

Diabetes: Autonomic Neuropathy

If you live with diabetes, you may be familiar with the numbness and pain that are the hallmark of peripheral neuropathy, or nerve damage. But most diabetes patients are unfamiliar with the more insidious form of diabetes-related nerve damage known as autonomic neuropathy.

The autonomic nervous system controls the involuntary functions of the body, such as heart rate, blood pressure, [bladder function](#), digestion, vision, salivation, and perspiration. Autonomic neuropathy can be more difficult to recognize and to diagnose because it attacks and damages the nerves that control organ and glandular systems, short-circuiting bodily functions rather than causing pain or obvious numbness.

Autonomic neuropathy can cause a wide spectrum of diverse and non-specific symptoms, including incontinence, constipation, diarrhea, dizziness, and excessive perspiration. Unfortunately, these are also common signs of a number of medical conditions, which makes autonomic neuropathy particularly difficult to detect. Often, a diagnosis isn't made until organ damage has occurred.

The Types of Autonomic Neuropathy

Cardiovascular Autonomic Neuropathy

although it can cause severe cardiovascular problems and sudden death, surveys show that only 2% of people with diabetes are tested for cardiovascular autonomic neuropathy (CAN).

Gastroparesis

Gastroparesis, sometimes called delayed stomach emptying, is caused by nerve damage to the digestive tract. In addition to causing gastrointestinal distress, gastroparesis can also have a major impact on blood glucose levels. Symptoms include vomiting, nausea, reflux, weight loss, heartburn, and early satiety (or feeling of fullness). Management of gastroparesis in people with diabetes can be difficult, but there are several drug options and investigational devices available for treatment.

Neurogenic Bladder

Nerve damage to the urinary bladder can cause incontinence, urinary tract infections, and kidney disease. Unfortunately, perceived embarrassment often prevents patients from reporting the problem to their doctor.

Sudomotor Neuropathy

Nerve damage to sweat glands can cause excessive sweating and dry skin, which can lead to infection and heat stroke.

Hypoglycemic Unawareness

People with hypoglycemic unawareness do not experience the normal symptoms of hypoglycemia (e.g., sweating, rapid heartbeat) that act as a warning system for people with diabetes, and therefore can go dangerously low and even lose consciousness before realizing that their blood sugar is low. Frequent blood glucose testing is important for these patients.

Impotence

Neuropathy is one potential cause of erectile dysfunction, and can play a part in female sexual dysfunction as well.

Visual Impairment

Ocular nerve damage can affect eyesight, particularly night vision.

How to Treat and Prevent Autonomic Neuropathy

Tight blood glucose control is the best defense against serious neuropathy complications, so frequent blood sugar monitoring and appropriate medication, dietary, and exercise regimens (as prescribed by your diabetes care team) are recommended.

Treatment of autonomic neuropathy depends on the manifestation of the condition and the symptoms experienced.

Cardiovascular Autonomic Neuropathy

Smoking cessation.

Drugs that increase blood volume (to treat orthostatic hypotension).

Alpha-lipoic acid.*

Gastroparesis

Dietary changes, including small meals with low-fat and low-fiber foods.

Medications that improve gastrointestinal function.

Electrical stimulation therapy*

Neurogenic Bladder

Bladder training (scheduled, frequent trips to urinate).

Biofeedback for incontinence.

Appropriate treatment of urinary tract infections.

Sudomotor

Adequate fluid intake.

Proper skin and [foot care](#).

Hypoglycemic Unawareness

Frequent self-testing of blood glucose levels.

Target higher than normal glucose levels to prevent hypoglycemia (always discuss blood glucose goals with your doctor).

Impotence

Drug therapy.

Vacuum assisted devices.

[Surgically implanted devices](#).

Night Vision Impairment

Avoidance of night driving.

Use of night lights in the home to prevent accidents.

*Therapies that are still considered investigational or in trials, but have shown some promise in clinical research studies.