



# Diabetic Neuropathy

## WHAT IS DIABETIC NEUROPATHY?

Diabetic neuropathy is nerve damage from high blood glucose (sugar) levels in people with diabetes. Nerves throughout the body can suffer damage. People with poor glucose control and who have had diabetes for a long time are at highest risk for nerve damage.

## DID YOU KNOW?

**About 60 to 70 percent of people who have had diabetes for many years have some form of nerve damage, but not everyone has symptoms.**

## WHAT ARE THE TYPES AND SYMPTOMS OF DIABETIC NEUROPATHY?

The most common types of diabetic neuropathy are those that affect the limbs and those that affect organs and muscles inside the body.

The first type (called distal polyneuropathy or DPN) affects the sensitivity of your feet, legs, hands, and arms. It also can affect the movement of your limbs. Symptoms of DPN include

- Pain, tingling, and burning
- Numbness and loss of feeling
- Muscle weakness
- Skin ulcers (open sores)

About half of people who have DPN might not have symptoms, except for losing feeling in their feet. Because of this feeling loss, they could injure their feet and not know it. Untreated foot injuries can lead to ulcers and infection and, sometimes, amputation.

The second type (called autonomic neuropathy) affects your urinary tract, digestive system, sex organs, sweat glands, eyes, and heart. Symptoms of autonomic neuropathy include

- Bladder problems (loss of bladder control, not being able to fully empty the bladder, frequent urinary tract infections)
- Digestive system problems (bloating, nausea, vomiting, diarrhea, constipation)
- Erectile dysfunction in men and sexual problems in women
- Too much or too little sweating
- Dizziness when you stand up

## HOW IS DIABETIC NEUROPATHY DIAGNOSED?

Your doctor will do a physical exam and ask about your symptoms. You should be checked once a year for DPN, or more often if you have foot problems. The doctor will check for loss of feeling in your feet by seeing whether you can feel light touch, pinpricks, and vibrations from a tuning fork. You might have tests to see how well your nerves are working. Your doctor will also make sure you don't have other conditions, such as blood flow problems or a vitamin deficiency.

## WHEN TO SEE YOUR DOCTOR

See your doctor as soon as possible if you have

- Frequent numbness or pain in your feet, legs, hands, or arms
- An ulcer (sore) on your foot or leg that isn't healing
- A foot or leg infection
- Digestive problems
- Problems with urination or sexual function
- Dizziness when you stand

## WHAT TREATMENTS ARE AVAILABLE FOR DIABETIC NEUROPATHY?

Good blood glucose control (keeping blood glucose from being too high or too low) may prevent further nerve damage but usually can't reverse damage that's already happened. Your doctor may prescribe medicines for pain that occurs with some types of nerve damage, and suggest certain vitamins if needed.

## HOW CAN YOU PREVENT PROBLEMS FROM DIABETIC NEUROPATHY?

The best way to prevent damage is to keep your blood glucose level under good control. You can do so by eating a healthy diet, exercising regularly, and reaching a healthy weight. Avoiding smoking and limiting alcoholic beverages can also help. Your doctor or diabetes educator can help you plan your healthy lifestyle.

You also can do a lot to prevent leg ulcers and amputations.

Protect your feet by

- Checking them every day
- Always wearing shoes (or slippers) and clean, dry socks
- Choosing shoes that are comfortable and fit well
- Seeing a podiatrist (foot doctor) for foot care if you need help

## TIPS FOR GOOD FOOT CARE

Wash and dry your feet and check them **every day**.

- Look for blisters, calluses, bruises, redness, swelling, cracked skin, sores, or cuts
- Cut your nails once a week or as needed.
- Put lotion on dry skin but not between your toes.

## Questions to ask your doctor

- Do I have nerve damage from diabetes?
- What kind of nerve damage do I have?
- Is the nerve damage permanent or temporary?
- Do I need treatment for my nerve damage?
- Should I see a podiatrist?
- Should I see a diabetes educator?

## RESOURCES

- Find-an-Endocrinologist: [www.hormone.org](http://www.hormone.org) or call 1-800-HORMONE (1-800-467-6663)
- Find a diabetes educator (American Association of Diabetes Educators): [www.diabeteseducator.org/DiabetesEducation/Find.html](http://www.diabeteseducator.org/DiabetesEducation/Find.html)
- Find a podiatrist (American Podiatric Medical Association): <http://iweb.apma.org/buyersguide/professionalsearch.aspx>
- Hormone Health Network diabetes information: [www.hormone.org/diabetes](http://www.hormone.org/diabetes)
- National Diabetes Information Clearinghouse (National Institutes of Health-NIH):  
— <http://diabetes.niddk.nih.gov/dm/pubs/neuropathies>  
— [http://diabetes.niddk.nih.gov/dm/pubs/complications\\_nerves/index.aspx](http://diabetes.niddk.nih.gov/dm/pubs/complications_nerves/index.aspx)
- National Diabetes Education Program (NIH): <http://ndep.nih.gov/publications/PublicationDetail.aspx?PubId=67&redirect=true>
- MedlinePlus (NIH): [www.nlm.nih.gov/medlineplus/diabeticnerveproblems.html](http://www.nlm.nih.gov/medlineplus/diabeticnerveproblems.html)
- The American Diabetes Association: [www.diabetes.org/living-with-diabetes/complications/neuropathy/](http://www.diabetes.org/living-with-diabetes/complications/neuropathy/)
- Mayo Clinic: [www.mayoclinic.com/health/diabetic-neuropathy/DS01045](http://www.mayoclinic.com/health/diabetic-neuropathy/DS01045)

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The Hormone Health Network offers free, online resources based on the most advanced clinical and scientific knowledge from The Endocrine Society ([www.endo-society.org](http://www.endo-society.org)). The Network's goal is to move patients from educated to engaged, from informed to active partners in their health care. This fact sheet is also available in Spanish at [www.hormone.org/Spanish](http://www.hormone.org/Spanish).

