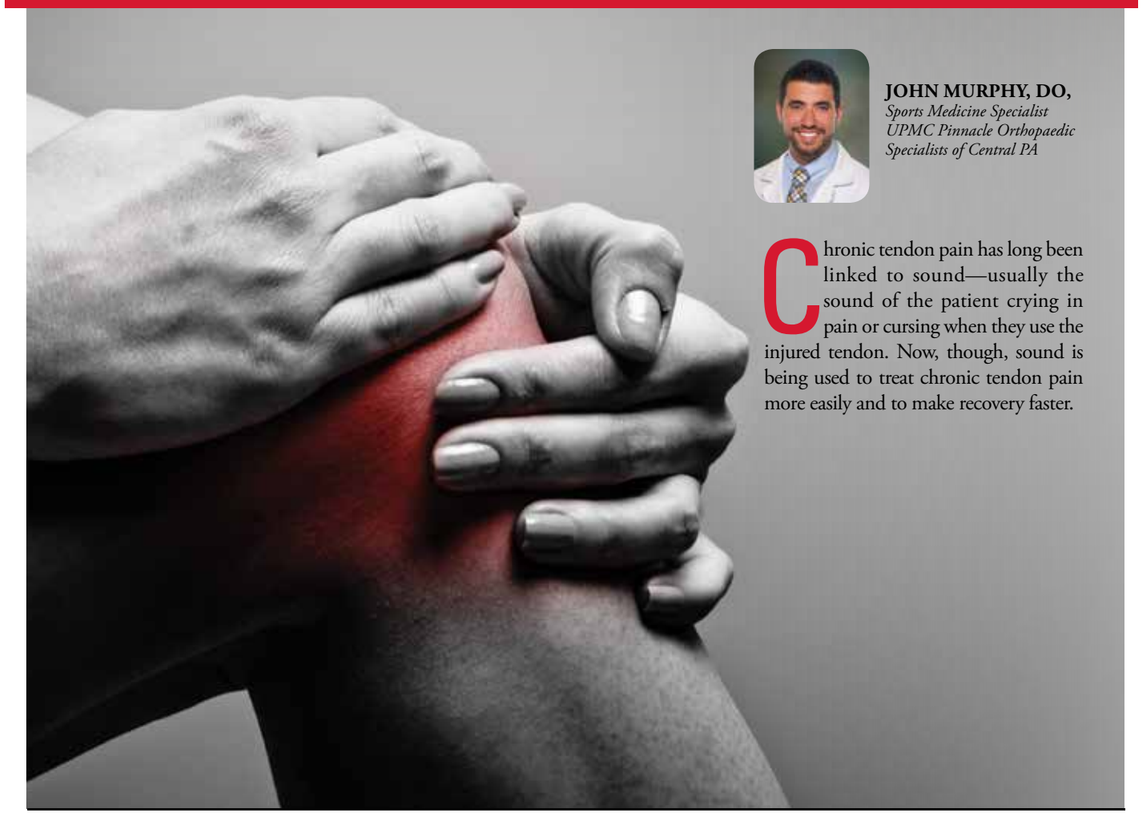
A SOUND WAY TO TREAT CHRONIC TENDON PAIN

USING ULTRASOUND



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Chronic tendon pain has long been linked to sound—usually the sound of the patient crying in pain or cursing when they use the injured tendon. Now, though, sound is being used to treat chronic tendon pain more easily and to make recovery faster.

Patients suffering from chronic tendon pain now have a minimally invasive treatment option that uses high-frequency sound waves—or ultrasounds—to remove damaged and scarred tissue that causes the tendon pain.

Prior to this procedure, called Tenex, patients who didn't respond to conservative therapy had to undergo invasive surgery with a long, debilitating recovery.

THE CAUSE OF TENDON PAIN

Tendons are the tough fibers that connect muscle to bone. Through overuse or injury, the tendon is damaged, often in the form of tiny tears. Over time, these tears multiply.

Most tendon injuries occur near joints, such as the shoulder, elbow, knee, and ankle, and are the result of gradual wear and tear to the tendon from overuse or aging.

