

Understanding Parkinson's Neurogenic Orthostatic Hypotension



Callers to the Parkinson's Disease Foundation (PDF) National HelpLine frequently ask us for tips about coping with a condition known as neurogenic orthostatic hypotension (nOH), or low blood pressure. If you have experienced it, you may already know that this symptom is common in mid- and late-stage Parkinson's disease (PD), and it can be quite alarming.

Neurogenic orthostatic hypotension is a sharp drop in blood pressure that happens when a person gets up from bed or from a chair, causing dizziness or even loss of consciousness. Doctors define it as a blood pressure drop of 20 millimeters of mercury (20 mm Hg) in systolic blood pressure (the top number in a blood pressure reading), or a drop of 10 millimeters in diastolic blood pressure (the bottom number), within three minutes after standing up. The condition can put people with Parkinson's at risk of fainting, losing balance, falling, and being injured. What can you do? One thing you can do is learn strategies to predict when blood pressure is most likely to fall. Another is to take steps to avoid feeling dizzy in the first place.

Symptoms

Your doctor can test for nOH by measuring your blood pressure. If you feel a little dizzy when you first stand up — but the feeling passes quickly — you probably do not have the condition. If instead your blood pressure continues to drop after a minute or more of standing, this may suggest a problem.

It is important that your physician measure your blood pressure while you are lying down, sitting and standing. Sometimes, the problem of nOH is only revealed when the blood pressure is measured in these three positions.

The symptoms of nOH include the following:

- lightheadedness
- feeling faint
- dizziness
- fainting
- weakness
- trembling
- difficulty thinking
- nausea
- headache
- cold hands and feet
- chest pain

Causes

Normally, when a person rises from lying down or sitting, the blood vessels constrict and

send blood from the legs and trunk up to the head. In addition, the heart beats slightly faster and more forcefully. In people living with PD, the heart rate may not increase upon standing, and the blood pressure may drop as a result.

Both Parkinson's itself, and the medications that are used to treat it, can contribute to nOH. In addition, people with Parkinson's may be on other medications that affect blood pressure. Specifically, the medications that can cause nOH in Parkinson's include carbidopa/levodopa (Sinemet®), bromocriptine (Parlodel®), ropinirole (Requip®), and pramipexole (Mirapex®); drugs for high blood pressure, including calcium channel blockers; certain antidepressants; drugs to treat urinary problems, such as prazosin (Mini-press®) and terazosin (Hytrin®); and drugs for erectile dysfunction (e.g., Viagra®).

Additional causes include diuretics, cardiac disease, dehydration, fever, and anemia.

How to Avoid Neurogenic Orthostatic Hypotension

If you can recognize your symptoms and are aware of what makes them worse, you can take

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steps to reduce and avoid them.

Most important is to avoid dehydration, especially during the months of hot weather. Ask your doctor to identify the medications you are taking that may lower your blood pressure, and see if a change in dose is indicated. Avoid abrupt changes in position.

Be aware of behaviors and circumstances that can make nOH worse.

These include the following:

- dehydration
- exposure to heat
- fever
- prolonged standing
- vigorous exercise
- drinking alcohol
- certain times of day (especially early morning)
- straining while going to the bathroom
- changing the position of the body (e.g., standing up)
- meals high in carbohydrates

For additional strategies talk to your doctor.

Drug Therapies

Ask your doctor whether there are any medications that can help you manage nOH and its effects. Options may include fludrocortisone (Florinef®), midodrine (ProAmatine®), pyridostigmine (Mestinon®) or droxidopa (Northera™). Be aware that medications that raise low blood pressure to normal levels when a person is standing may cause high blood pressure when a person is lying down. In fact, Northera contains a black box warning indicating that it carries an increased risk for this event, called supine hypertension, which can lead to stroke. Check with your doctor about these and other potential side effects when considering medical treatment for nOH.

Conclusions

We hope these tips will help you cope with neurogenic orthostatic hypotension. As always, feel free to call PDF's HelpLine staff — at (800) 457-6676, from Monday to Friday, 9:00 AM to 5:00 PM ET — with your questions about this or any other matter associated with Parkinson's.

Tips for Avoiding Neurogenic Orthostatic Hypotension

- Drink lots of water and other fluids, at least one cup (eight ounces) with meals and two more at other times of the day.
- After consulting your doctor, increase your salt intake by eating prepared soups or pretzels. (Note: for people with heart disease, this should be avoided.)
- Exercise gently and regularly — and avoid long periods of inactivity.
- Eat small, frequent meals.
- Reduce alcohol intake.
- Avoid hot drinks and hot foods.
- If you expect to be standing for a long period of time — while shopping, for example — quickly drink two eight-ounce glasses of cold water. This will increase blood volume and causes blood pressure to go up for a couple of hours.

If you experience dizziness in the morning:

- Raise the head of the bed by four inches (10 cm).
- Drink two eight-ounce cups of cold water 30 minutes before getting up.
- Do isometric exercises before getting up that contract the leg or feet muscles. For example, raise the toes, contract the thigh muscles and hold for 30 seconds, or march the legs slowly in place.
- Shift slowly from lying to sitting and then standing.
- Try putting on an abdominal binder before you get out of bed (and remove it before lying down again). Compression garments such as antigravity stockings can be effective in preventing nOH.

Related Fact Sheets:

- Fatigue and Sleep Disorders
- Pain in Parkinson's Disease
- Combating Depression in Parkinson's

If you have or believe you have Parkinson's disease, then promptly consult a physician and follow your physician's advice. This publication is not a substitute for a physician's diagnosis of Parkinson's disease or for a physician's prescription of drugs, treatment or operations for Parkinson's disease.

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