

Understanding Peripheral Neuropathy and Sensory Ataxia

Information for patients and families

Your clinician has told you that your balance problems are caused, at least in part, by peripheral neuropathy — also called sensory ataxia. This leaflet explains in plain language what that means, why you feel unsteady, how it is found, and what can be done to help you stay safe and steady.

What is peripheral neuropathy and sensory ataxia?

Your body has special nerves that constantly tell your brain where your feet, legs and joints are, even when you are not looking. This sense is called position sense, or proprioception. In peripheral neuropathy these nerves become damaged, so fewer of these messages reach your brain.

When position sense fades, your brain has to rely much more on your eyes to keep you balanced. This is why the main problem — sensory ataxia — is unsteadiness that is far worse in the dark, with your eyes closed in the shower, or on uneven ground. It is not a problem with your muscles or your strength; it is a problem with the feedback your brain receives.

What you might notice

- Unsteadiness or a feeling of veering, especially in the dark or with your eyes closed
- Numbness, tingling, or a feeling of walking on cotton wool in your feet
- Walking with a wide, careful, stamping step, often watching the floor
- Trips, stumbles or falls, particularly at night or on uneven ground
- Sometimes pain or burning in the feet, though many people have none

What causes it?

There are many possible causes. The most common is diabetes. Other important causes include low vitamin B12, an underactive thyroid, heavy alcohol use, some inherited conditions, certain chemotherapy drugs, and immune conditions where the body's defence system attacks the nerves. Finding the cause matters, because some causes can be treated and even partly reversed.

How is it diagnosed?

Your clinician will examine your balance, your reflexes and the feeling in your feet, often including a simple test where you stand with your feet together and eyes closed. To find the cause, you will usually have blood tests and a nerve test called nerve conduction studies, and sometimes a scan or a small skin sample. This step-by-step search finds a treatable cause in most people.

How is it treated?

Treatment has two parts — treating the cause, and helping your balance:

- Treating the cause: vitamin B12 is replaced with injections; blood sugar is brought under control in diabetes; immune causes are treated with special infusions. Some people recover well, especially when treatment starts early.

- Balance physiotherapy is the most helpful treatment for steadiness. A physiotherapist trains your brain to rely more on your eyes and other senses, and teaches safe ways to move, stand and walk.
- If you have pain, tingling or burning, there are effective medicines your clinician can prescribe.

Staying steady and preventing falls

- Keep your home well lit, especially at night, and use a night light on the way to the bathroom
- Remove trip hazards such as loose rugs and clutter, and take care on stairs and wet floors
- A walking stick or frame can help — it gives your hands extra feedback about the ground
- Wear well-fitting, flat, thin firm-soled shoes; very thick cushioned soles can make balance harder

Looking after yourself

Keep taking any treatment for the underlying cause, and attend your follow-up appointments so your progress can be checked. Staying active within safe limits helps your balance and your general health. Low mood and anxiety are common when balance changes — please tell your clinician, because both can be helped. With the right treatment, rehabilitation and a few practical changes, most people become safer and more confident over time.

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This leaflet is general information and does not replace advice from your own clinician about your individual situation.