

## **Hand Pain: Not necessarily carpal tunnel syndrome** **By Todd Loehrke, DPT, CMTPT**

There are many causes of burning, aching, or tingling hand pain other than carpal tunnel syndrome. Often, these other causes, even though they can be very treatable by non-surgical means, get misdiagnosed under the carpal tunnel syndrome label. In my practice, I have seen this lead to patient frustration, anxiety, and even unsuccessful surgeries. Many effective physical therapists and orthopedic surgeons screen for these other causes before requesting an MRI or EMG, thereby avoiding unnecessary, frustrating, and expensive testing.

Don't assume you have carpal tunnel syndrome if you have hand pain. The other causes are actually more common, but sometimes more mysterious—that is until they are accurately identified and properly treated.

The most common cause of mystery hand pain that I see in my clinic is neurogenic thoracic outlet syndrome. The site of pain or tingling is often the ring and small finger, but can extend up to the armpit or include the entire hand. This condition is typically related to the neck muscles, upper ribs, postural issues, and shoulder mechanics. It also has the potential to respond very quickly to physical therapy. In most cases the EMG studies are negative, even if the pain is severe.

Another frequent cause of hand pain is an irritated cervical nerve root where it enters the spine at a person's neck. Depending on which nerve root is compressed or irritated, the pain can appear anywhere in the hand. Many cases that I've seen involved sharp thumb pain due to a compressed sixth cervical nerve root. At times, there is arm and hand weakness, with or without hand pain, when the seventh cervical nerve root is compressed. This can occur quite subtly by sleeping in an awkward position, or with a sudden trauma such as a lifting or whiplash injury.

Other hand issues that arise can be due to specific activities. These include thumb and index finger pain caused by strong gripping or certain movements due to an irritated dorsal radial sensory nerve, identified more commonly in ballplayers. Another potential issue comes from pressure on or pounding with the side of the hand. This appears more commonly among long-distance bikers who rest on this part of their hand. Yet another scenario is due to an ulnar nerve irritation at the elbow aggravated by repetitive elbow movements, a snapping ulnar nerve, or from sleeping in a bent-elbow position.

No examination for hand pain would be complete without also screening the hand in the area of the pain for arthritis, tendonitis, tenosynovitis, fracture, joint instability, or other specific mechanical issues. Whatever the cause, your physical therapist is typically the most cost effective place to start investigating the mystery of your hand pain and getting an accurate diagnosis. Typically a specific diagnosis can be found and confirmed with clinical tests, avoiding other costly testing such as an MRI or EMG. And when findings indicate an issue that can be corrected with therapy—great! You are then able to understand your problem, heal your body, and get out

of pain—all while avoiding surgery, and/or referral through various medical professions trying to get the same, but much more expensive, diagnosis.

Additionally, at Orthopedic & Spine Therapy, our therapists are trained in differential diagnosis in order to also safely identify pain that is not musculoskeletal (or neural) in origin based on a thorough history and examination. In order to take the best care of our patients, when these other causes are suspected, they are promptly referred to their primary care provider (their physician) for specific evaluation of the underlying issue. Because of this, we are confident of our ability and the responsibility to be the initial point of contact for musculoskeletal issues, and are recognized as such by the majority of insurance plans that do not require a physician referral to begin a physical therapy treatment program.

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