



CARPAL TUNNEL SYNDROME

Carpal tunnel syndrome is a painful, progressive condition resulting from nerve compression, near the wrist. The median nerve, a key hand nerve responsible for sensation on the palm side of the fingers and thumb, can become constricted or pressed as it passes through the carpal tunnel, at the wrist joint. In addition to the nerve, the rigid tunnel structure houses tendons, which can thicken and narrow the passageway. Carpal tunnel syndrome symptoms appear when the median nerve is impinged and squeezed in the constricted tunnel. Numbness, weakness and pain commonly accompany the syndrome.

Cause of Carpal Tunnel Syndrome

In most cases of carpal tunnel syndrome, the median nerve is healthy, before the condition sets-in. A combination of factors can increase pressure on the nerve, leading to carpal tunnel syndrome. The following may contribute to the syndrome:

- Genetics– Some people suffering from carpal tunnel syndrome may have congenital predisposition for developing the condition. In these cases, the tunnel is naturally narrow, compressing the median nerve as it passes through the wrist.
- Trauma – Athletic injuries may cause or contribute to carpal tunnel syndrome. Sprains and fractures accompanied by swelling, in particular, increase risk for developing carpal tunnel constriction.
- Presence of Arthritis – Arthritis in the hand or wrist may lead to carpal tunnel syndrome.
- Repetitious Activities – Although more research is needed to establish causes, certain job-related activities, such as repetitive keyboarding and operating hand tools, may be linked to the onset of carpal tunnel syndrome.
- Sex – Women are more likely to experience carpal tunnel syndrome than their male counterparts. The increased prevalence may be tied to the smaller anatomy of women’s hands, causing more frequent constriction at the wrist.

Description of Carpal Tunnel Syndrome

Under normal circumstances, the median nerve passes through the carpal tunnel, without incident. The tunnel, located near the base of the wrist, sometimes narrows, as a result of inflammation or injury. Carpal tunnel syndrome symptoms appear when the median nerve becomes constricted as it passes through the opening.

Symptoms of Carpal Tunnel Syndrome

The following symptoms may indicate the presence of carpal tunnel syndrome:

- Numbness, tingling, or shock sensations at the thumb, index, middle, and half of the ring finger
- An electric shock-like feeling mostly in thumb, index, and long fingers
- Strange sensations and pain traveling up arm toward shoulder
- Symptoms usually begin gradually and may become increasingly more constant
- Symptoms at night are common, may disrupt sleep
- Feeling of clumsiness or weakness
- Muscles at base of thumb may become visibly smaller in severe cases

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