Keep your nerves healthy
Prevent diabetes problems

What are diabetes problems?
Too much glucose (sugar) in the blood for a long time causes diabetes problems. High blood glucose levels can damage many parts of the body, such as the eyes, nerves, heart and blood vessels. You can take steps to prevent them or slow them down.

Facts about diabetes and nerve disease (neuropathy):
• Diabetes can damage your nervous system.
• Finding and treating these problems early is important.
• There are two types of neuropathy—peripheral and autonomic.
• Nerve disease affects over 60% of people with diabetes.

What is neuropathy (diabetic nerve disease)?
Neuropathy is a type of nerve damage that can happen to people who have diabetes. This damage makes it hard for their nerves to carry messages to the brain and other parts of the body. It can cause numbness (loss of feeling), burning sensation and painful stabbing or tingling especially in the feet or hands.

What Are the Symptoms of Diabetic Neuropathy?
The symptoms of diabetic neuropathy vary. Numbness and tingling in feet are often the first sign. Some people notice no symptoms, while others are severely disabled. Often, symptoms are slight at first, and since most nerve damage occurs over a period of years, mild cases may go unnoticed for a long time. In some people, mainly those afflicted by focal neuropathy, the onset of pain may be sudden and severe.

• Numbness, painful stabbing or tingling or a burning feeling in your feet or hands
• A feeling of lightheadedness that causes you to fall
• Diarrhea and constipation
• Failure to get an erection (in men)
• A feeling of fulness, bloating, indigestion and nausea

What Causes Diabetic Neuropathy?
High blood glucose, causes chemical changes in nerves. These changes impair the nerves' ability to transmit signals. High blood glucose also damages blood vessels that carry oxygen and nutrients to the nerves. In addition, inherited factors, probably unrelated to diabetes may make some people more susceptible to nerve disease than others.
How Do Doctors Diagnose Diabetic Neuropathy?

A doctor diagnoses neuropathy based on symptoms and a physical exam. During the exam, the doctor may check muscle strength, reflexes, and sensitivity to position, vibration, temperature, and light touch. Sometimes special tests are also used to help determine the best treatment.

What Are the Major Types of Neuropathy?

The symptoms of neuropathy also depend on which nerves and what part of the body is affected. There is peripheral and autonomic neuropathy.

**Peripheral neuropathy** is most common and affects the feeling in the arms, hands, legs and feet. Numbness and tingling in the feet is usually the first sign. Other signs are:

- Not being able to feel pain or temperature changes
- Burning or prickling feelings
- Sharp pains or cramps
- Loss of sensitivity to touch, even light touch
- Loss of balance and coordination

*These symptoms are often worse at night.*

**Autonomic neuropathy** affects the nerves in the heart, stomach, intestines, bladder and sex organs.

- Problems with the stomach or intestines such as indigestion, belching, nausea, vomiting, diarrhea and constipation are all symptoms of neuropathy in the digestive system (called- *gastroparesis*).
- Problems with blood pressure when moving from a sitting to standing position causing lightheadedness, dizziness or faintness (called- *hypotension*).
- Decreased sexual function in both males and females. Failure for men to get an erection (called- *impotence*), occurs in about 40% of males with diabetes. Vaginal dryness and decreased nerve sensation in females is common.
• Neuropathy can affect the ability to have bladder control (called- incontinence).

• Damage to the nerves of the heart that may make your heart beat faster or at different speeds. It can also affect the ability for a person to feel pain during a heart attack.

If you or your doctor suspect autonomic neuropathy, you may be referred to a physician who specializes in the body area that is affected by the neuropathy for additional tests.

How is diabetic neuropathy treated?

Treatment of neuropathy is aimed at preventing further nerve damage and to relieve discomfort. Maintaining lower blood glucose levels helps reverse the pain or loss of sensation that neuropathy can cause. Control of blood glucose levels may help prevent or delay the onset of further problems. A number of medications and other approaches are used to relieve the symptoms of diabetic neuropathy.

Good foot care is important for people with diabetic neuropathy

People with diabetes need to take special care of their feet. Loss of sensation or feeling in the feet, can cause sores or injuries to go unnoticed and this increases the chance of infection. Foot ulcers or foot injuries require attention and treatment to prevent the development of infection in the bone which could result in foot amputation.

Remember: In its early stages, diabetic neuropathy can be successfully treated. How to protect your nerves:

• Manage your blood glucose (sugar) levels
• Manage your blood pressure
• If you smoke, stop!
• Get regular physical activity
• Inspect your feet everyday and take good care of your feet
• Have an annual foot exam to help to detect any foot problems