

[Health Topics](#)
[Drugs & Supplements](#)
[Videos & Cool Tools](#)
[ESPAÑOL](#)

Diabetes and nerve damage



Nerve damage that occurs in people with diabetes is called diabetic neuropathy. This condition is a complication of [diabetes](#).

Causes

In people with diabetes, the body's nerves can be damaged by decreased blood flow and a high [blood sugar level](#). This condition is more likely when blood sugar level is not well controlled.

About half of people with diabetes develop nerve damage. Symptoms often do not begin until many years after diabetes has been diagnosed. Some persons who have diabetes that develops slowly already have nerve damage when they are first diagnosed.

Symptoms

Symptoms often develop slowly over many years. The types of symptoms you have depend on the nerves that are affected.

When the nerves that control digestion are affected, you may have trouble digesting food. This can make your diabetes harder to control. Symptoms of digestion problems include:

- Feeling full after eating only a small amount of food
- [Heartburn](#) and bloating
- Nausea, constipation, or diarrhea
- Swallowing problems
- Throwing up undigested food a few hours after a meal

When nerves in the arms and legs are affected, symptoms often start in the toes and feet, and include tingling or burning, or deep aching pain. As the damage gets worse, you will likely lose feeling in your arms and legs.

Because of this, you may:

- Not notice when you step on something sharp
- Not know that you have a blister or small cut
- Not notice when your feet or hands touch something that is too hot or cold

When nerves in your heart and blood vessels are damaged, you may:

- Feel light-headed when you stand up (orthostatic [hypotension](#))
- Have a fast heart rate
- Not notice [angina](#), the chest pain that warns of heart disease and heart attack

Other symptoms of nerve damage are:

- Sexual problems, which cause erection problems in men and vaginal dryness or orgasm problems in women
- Not being able to tell when your blood sugar gets too low
- Bladder problems, which cause urine leakage or not being able to empty the bladder.
- Sweating too much, even when the temperature is cool, or at rest, or other unusual times

Exams and Tests

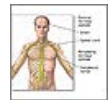
The health care provider will do a physical exam. The exam may find that you have the following:

- No or weak reflexes in the ankle
- Loss of feeling in the feet (this is checked with a brush-like instrument called a monofilament)
- Changes in the skin

MedlinePlus Topics

[Diabetic Nerve Problems](#)

Images


[Diabetes and nerve damage](#)

[Central nervous system](#)

Read More

[Diabetes](#)
[Erection problems](#)
[Glucose test - blood](#)
[Numbness and tingling](#)
[Peripheral](#)

Patient Instructions

[Diabetes - foot ulcers](#)
[Diabetes - what to ask your doctor - type 2](#)

- Loss of the ability to sense movement of your joints (proprioception)
- Drop in blood pressure when you stand up after sitting or lying down

Tests that may be ordered include:

- [Electromyogram \(EMG\)](#), a recording of electrical activity in muscles
- [Nerve conduction velocity tests \(NCV\)](#), a recording of the speed at which signals travel along nerves
- Gastric emptying study to check how fast food leaves the stomach and enters the small intestine
- Tilt table study to check if the nervous system is properly controlling blood pressure

Treatment

Follow your health care provider's advice on how to slow diabetic nerve damage.

Control your blood sugar (glucose) level by:

- Eating healthy foods
- Getting regular exercise
- Checking it as often as instructed and keeping a record of your numbers so that you know the things that affect you level
- Taking medicine or insulin as instructed by your health care provider

To treat the symptoms of nerve damage, your health care provider may prescribe medicines to treat:

- Pain in your feet, legs, or arms
- Nausea, vomiting or other digestion problems
- Bladder problems
- Erection problems or vaginal dryness

When you have nerve damage in your feet, the feeling in your feet can be reduced. You can even have no feeling at all. As a result, your feet may not heal well if they are injured. [Caring for your feet](#) can prevent minor problems from becoming so serious that you end up in the hospital.

Caring for your feet includes:

- Checking and caring for your feet every day
- Getting a foot exam each time you see your health care provider
- Wearing the right kind of socks and shoes (ask your health care provider about this)

Outlook (Prognosis)

Treatment relieves pain and controls some symptoms.

Other problems that may develop:

- Bladder or kidney infection
- [Diabetes foot ulcers](#)
- Nerve damage that hides the symptoms of chest pain (angina) that warns of heart disease and a heart attack
- Loss of a toe, foot or leg

When to Contact a Medical Professional

Call your health care provider if you develop any symptoms of diabetic neuropathy.

Alternative Names

Diabetic neuropathy; Diabetes - neuropathy

References

American Diabetes Association. Standards of medical care in diabetes -- 2013. *Diabetes Care*. 2013;36 Suppl 1:S11-S66.

Bril V, England J, Franklin GM, et al. Evidence-based guideline: Treatment of painful diabetic neuropathy: report of the American Academy of Neurology, the American Association of Neuromuscular and Electrodiagnostic Medicine, and the American Academy of Physical Medicine and Rehabilitation. *Neurology*. 2011;76:1758-1765.

Update Date: 5/28/2013

Updated by: Brent Wisse, MD, Associate Professor of Medicine, Division of Metabolism, Endocrinology &

Nutrition, University of Washington School of Medicine. Also reviewed by David Zieve, MD, MHA, Bethanne Black, and the A.D.A.M. Editorial team.

[Browse the Encyclopedia](#)



A.D.A.M., Inc. is accredited by URAC, also known as the American Accreditation HealthCare Commission (www.urac.org). URAC's [accreditation program](#) is an independent audit to verify that A.D.A.M. follows rigorous standards of quality and accountability. A.D.A.M. is among the first to achieve this important distinction for online health information and services. Learn more about A.D.A.M.'s [editorial policy](#), [editorial process](#) and [privacy policy](#). A.D.A.M. is also a founding member of Hi-Ethics and subscribes to the principles of the Health on the Net Foundation (www.hon.ch).

The information provided herein should not be used during any medical emergency or for the diagnosis or treatment of any medical condition. A licensed physician should be consulted for diagnosis and treatment of any and all medical conditions. Call 911 for all medical emergencies. Links to other sites are provided for information only -- they do not constitute endorsements of those other sites. Copyright 1997-2014, A.D.A.M., Inc. Duplication for commercial use must be authorized in writing by ADAM Health Solutions.



 [Mobile version](#)  [Get email updates](#)  [Subscribe to RSS](#)  [Follow us on Twitter](#)

[Disclaimers](#) [Copyright](#) [Privacy](#) [Accessibility](#) [Quality Guidelines](#) [Viewers & Players](#)

[U.S. National Library of Medicine](#) 8600 Rockville Pike, Bethesda, MD 20894 [U.S. Department of Health and Human Services](#) [National Institutes of Health](#)

Page last updated: 26 February 2014