

Carpal tunnel syndrome is not just an office workers' condition

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Credit: Henry Ford Health System

Researchers at Henry Ford Health System have found that workers in construction and other manufacturing jobs are more susceptible for developing carpal tunnel syndrome than those who work in office jobs.

In a [retrospective study](#) published in the *Journal of Occupational and Environmental Medicine*, researchers report that manual labor jobs that require lifting, gripping and forceful wrist motion contribute to higher rates of [carpal tunnel syndrome](#).

Injuries related to carpal [tunnel](#) have steadily declined from 1.3 million in 2003 to 900,380 in 2018, according to the most recent figures compiled by the U.S. Department of Labor. However, Henry Ford researchers, seeking to clarify conflicting information in previous research studies, found that injuries in labor industry jobs still outpace injuries associated with office jobs.

"This study is an important reminder that carpal tunnel is a primary contributor to hand and upper extremity pain in both the clerical and manufacturing work places, and that ergonomic

conditions for workers in both industries should be equally considered," said Charles Day, M.D., Executive Vice Chair and Chief of Hand & Upper Extremity Surgery of Henry Ford's Department of Orthopedic Surgery and the study's senior investigator.

Dr. Day typically consults 10-15 CTS patients and performs 4-5 minimally invasive endoscopic carpal tunnel surgeries each week as part of Henry Ford's Hand and Wrist Care team.

It's estimated that when [healthcare costs](#), reduced productivity, missed work and the potential for lost income due to changing careers are considered, the typical carpal tunnel syndrome case may have an overall cost on society of between \$47,000 and \$119,000.

The costs to employers, workers, and insurance companies from carpal tunnel and other ergonomic workplace injuries can rack into the billions. Costs for carpal tunnel medical care are estimated to be more than \$2 billion annually in the United States, primarily from surgery and nonmedical costs that include mental or psychological health treatment and loss of earnings and productivity.

Dr. Day said a large randomized study of manual labor and office jobs is needed to better assess the association with carpal tunnel, which causes swelling of the ligaments and bones in the wrist, leading to nerve compression. Common symptoms range from mild occasional numbness in the fingers to hand weakness, loss of feeling extreme night pain and loss of hand function.

Workers at risk for carpal tunnel are those who do [jobs](#) that involve repetitive finger use. Motions that can place people at risk of developing carpal tunnel syndrome include:

- High-force hammering
- Long-term use

- Extreme wrist motions
- Vibration

While carpal tunnel is one of the most-commonly reported occupational injuries, there are other potential causes or associations for this condition including diabetes, thyroid dysfunction, fluid retention from pregnancy or menopause, autoimmune disorders such as rheumatoid arthritis, fractures or trauma to the wrist, and many other factors.

Dr. Day's recommendation for reducing your risk for developing CTS or worsening existing symptoms is to avoid repetitive motion like lifting, grasping, holding a vibration tool, or typing on a keyboard.

Carpal tunnel surgery is recommended when it does not respond to non-surgical treatments or becomes severe. The surgery enlarges the size of the tunnel which decreases the pressure on the nerves and tendons that pass through the space. This is done by cutting or "releasing" the ligament known as the transverse carpal ligament that covers the [carpal tunnel](#) at the base of the palm.

More information: Eric B. Battista et al, Manufacturing Workers Have a Higher Incidence of Carpal Tunnel Syndrome, *Journal of Occupational & Environmental Medicine* (2020). [DOI: 10.1097/JOM.0000000000002122](#)

Provided by Henry Ford Health System

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