

TIPS: SWOLLEN FEET AND LEGS

Swollen feet and/or legs can be a possible side effect of the condition ALS. It can range from mild discomfort to acute pain. It can even become so severe as to cause a vicious circle, leading to more problems with swelling, and even to problems with the veins and damage to the valves.

What causes the swelling?

Veins are blood vessels that carry oxygen-low blood back to the heart. The heart then pumps the blood towards the lungs, where it will be oxygenated. The oxygen-rich blood will be carried by the arteries to provide the body's tissues with oxygen. The oxygen-low blood will then, despite gravity, return to the heart through the veins of the lower limbs. An ingenious system of valves prevents the blood in the veins from flowing backwards down the veins. When lying down, this process happens without the aid of an extra power source. When sitting up or standing, however, gravity needs to be defied. The so-called muscular pumps, of which the calf pump is the most important, will serve as an extra source of power. When the muscles contract, the deep veins are, almost similar to a sponge, squeezed empty, and the blood is carried upwards to the heart thanks to the valves. When something goes wrong during this process, it can lead to venous insufficiency. This is characterised by heavy and tired legs, the accumulation of fluids in legs and feet, varicose veins and painful legs. Sometimes the valves or the muscular pumps malfunction, causing the blood to accumulate in the blood vessels of feet and legs, which in turn causes the discomfort and the pain.

A second possible cause is heat, because heat causes blood vessels to widen, causing even more blood to accumulate in the legs. Heat also increases the supply of arterial blood. In other words, more blood arrives in the legs, while less blood is pumped away. The blood will have less oxygen, giving the impression of having tired legs.

A third possible cause is malnutrition. A trace element or vitamin deficiency can worsen the process. Vitamin B1 (thiamin), iron and others can be useful.

Is it dangerous?

Besides swelling, it can cause oedema, which brings about a painful and burning sensation. Both feet and legs become sensitive to heat and cold. Moreover, blood flow will deteriorate, causing the skin of feet and legs to become more sensitive and eventually damaged. But the most dangerous side effect of the swelling is the

increased risk of developing deep vein thrombosis or pulmonary embolism (a blood clot that ends up in the lungs).

Less dangerous problems are:

- night-time cramps and sleeping problems
- tingling in the lower limbs
- varicose veins
- leg ulcers
- haemorrhoids

Treatment

The golden rule is to raise or lift legs and feet.

It is best to have your feet at the same level as your heart, or even higher. This will put less strain on the heart to circulate blood. A multi-position wheelchair or a hospital bed is the most comfortable and efficient way to prevent this problem.

Diuretics, which are generally prescribed to reduce fluid retention in feet and/or legs, are not advised for ALS patients, because they don't solve the problem. A low-salt diet will also not counter the swelling, because the main cause is the ALS patient's inactivity. A low-salt diet, however, is advisable when suffering from high blood pressure or heart problems.

Warning signs for possible blood clots

Watch out for signs suggesting a blood clot in the legs. The initial symptoms are the following:

- one leg is more swollen than the other (However, because of the atrophy of muscles caused by ALS, a difference can exist between both legs. Therefore raise the swollen leg to see if the swelling goes down.)
- the swelling does not subside during the night
- pain when standing or stretching the calve muscle
- redness
- heat
- discomfort
- a combination of the aforementioned symptoms

When you think you have a blood clot, do not massage the swollen area. Instead, immediately consult a physician to have a diagnosis made. When a blood clot reaches the lungs, it will cause a sudden attack of chest pain and shortness of breath.

Prevention

Movement helps prevent swelling, even in a passive manner like stretching or doing some exercises, as long as they are done multiple times a day, aided by a caregiver.

A gentle foot massage can also help improve blood circulation and reduce swelling. Frequent repositioning when seated in a wheelchair or leaning back is important to have an adequate blood flow and to prevent blood clots as well. When seated upright, avoid dangling your feet above the ground. Instead have them resting on something to relieve the tension on the backside of the thighs.

Other ways to ensure an adequate blood flow:

- wear compression stockings to apply pressure to calves and feet
- use medical aids that need to be inflated/deflated to apply pressure on feet and legs
- avoid tight-fitting clothes, shoes or socks
- avoid immediate contact between legs and a heat source
- take cold or alternating hot/cold baths
- avoid coffee, alcohol, and overly spiced foods
- avoid being overweight

Treatment of swollen legs for ALS patients

- raise your feet to a position that is higher than your heart by tilting the back of the wheelchair backwards and raising the foot supports

- move and stretch your legs, even if it's in a passive manner, it will help
- regularly change positions
- use compression stockings

Don't expect diuretics or a low-salt diet to help. These will not reduce oedema, because of the inactivity due to ALS.

Immediately consult a physician when you believe you have a blood clot.

Note

The information given above is aimed specifically at ALS patients. When you do not suffer from ALS, but still experience swelling in feet and/or legs, consult your GP to identify the cause and find the proper treatment. If you experience swelling in the fingers or around the eyes, immediately contact your GP.

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Source: http://gezondheid.infoblog.be/lichaamsverzorging/zware_benen_lopen_moeilijk

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(MDA/ALS Newsletter, February 2004)