

# Helping the Hand

Surgery offers patients a way out of carpal tunnel pain



After undergoing a carpal tunnel release procedure, Chris Reed's arm pain was immediately relieved. Carpal tunnel results from compression of the median nerve, one of the three major nerves that supply sensation and function to the hand.

Often, people with numbness and tingling in the hand may try to ignore their discomfort. All too soon, however, numbness and tingling may progress into swelling and pain, and work, family, and quality of life becomes negatively impacted. When the diagnosis is carpal tunnel, physicians at

Commonwealth Orthopaedics are poised to lend a helping hand.

Carpal tunnel results from compression of the median nerve, one of the three major nerves that supply sensation and function to the hand. This nerve travels through a "tunnel" in the wrist, a narrow passageway

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comprised of the transverse carpal ligament and the carpal bones at the base of the hand, as well as some tendons connected to the fingers and thumb.

Some people are more predisposed to getting carpal tunnel syndrome than others. Women are three times more likely to experience carpal tunnel than men. Other risk factors or indicators, according to Alexander Croog, MD, orthopaedic surgeon at Commonwealth Orthopaedics, are diabetes, rheumatoid arthritis or other inflammatory conditions, under-active thyroid or a previously broken wrist. Some studies have linked certain careers with carpal tunnel pain, such as those requiring constant typing or handling of vibrating tools, such as a jackhammer.

Diagnosing carpal tunnel syndrome often takes several steps. Many patients can be diagnosed from their medical history and a physical exam. "This is more typical for someone who has progressive symptoms, such as numbness and tingling in the hand, or numbness in the thumb, index finger, middle finger, or ring finger for a series of months," said Dr. Croog.

A nerve conduction study can confirm the diagnosis, said Sarah Pettrone, MD, who recently joined Commonwealth Orthopaedics after completing her hand-and-upper-extremity fellowship at the University of Washington in Seattle. During nerve conduction tests, a neurologist uses small, acupuncture sized needles to test how well a nerve conducts a signal.

After completing the tests, the patient must decide whether to wait or request a carpal tunnel release procedure. “You can try other options first, such as wearing a velcro brace that holds your wrist in a little bit of extension,” Pettrone said. Another option is non-steroidal anti-inflammatory medications (such as ibuprofen).

Several types of surgery are available at Commonwealth Orthopaedics. Dr. Croog

### After a carpal tunnel procedure, surgeons advise patients to return to normal activity as soon as possible.

performs a minimal-incision carpal tunnel release. For this technique, the incision, which is usually about three centimeters, is made on the palm, close to the wrist.

As Dr. Croog described the procedure, “The top of the tunnel closest to the skin

is cut, so the median nerve (the one that is aggravated) has more room. Carpal tunnel is a type of compressive nerve injury, so relieving the compression relieves the symptoms. Usually, when patients return for their first visit after a week and a half, they notice significant improvement.”

In addition, Dr. Pettrone practices endoscopic carpal tunnel release. “The incision is located more proximally in the wrist rather than over the palm,” she said. “I use a special instrument that includes a camera and a blade. The camera is inserted into the carpal tunnel, and then the ligament is released with the blade.” She said the rehabilitation time may be a bit faster and the scar somewhat less noticeable with this technique.

Surgeons advise patients to return to normal activity as soon as possible after carpal tunnel release surgery. “When the stitches come out, the patients have no limitations,” Dr. Croog said.



**Alexander Croog, MD,** earned his medical degree from the University of Virginia School of Medicine. He completed his residency in orthopaedic surgery at New York University Hospital for Joint Diseases.



**Sarah Pettrone, MD,** earned her medical degree from the University of Virginia School of Medicine in Charlottesville. She completed an orthopaedic surgery internship and residency at New York University Hospital for Joint Diseases, as well as a hand fellowship at the University of Washington in Seattle.

## Carpal Tunnel Surgery Works

During the summer, Chris Reed started to develop numbness and tingling in some of the fingers of his right hand. At first, he chalked it up to the more than average amount of typing he does in his job as a law librarian, using power tools, mowing the yard, and playing with his 2-year-old son, Owen. He later noticed some swelling in his palm and eventually felt pain radiating up his arm at night, depriving him of sleep. That was when he realized it was time to seek help.

After some rudimentary tests, his primary care doctor referred Reed to hand specialist Alexander Croog, MD. The swelling in Reed’s palm prompted Dr. Croog to quickly schedule an MRI to rule out such possibilities as a hand tumor. Dr. Croog then also referred him to a

neurologist for nerve tests and a rheumatologist to investigate other possible causes for the symptoms, such as diabetes. After examining the results, Dr. Croog recommended that Reed undergo carpal tunnel release procedure.

“My pain was immediately relieved after surgery,” said Reed. “With a small incision at the base of my palm; it seemed like I was in and out of surgery, with very little time spent in post-op,” he recalled. “To relieve the discomfort of the incision, I only took my prescribed pain medication for two days.”

The outpatient surgery took place on Thursday, and Reed returned to work on Monday. Ten days later, Dr. Croog removed the bandage and the stitches. Reed noted, “I was very surprised

that the scar was barely noticeable.”

Two months after surgery for his right hand, Reed had the same procedure on his left hand, which was starting to exhibit similar symptoms just before he had his first surgery.

He offered advice for people with carpal tunnel pain: “Do not fear that the surgery will put you out of commission for normal activities. Recovery is quick.” Recently, he took his own advice. “I installed the roof rack on my SUV, something I couldn’t have done last summer before the surgery!”