



WORLD
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HEALTH REGISTRY

Carpal Tunnel Syndrome Linked to Cleanup Work at the World Trade Center Disaster Site

The collapse of the World Trade Center (WTC) on September 11, 2001, required extensive cleanup. Rescue and recovery workers needed to perform repetitive movements and heavy lifting and operate equipment, which can increase the risk of carpal tunnel syndrome (CTS).

What Is CTS?



CTS is a nerve condition caused by pressure on the median nerve in the wrist. The median nerve controls feeling and movement in the thumb, the index finger, the middle finger, and part of the ring finger. CTS can be caused by repetitive hand or wrist movements, forceful gripping, vibration, or prolonged uncomfortable wrist positions.

Symptoms of CTS include:

- Numbness or tingling in the thumb, index finger, or middle finger
- Hand or wrist pain, especially at night
- Weakness or clumsiness when gripping objects
- Dropping things or difficulty with fine motor tasks (such as writing or using utensils)

Symptoms often start gradually and may worsen without treatment.

What Did We Learn?

Studies show that CTS is linked to high-impact and highly repetitive tasks, which may include actions performed by rescue and recovery workers at the WTC site. Exposure to toxins at the WTC site or the WTC dust cloud is another possible risk factor of CTS. Our research showed that higher exposure to the WTC dust cloud was significantly linked to CTS symptoms.

8%

of people exposed to the WTC dust cloud
met the clinical definition of CTS.

This is higher than the rate in the general population, which is between 1% and 5%.

Why Does This Matter?

CTS can interfere with daily activities such as typing, cooking, and dressing. Early recognition and treatment can reduce pain, prevent long-term nerve damage, and help people stay active at work and home.

What Should I Do?

If you worked at or near or lived near the WTC site on 9/11, it is important to:



1. **Be aware of symptoms** such as numbness, tingling, or weakness in the hands.



2. **Talk to your healthcare provider if you have symptoms.** Tell them about your symptoms and any repetitive hand or wrist activities you do at work or at home. Early care can make a big difference.



3. **Follow treatment recommendations.** This may include wrist splints, activity changes, physical therapy, or medication. In severe cases, surgery might be needed.



To learn about other 9/11-related physical and mental health conditions, visit nyc.gov/911health/materials.



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For questions about the WTC Health Registry, email wtchr@health.nyc.gov.