

What Is Small Fiber Neuropathy?

[Symptoms](#) | [Causes](#) | [Risk factors](#) | [Diagnosis](#) | [Treatment](#) | [Outlook](#) | [Q&A](#)








Medically reviewed by [Deborah Weatherspoon, PhD, RN, CRNA](#) on January 4, 2018 —
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Overview

Small fiber neuropathy occurs when the small fibers of the peripheral nervous system are damaged. Small fibers in the skin relay sensory information about pain and temperature. In the organs, these small fibers regulate automatic functions such as heart rate and breathing.

A diagnosis of small fiber neuropathy can be a sign of an underlying health condition, such as [diabetes](#). Often, though, no underlying cause is identified.

 This condition causes sensory symptoms such as pain, burning, and tingling. These symptoms often start in the feet and progress up the rest of the body. They may become more severe over time.

    Small fiber neuropathy is a type of [peripheral neuropathy](#). Peripheral neuropathies affect the peripheral nervous system. This includes the nerves outside of the brain and spinal cord. With small fiber neuropathy, the narrow nerve fibers of the peripheral nervous system are affected.

Symptoms

Symptoms of small fiber neuropathy can vary. Pain is the most common symptom. Other symptoms include sensations, such as:

- burning, tingling, or prickling ([paresthesia](#))
- short bursts of pain
- loss of sensation

Some sensory symptoms can be caused by external triggers. For instance, some people might experience foot pain when wearing socks or touching bedsheets.

Symptoms can be mild or severe, though early symptoms are often mild. Small fiber neuropathy tends to affect the feet first and progress upward. This is known as a “stocking-and-glove” distribution. At later stages, this condition may affect the hands.

In some cases, small fiber neuropathy disrupts autonomic functions. Autonomic functions are things your body does automatically, such as regulating digestion, blood pressure, and urinary function.

When autonomic nerve fibers are affected, symptoms can include:

- constipation
- difficulty sweating

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Causes

Small fiber neuropathy can be the first sign of an underlying condition, such as diabetes. Other conditions that may cause small fiber neuropathy include:

- endocrine and [metabolic disorders](#)
- [hypothyroidism](#)
- [metabolic syndrome](#)
- hereditary diseases
- [Fabry disease](#)
- hereditary [amyloidosis](#)
- hereditary sensory autonomic neuropathy
- Tangier disease
- immune system disorders
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- infectious diseases
- [hepatitis C](#)
- [HIV](#)
- [Lyme disease](#)

Other causes may include:

- certain medications, such as [chemotherapy](#) drugs
- [vitamin B-12 deficiencies](#)
- [alcoholism](#)

An underlying cause isn't always found. In these cases, small fiber neuropathy is considered [idiopathic](#).

Risk factors

Having one or more of the conditions listed above may put you at an increased risk of developing small fiber neuropathy.

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Studies have also shown that people with idiopathic small fiber neuropathy have a higher prevalence of impaired [glucose tolerance](#) than the general population. Impaired glucose tolerance is associated with [prediabetes](#). Small fiber neuropathy may be one of the earliest signs of prediabetes.

Age is another risk factor. Small fiber neuropathy is [more commonly seen](#) in people over the age of 65 than in younger individuals. It may also be more common among men.

Diagnosis

Doctors use a variety of different evaluations to diagnose this condition. These may include:

Medical history

Your doctor will ask you about your symptoms, medical history, and family history. This can help them identify diagnosed or undiagnosed conditions that might be contributing to your symptoms.

Nerve conduction test and electromyography



Your doctor might recommend a [nerve conduction test](#) along with an [electromyography](#). These two tests can be used to rule out large fiber peripheral neuropathies, which can cause similar symptoms. When the results of these tests are normal, other tests are needed to assess small fiber damage.

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Skin biopsy

Skin [biopsies](#) are the most effective way to diagnose small fiber neuropathy. They're only mildly invasive.

During the procedure, the physician will remove several tiny skin samples, typically from the legs. The samples are then examined under a microscope for signs of small fiber neuropathy.

Reflex testing

Quantitative sudomotor axon reflex testing (QSART) tests autonomic function. It measures the amount of sweat produced when the skin is stimulated with a mild electrical shock. People who have small fiber neuropathy are more likely to have [low sweat output](#).

Other tests

Your doctor might use other tests to identify or rule out medical conditions related to your symptoms. Blood tests, genetic testing, and imaging tests are other common diagnostic tests.

Treatment

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When the cause hasn't been identified, treatment focuses on managing symptoms. Pain-related symptoms are typically treated with medication, including:

- antidepressants
- anticonvulsants
- corticosteroids
- topical pain creams
- analgesics

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Outlook

Most people with small fiber neuropathy experience a slow progression, with symptoms moving up the body from the feet. A diagnosis of small fiber neuropathy doesn't mean you'll be diagnosed with large fiber neuropathy later on.

Neuropathic pain can worsen over time. In other cases, it goes away on its own. In general, most people with small fiber neuropathy need to manage ongoing pain.

When the underlying cause is known, treating it can help resolve pain and improve the outlook in the long term.



Q&A: Small fiber neuropathy and disability

Q:

Is small fiber neuropathy considered a disability?

A:

Small fiber neuropathy varies widely from mildly annoying to extremely painful. If the neuropathy causes an excessive amount of pain and impairs your ability to work, you may be eligible for disability. For example, the Social Security Association (SSA) guidelines, Section 9.08 and 11.14, describe symptoms of neuropathy that may indicate eligibility for SSA disability payments. The symptoms listed include tremor, paralysis, involuntary movement in the limbs, or the loss of bodily movements that cause standing or walking limitations. Many factors may affect disability decisions and an advocate or attorney may best answer your questions.

– Deborah Weatherspoon, PhD, MSN, RN, CRNA

Answers represent the opinions of our medical experts. All content is strictly informational and should not be considered medical advice.

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