

Carpal Tunnel Syndrome May Triple Your Risk of Developing Stiff Heart Syndrome

By [Alyssa Hui](#)

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Key Takeaways

A recent study found people with carpal tunnel syndrome tend to develop cardiac amyloidosis, also known as “stiff heart syndrome,” about 10 to 15 years later.

- Experts say the presence of carpal tunnel syndrome may be an early warning sign for cardiac amyloidosis, as amyloid deposits can affect both the wrist’s connective tissue and the heart.
- Patients with carpal tunnel syndrome, including those with additional risk factors, should talk with their healthcare providers about potential cardiac amyloidosis and screening methods.

According to a recent study, [carpal tunnel syndrome](#) might be an early sign of transthyretin amyloid cardiomyopathy (ATTR-CM), a type of [cardiac amyloidosis](#) known as “stiff heart syndrome.”

The research, published in *Mayo Clinic Proceedings*, found that patients with carpal tunnel syndrome had a higher prevalence of amyloid deposits in their tissue. The link was especially true for people having [carpal tunnel release surgery](#).¹

As a result, people with carpal tunnel have three times the risk of developing amyloidosis compared to those without carpal tunnel syndrome. They also have a 13% greater risk of heart failure.

“This link is crucial, as it suggests that carpal tunnel syndrome could serve as an early warning sign for cardiac amyloidosis, potentially allowing for earlier diagnosis and intervention to prevent severe cardiac complications,” [Pankaj Arora, MD](#), the senior author of the study and an associate professor of medicine in the [Division of Cardiovascular Disease](#) at the University of Alabama at Birmingham, told Verywell.

Here’s what experts want you to know about protecting your joints and heart if you have carpal tunnel syndrome.

[Carpal Tunnel vs. Arthritis: Differences, Symptoms, and Causes](#)

When Amyloidosis Presents in the Wrist

[Carpal tunnel syndrome](#) is when the median nerve in the wrist gets compressed or squeezed, leading to numbness, tingling, and weakness in the hand, [David Majure, MD, MPH](#), medical director of the Heart Transplant Service at NewYork-Presbyterian/Weill Cornell Medical Center and an assistant professor of medicine at Weill Cornell Medical College, told Verywell.²

[Amyloidosis](#) is a diverse group of disorders where abnormal proteins are deposited in places where they shouldn't be, including the gut, skin, and spine. Another spot? The carpal tunnel.

“When it is deposited into heart muscle, it can lead to cardiac amyloidosis,” said Majure. When this happens, abnormal proteins (amyloids) build up in the heart tissue, leading to dysfunction.³ Essentially, the heart gets stiff, and blood can no longer flow freely into its pumping chambers.

“As more and more amyloid proteins are deposited, the pressures within the heart become abnormally high, the lungs are unable to easily drain, and the heart is unable to pump blood efficiently,” said Majure. People may have symptoms like shortness of breath, fatigue, and fluid retention. In serious cases, it can lead to an early death.

[Everything to Know About Amyloidosis Symptoms](#)

How Carpal Tunnel Acts as a ‘Warning’

Carpal tunnel syndrome might be an early warning sign of cardiac amyloidosis because both conditions involve amyloid deposits, which are clumps of abnormal proteins that build up in organs and tissues throughout the body, [Sandra Chaparro, MD](#), medical director of the Advanced Heart Failure program at Miami Cardiac & Vascular Institute, part of Baptist Health South Florida, told Verywell.

“The explanation for this link lies in the systemic nature of amyloidosis, where amyloid proteins can affect various organs including nerves in the hand and heart tissues,” said Chaparro.

Arora added that the presence of carpal tunnel syndrome could signal a person's risk of developing cardiac amyloidosis because amyloid deposits can affect both the wrist's connective tissue and the heart.

Amyloids can build up in the tissue around the wrist, which is a “hallmark of carpal tunnel syndrome,” according to Arora. These deposits can also affect the heart tissue, but carpal tunnel symptoms often show up due to the fairly confined space in the wrist.

