

Carpal Tunnel Syndrome and It's Causes

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DESCRIPTION

The pressure on the median nerve causes carpal tunnel syndrome. On the palm side of the hand, the carpal tunnel is a tiny channel enclosed by bones and ligaments. When the median nerve is crushed, it can cause numbness, tingling, and weakness in the hand and arm. It occurs as a result of pressure on the median nerve, which spans the length of the arm, passes through the carpal tunnel in the wrist, and terminates in the hand. The thumb's movement and sensation, as well as the movement of all the fingers, are controlled by the median.

Anatomy

The carpal tunnel is a tiny, one-inch-wide channel in the wrist. Carpal bones, which are little wrist bones, construct the tunnel's floor and sides. The transverse carpal ligament, a strong band of connective tissue, forms the tunnel's roof. The carpal tunnel has little capacity to flex or grow in size since these boundaries are so stiff. The median nerve is one of the most important nerves in the hand. It starts as a group of nerve roots in the neck that eventually combine to produce a single nerve in the arm. The median nerve runs down the upper arm, across the elbow, through the forearm, and then through the carpal tunnel at the wrist to reach the hand and fingers. Along the route, it splits into multiple smaller nerves, especially as it reaches the palm. Feeling is possible in the thumb, index finger, middle finger, and half of the ring finger thanks to these nerves (the thumb side). The muscles at the base of the thumb are likewise controlled by the median nerve. The nerve and the nine tendons that bend the fingers and thumb both pass through the carpal tunnel. Because they flex the fingers and thumb, these tendons are known as flexor tendons.

Causes

Many individuals have no idea what caused their carpal tunnel syndrome. It could be caused by: Repetitive actions, such as

typing, or any repetitive wrist movements. This is especially true for activities that need a person's hands to be lower than their wrists. Hypothyroidism, obesity, rheumatoid arthritis, and diabetes, as well as pregnancy. Other variables that can cause carpal tunnel syndrome includes:

Heredity: This is most certainly a significant factor. Some people's carpal tunnels are inherently narrower, while others have anatomic abnormalities that alter the amount of space available for the nerve and these characteristics can run in families.

Repetitive hand motions or activities: Over time, repeating the same hand and wrist motions or activities can exacerbate the tendons in the wrist, creating swelling and pressure on the nerve. Hand and wrist position: Activities that require a lot of flexion or extension of the hand and wrist for a long time can put a lot of strain on the nerves. Diabetes, rheumatoid arthritis, and thyroid gland imbalance are some of the health disorders linked to carpal tunnel syndrome.

Nerve-damaging conditions: Nerve injury, especially damage to the median nerve, is more likely in several chronic conditions, such as diabetes.

Rheumatoid Arthritis (RA): The lining around the tendons in the wrist can be affected by rheumatoid arthritis and other inflammatory disorders, putting pressure on the median nerve.

Medications: Carpal tunnel syndrome has been linked in certain studies to the usage of anastrozole (Arimidex), a medicine used to treat breast cancer.

Obesity: It is linked to a higher incidence of carpal tunnel syndrome.

Changes in body fluid: Fluid retention can cause irritation to the median nerve by increasing pressure within the carpal tunnel. During pregnancy and menopause, this is a common occurrence. Carpal tunnel syndrome caused by pregnancy usually improves on its own once the baby is born.

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