



Understanding Carpal Tunnel Syndrome

Have you ever woken up with a sensation of pins and needles in your fingers?

Do you find that you are dropping objects more frequently? If you answered yes to those questions, then you may be experiencing symptoms of carpal tunnel syndrome.

Carpal tunnel syndrome (CTS) often starts as a general sensation of aching or weakness throughout the wrist and hand and can lead to numbness and tingling into your fingers. An increase in symptoms can be experienced as the condition progresses and may start to have an impact on your daily activities. Evidence suggests that 3% of women and 2% of men will experience carpal tunnel symptoms in their lifetime and the average age of onset is 55 or older.

To begin, let's discuss the anatomy of the carpal tunnel. There is a small, internal space on the palm side of the wrist and this space is called the carpal tunnel. A ligament that runs across the wrist forms the top or roof of the carpal tunnel. The median nerve and several flexor tendons run through this tunnel. The median nerve is responsible for providing sensation to the thumb, index, middle, and half of the ring finger. Carpal tunnel syndrome is caused by excess pressure being applied to the median nerve at the wrist level. The extra pressure on the nerve can decrease the nerve's ability to send its signal to the fingers causing a sensation of pins and needles. You can think of the median nerve as a garden hose; when you step on a hose the flow of water is decreased and when the pressure is taken off, the water can flow freely. This is the same concept with the median nerve and the extra pressure that can occur in the carpal tunnel.

Signs and Symptoms

- ❖ Tingling/Numbness in the palm side of your thumb, index, middle, and ring fingers. You will not feel these symptoms in the small finger with carpal tunnel syndrome. This often occurs during prolonged gripping activities such as holding a phone or newspaper or can occur at night. Many people often wake up with the sensation of numbness in their hand and find themselves 'shaking out' their hand for relief.
- ❖ Weakness throughout the hand and fingers. People often report feeling clumsy or will frequently drop objects.
- ❖ Pain that radiates from the wrist down into the hand or travels up the forearm toward the shoulder.

Causes and Risk Factors

The exact cause of CTS is typically unknown. Compression or pressure on the median nerve can happen in several ways including:

- ❖ Repetitive use of hand and fingers
- ❖ Keeping the wrist in a bent position for a prolonged period of time
- ❖ Inflammation of the tendons that run through the carpal tunnel
- ❖ Water retention
- ❖ Pregnancy

Research has shown that conditions such as arthritis, wrist fractures, or dislocations may cause the carpal tunnel to narrow. According to the National Institute of Neurological Disorders and Stroke, individuals with metabolic conditions, such as diabetes, are at higher risk for CTS. Women are three times more likely to experience carpal tunnel syndrome symptoms than men and it rarely affects children. According to the American Society for Surgery of the

Hand, in severe cases of carpal tunnel syndrome, numbness can be permanent and there may be a loss in the muscle mass at the base of the thumb.

Treatment Options:

There are several treatment options for CTS including occupational therapy. An occupational therapist is a skilled health professional who will evaluate your condition and how the symptoms are impacting your ability to complete your daily activities. Some treatment options include:

- ❖ Wrist splinting to provide support and keep the wrist straight to reduce pressure being applied to the median nerve. Wrist splints are typically worn at night to bed to reduce symptoms that may interfere with sleep.
 - ❖ Activity modification techniques to continue to participate in daily and recreational activities without increasing CTS symptoms.
 - ❖ Stretching and strengthening exercises to help reduce pain and improve grip strength and function of the hand. An occupational therapist will be able to design and implement a treatment program to assist in alleviating your symptoms.
 - ❖ Corticosteroid injections, non-steroidal anti-inflammatory drugs, and use of vitamins such as B6, may also be used in conjunction with therapy to help reduce symptoms. If conservative treatment is not successful in alleviating symptoms, carpal tunnel surgery has proven successful in alleviating CTS symptoms.
- Carpal tunnel syndrome can have a significant impact on all aspects of your daily routine. Early diagnosis is important to prevent irreversible damage to the median



Patients at All Care Physical Therapy are fully evaluated then offered the best treatment option for their condition.

nerve and prevent you from participating in your daily activities. At All Care Physical Therapy, our Hand Therapist specializes in the treatment of carpal tunnel and other hand disorders. Contact your physician if you are experiencing these symptoms and ask if an Occupational Therapist at All Care can help.

Call 1-855-3ALLCARE.



The All-Care Story



Our founder, Michael Yorke earned a Master's degree in Physical Therapy from Hahnemann University in Philadelphia in 1999. After

working in the industry for a few years, Michael discussed the shortcomings of his experience with his parents, Jim and Joan Yorke. Together they recognized the need for a company that encourages an emotional as well as physical recovery for patients. All-Care was then founded in 2005 in Whiting, NJ. Due to the overwhelming patient satisfaction of the "All-Care Approach", we were able to open four new locations throughout Ocean County, NJ over the following five years. The success of our company has been built on our ability to provide the best rehabilitative care with a never ending pursuit of exceptional service.



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