Anyone can have a tendon injury. But people who make the same motions over and over in their jobs, sports, or daily activities are more likely to damage a tendon. Tennis or golfer's elbow or chronic runner's knee are common examples.

Tendinopathy, chronic tendon pain, is caused by the microtears in the tendon. When there is a tear, the tendon forms scar tissue, which in turn causes much of the pain that patients feel. This can include:

- Pain, stiffness, and loss of strength in the affected area.
- Sharp pain when the tendon is used.
- Pain and stiffness during the night or when patients get up in the morning.
- Tenderness or swelling in the affected area.
- A crunchy sound or feeling when using the tendon.

CONSERVATIVE TREATMENT

In most cases, patients can treat a tendon injury at home. Home treatment includes:

- Resting the painful area and avoiding any activity that makes the pain worse.
- Applying ice or cold packs for 10 to 15 minutes at a time, as often as two times an hour, for the first 72 hours.
- Taking over-the-counter pain relievers such as acetaminophen or NSAIDs (e.g., ibuprofen or naproxen).
- Doing gentle range-of-motion exercises and stretching to prevent stiffness.

As soon as patients start feeling better, they can return to their activities, but they should take it easy for a while. They should build up to their previous level slowly, and stop if it hurts. Warming up before you exercise and doing some gentle stretching afterward will help prevent future injury. Patients may also apply ice to prevent pain and swelling.

If these steps don't help, physical therapy may be needed. If the injury is severe or long-lasting, your doctor may have you use a splint, brace, or cast to hold the tendon still.

While these steps are generally effective, it may take weeks or months for a tendon injury to heal. It's important for patients to be patient and stay with the treatment plan. If they start using the injured tendon too soon, it can lead to more damage.

THE TENEX DIFFERENCE

In the past when conservative treatment didn't reduce patients' pain, the only option was an invasive surgical procedure to scrape out the scar tissue on the tendon. In addition to requiring more complicated surgery, this option required a long, debilitating recovery and lost work time.

The Tenex procedure is minimally invasive. It's done in one sitting—usually taking less than 20 minutes total—and patients go home with few restrictions in what they can do.

The Tenex procedure achieves these incredible outcomes through the use of ultrasound. It uses ultrasound imaging to view the affected area and to remove the damaged tissue that causes the pain. Removing the damaged tissue allows the tendon to heal properly and relieves the pain.

An ultrasound is sound waves with frequencies higher than the upper limit of human hearing. Basically, the sound vibrates at a rate so fast that our ears can't detect it.

Ultrasound has been used for a long time as an imaging tool to guide procedures. What's new in the Tenex device is the use of ultrasound as an energy source to power the pen-like device that cuts and removes scar tissue on the tendon.

The Tenex tool is shaped like a pen and contains two needles. The first needle, powered by an ultrasonic wave of energy, breaks up the scar tissue. Meanwhile, a saline flushing system inside the second needle vacuums the tissue debris.

The remarkable feature of the Tenex tool is that the ultrasonic energy breaks up diseased tendon without harming healthy tendon tissue. It focuses solely on the damaged and scarred tissue.

HOW THE TENEX PROCEDURE IS PERFORMED

The doctor will use ultrasound imaging to view the injured area and precisely identify the location of the damaged tendon.

The doctor will numb the area with a local anesthetic and then apply the Tenex ultrasonic tool.

Using ultrasonic energy, the tool safely breaks down and removes the damaged tissue, and the surrounding healthy tissue is left unharmed.

The total time of the treatment is minimal—often less than a half hour. Stitches are not required, so it just takes a small, adhesive bandage to cover the wound.

Patients may feel uncomfortable for a day or two, but they are encouraged to get moving again. Full recovery can be as early as six weeks.

This is a great, minimally invasive option for patients suffering from chronic tendon pain. It's a huge step forward from traditional surgical options which required a long, debilitating rehabilitation. Patients are encouraged to contact Orthopaedic Specialists of Central PA to talk about this innovative option. ■