

What your gait says about your health

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Walking requires a huge number of signals between your brain and the muscles in your arms, chest, back, abdomen, pelvis and legs. Something that looks relatively straightforward is in fact [incredibly complex](#). And the pace and smoothness of your walk can be an indicator of your health and how well you are aging.

As the body ages, muscles lose mass, strength and quality. This process is called [sarcopenia](#) and it begins around [your 40s](#).

Alongside this, the nervous system undergoes "atrophy," where the nerves everywhere in the [body function less efficiently](#) and nerve numbers decrease.

It is thought that you lose [0.1%](#) of your neurons ([nerve cells](#)) each year between the ages of 20 and 60, with the loss speeding up after that.

If you live to 90, your brain will have [lost 150 g of tissue](#) compared with its weight at age 50.

Studies have shown that your [walking speed at age 45](#) is a strong predictor of your physical and mental health later in life. And there is a noticeable decline in [walking speed by the time you pass 60](#).

The decline in speed and smoothness of your walk can be an early indicator of neurodegenerative conditions, such as [Parkinson's](#) disease. Parkinson's interferes with the brain's messages to the musculoskeletal system, causing the person's gait to be slower, less symmetrical and more staggering. This can be subtle yet detectable during the [early stages](#) of the disease.

With [cognitive decline](#), the stride length when walking is significantly shorter. And the time it takes for a [stride to be completed increases](#).

The complex task of walking is also designed to stop us from tripping over our own feet. The muscles on the front of the shin are designed to pull the foot up as it swings forward. In some people, this begins to fail and they trip.

This is known as "foot drop," where the foot drops down so the toes hit

the ground, causing a trip hazard. Nerve damage from [diabetes](#) can cause this, as can [sitting cross-legged](#) or in certain [yoga positions](#) for extended periods.

Narrowing of the arteries

If you feel pain in your [gluteal muscles](#) and down the back of your leg, and even into your calf, while walking, and it disappears when you stop moving, you might have peripheral arterial disease.

The presence and then absence of the pain relative to moving or resting is called [claudication](#). This happens because there is a narrowing of the arteries supplying blood to your legs. When you walk, there is an increased demand for oxygen from the muscles in the legs.

As a result of the narrowing, the arterial blood flowing into the legs cannot [meet the oxygen demand](#) and the muscles become anaerobic (lack oxygen), causing the [release of lactic acid](#). Lactic acid causes the feeling of cramp. But when you stop moving, the muscles need minimal oxygen, so the pain disappears.

Risk factors for peripheral artery disease include [smoking, high cholesterol, high blood pressure and diabetes](#). Having a [family history of vascular disease](#) is also a risk factor.

Staggering

A staggering gait with balance problems is often associated with [excessive alcohol consumption](#), but it can also suggest [a lack of vitamin B12](#).

The manifestation of symptoms in adults takes months, even years, but

in children it can appear in a [much shorter time](#) because of the maturation of the nervous system and the key role vitamin B12 plays [in protecting the nervous system](#) from disorders.

Thankfully, treating vitamin B12 deficiency with injections is [relatively straightforward](#) and well tolerated in most cases. In some cases, adding B12-rich foods to the diet—such as meat, fish, eggs and dairy—can be enough to eradicate symptoms.

Inner ear issues, such as [labyrinthitis](#), can be a short-term cause of issues with balance and gait. They typically resolve on their own without treatment.

An infection of the inner ear results in abnormal movement of the fluid in that part of the ear, which makes the nerve signals from the ear to the brain become difficult to interpret. This results in the body not fully integrating this information with visual and positional information.

With aging, walking inevitably becomes less smooth and effortless. However, if you notice increases in tripping, staggering and falling—or walking has just become more difficult over a short time—it's worth seeing your doctor about it.

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