

# Neuropathy

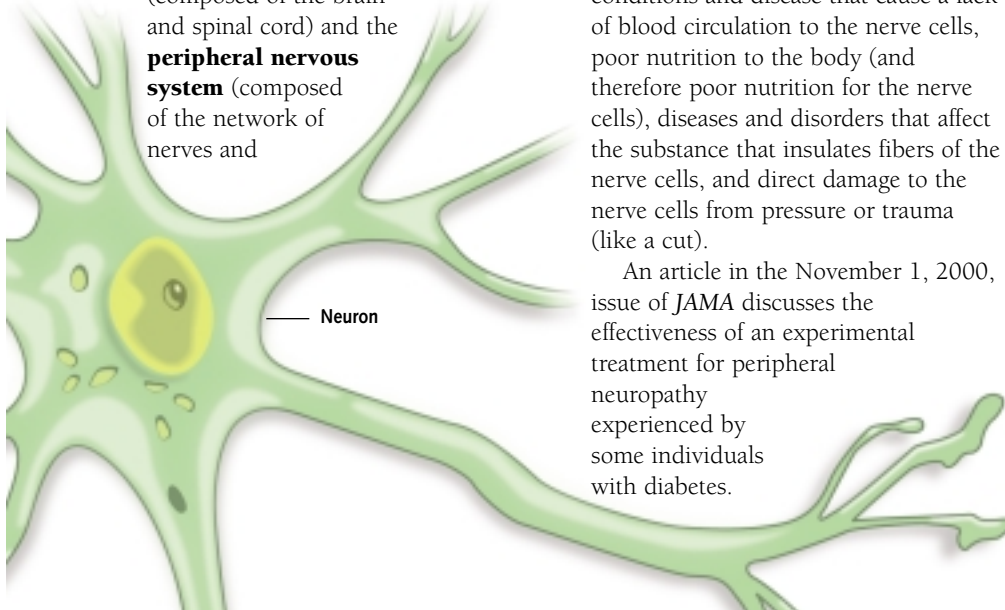
The nervous system is a vast and complex network of **neurons** (individual nerve cells) and **nerves** (bundles of nerve fibers from neurons) that provide information to the brain and communication from the brain and spinal cord (and within the brain) for normal functioning of the body.

The nervous system is often considered as 2 parts: the **central nervous system** (composed of the brain and spinal cord) and the **peripheral nervous system** (composed of the network of nerves and

neurons outside the central nervous system connected to the spinal cord). The peripheral nervous system is composed of **sensory nerve fibers** that communicate sensory information to the brain, like pain for example, and **motor nerve fibers** that send information to control muscles.

**Peripheral neuropathy** is damage or impairment of cells in the peripheral nervous system. The impairment or damage can be associated with conditions and disease that cause a lack of blood circulation to the nerve cells, poor nutrition to the body (and therefore poor nutrition for the nerve cells), diseases and disorders that affect the substance that insulates fibers of the nerve cells, and direct damage to the nerve cells from pressure or trauma (like a cut).

An article in the November 1, 2000, issue of *JAMA* discusses the effectiveness of an experimental treatment for peripheral neuropathy experienced by some individuals with diabetes.



## POSSIBLE CAUSES OF PERIPHERAL NEUROPATHY:

- Not having good control of your blood sugar levels when you have diabetes
- Excessive alcohol consumption
- Nutritional deficiencies or problems absorbing nutrients
- Infection
- Inflammation
- Poisoning, such as from overexposure to certain toxic chemicals (arsenic, mercury, or lead, for example)
- Prolonged pressure
- Abnormal growths, such as tumors, may also cause damage to the nerves
- Autoimmune disorders (like rheumatoid arthritis and lupus, for example)
- Metabolic disorders (imbalances in body chemistry, such as imbalances caused when the kidneys are not working properly)

## SYMPTOMS OF PERIPHERAL NEUROPATHY:

- Numbness, especially in the extremities (legs, feet, arms, and hands)
- Muscle weakness
- Tingling, burning, pricking, or tickling sensations
- Pain, especially in the extremities (legs, feet, arms, and hands)

## REDUCING YOUR RISK OF EXPERIENCING NEUROPATHY:

- Make sure you get good nutrition
- Avoid excessive use of alcohol
- Avoid exposure to toxic chemicals
- If you have diabetes make sure you have good control over your blood sugar levels

## FOR MORE INFORMATION:

- National Institute of Neurological Disorders and Stroke  
800/352-9424 or [www.ninds.nih.gov](http://www.ninds.nih.gov)
- National Institute of Diabetes and Digestive and Kidney Diseases  
*Prevent Diabetes Problems: Keep Your Nervous System Healthy*  
c/o National Diabetes Information Clearinghouse  
1 Information Way  
Bethesda, MD 20892-3560  
800/860-8747 or 301/654-3327  
or [www.niddk.nih.gov](http://www.niddk.nih.gov)

## INFORM YOURSELF:

To find this and previous *JAMA* Patient Pages, check out the AMA's Web site ([www.ama-assn.org/consumer.htm](http://www.ama-assn.org/consumer.htm)).

Additional Sources: National Institute of Neurological Disorders and Stroke, National Institute of Diabetes and Digestive and Kidney Diseases, The AMA Home Medical Library, The AMA Family Medical Guide, The AMA Encyclopedia of Medicine

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