It’s important to note that carpal tunnel syndrome can be caused by many conditions.² While amyloidosis is “likely a less common cause of carpal tunnel syndrome,” the risk of amyloidosis causing carpal tunnel syndrome is not well established, Majure said.

[Hereditary ATTR \(hATTR\) Amyloidosis Prognosis](#)

Who Gets Carpel Tunnel and Stiff Heart Syndrome?

Although carpal tunnel syndrome is common in the general population, affecting up to 10 million people in the U.S., not everyone with carpal tunnel syndrome is also at risk for cardiac amyloidosis, Arora said.⁴ However, research suggests that people with the transthyretin (TTR) mutation are at an increased risk.⁵

The TTR mutation affects the gene that makes transthyretin (a protein that’s responsible for transporting thyroid hormones and vitamin A), causing it to fold improperly and create amyloid deposits, according to Chaparro. The misfolding leads to the formation of amyloid deposits in various tissues, including the heart. Over time, the deposits can affect heart function, potentially leading to cardiac amyloidosis.⁶

“Genetic testing can determine if someone has this mutation, which increases the risk of developing familial amyloidosis [polyneuropathy](#) (FAP) and cardiac amyloidosis,” said Chaparro.⁷

[Coping with a Diagnosis of hATTR](#)

Should You Worry About Your Heart If You Have Carpel Tunnel?

Having carpal tunnel syndrome alone doesn’t necessarily mean you need to worry about your heart health, according to Arora. However, if you have carpal tunnel syndrome, it won’t hurt to be aware of the potential link to cardiac amyloidosis, especially if you have other risk factors or a family history of amyloidosis.

Chaparro added that people with carpal tunnel syndrome should monitor for signs and symptoms and bring up any concerns with a healthcare provider.

“Testing should be considered in patients with carpal tunnel syndrome, especially if there are additional risk factors or symptoms suggestive of systemic amyloidosis,” said Chaparro. “Providers may consider a proactive approach by discussing cardiac screening when appropriate.”

Patients who have carpal tunnel syndrome in both wrists (bilateral), are 50 years and older, and have a family history of heart disease or symptoms of heart failure would benefit from a more proactive approach. Arora said that “the *Mayo Clinic Proceedings* [study] suggests screening these high-risk groups for ATTR cardiac amyloidosis to ensure early diagnosis and treatment.”

[How Long Can You Live With hATTR?](#)

Can You Be Tested for Stiff Heart Syndrome?

If you have carpal tunnel syndrome and you’re not sure about your risk for stiff heart syndrome, talking to your provider is the first step to figuring out if more testing would be helpful.

“Screening for underlying conditions like TTR-related amyloidosis may be considered in specific cases,” said Chaparro.

Both Chaparro and Arora also suggest taking preventative measures, like managing any underlying health conditions, scheduling regular follow-ups with your provider, keeping an eye out for any cardiac symptoms, and maintaining your overall health.

Amyloidosis can lead to heart disease, but there are treatments available when it’s diagnosed early, said Majure. Since carpal tunnel syndrome is typically [diagnosed](#) before cardiac amyloidosis, Majure added that it’s “important to discuss with your doctor the possibility of amyloid as a cause of carpal tunnel syndrome.”

Your provider may ask you questions about your family history to determine if additional testing is needed. This might include an electrocardiogram, echocardiogram, or a special test called a pyrophosphate scan, which can detect amyloid deposits in the heart.

Majure added that genetic testing may be considered in specific cases, but that step is typically done only after your provider has made the diagnosis or if you have a close family member who has already been diagnosed with a mutation.

For more information :

Shetty NS, Pampana A, Patel N, et al. [Carpal tunnel syndrome and transthyretin amyloidosis in the All of Us research program](#). *Mayo Clin Proc*. 2024;99(7):1101-1111. doi:10.1016/j.mayocp.2023.11.016