

## LOWER LEG ULCERS

BY SR ANNETTE ANDERSON (M.CUR)

Lower leg ulcers are wounds which are typically found below the knee and above or on the ankle. These are linked to vascular disease but has four possible underlying causes.

These include Venous leg ulcers, the most common, Lymphatic leg ulcers are like venous ulcers and share many signs and symptoms. Arterial leg ulcers are least common and occur due to a lack of blood supply to the lower legs and neuropathic leg ulcers typically seen in diabetic patients due to peripheral neuropathy (nerve damage).

### ***Venous leg ulcers:***

Venous leg ulcers are caused by congestion of the venous system which results from varicose veins with valve failure in the venous system, venous outflow obstruction related to abdominal obesity, post-thrombotic syndrome after previous deep vein thrombosis, and inadequate / poor calf muscle pump action. One, and quite often a combination, of these factors that results in venous hypertension and blood pooling in the lower legs causing damage. Symptoms include shallow sores which typically have irregular edges, a red base and leak a yellowish, bloody discharge. The discharge is often significant, resulting in wet socks, pants and bandages. The surrounding skin is often shiny, tight and warm and many be discoloured pink, red or purple. Patients often complain of heavy, itchy legs which are swollen and cramp.

Treatment for venous ulcers include treatment of the underlying cause. This may include varicose vein treatment, accompanied by compression therapy and wound care. Bedrest and elevation of the legs is extremely helpful in treating this condition and antibiotics might be necessary if the ulcers or wounds have become infected. A healthy lifestyle, which incorporates calf raises are important with possible compression stockings to be worn during the days (especially summer or when standing or sitting still for long periods) to prevent reoccurrences.

### ***Lymphatic Leg ulcers:***

The lymphatic system is responsible for removing the fluid from the lower legs that does not return to the heart in the venous system. When this system is compromised lymphedema occurs which causes swelling (oedema) and tissue changes (fibrosis and thickened skin). Lymphatic leg ulcers are slow to heal, chronic ulcers on the lower legs caused by a compromised lymphatic system. These ulcers are triggered by minor cuts, insect bites or infections which break the tight, swollen skin causing leaking ulcers. These ulcers occur more frequently in the presence of venous hypertension, which requires the treatment of the underlying venous disorder. The underlying causes of lymphoedema are more difficult to treat, as the primary cause is genetic, while secondary causes include cancer treatment, surgery or certain infections.

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Other symptoms include chronic, ulcers especially near the ankles, oedema (swelling of the legs) with skin changes. These skin changes may include dryness, scaling, hardening and cobblestone appearance with creases. Legs are often heavy, ache and itch with secondary bacterial and fungal infections being quite common.

Treatment includes compression therapy and advanced wound care. Elevation of the lower limb and treating the infection with targeted antibiotics. Lifestyle changes are also recommended.

### ***Arterial ulcers:***

Arterial ulcers are due to peripheral vascular disease, where vascular risk factors damage the artery wall of the lower legs and can result thickening from deposits called atherosclerotic plaques. Typical vascular risk factors are age, smoking, diabetes, hypertension and hyperlipidaemia or elevated fats in the blood, particularly high cholesterol levels. As the condition worsens, these fatty plaques enlarge or splinter, reducing or blocking blood flow below the blockage. This results in the skin and other tissues not receiving sufficient blood and oxygen, which cause arterial ulcers.

The most common symptom of arterial ulcers is the presence of pain worsened when the foot is elevated and relieved when the leg is down or dependent. Patients with arterial ulcers are often forced to sleep with their leg hanging off the bed to manage the pain. This is a sign of advanced peripheral vascular disease and there is a very high risk of losing the leg.

Treatment includes an urgent consultation with a vascular specialist and then treatment might include angioplasty, stents or bypass surgery.

### ***Diabetic Ulcers:***

Diabetic ulcers are typically on the foot (please see our article specifically on diabetic foot ulcers). However, these ulcers may also present on the lower legs, often due to unrecognized trauma which results in infected ulcers.

Common symptoms are non-painful wounds, which are often only seen when clothes appear wet or dirty due to the wound exudate. Swollen, red, warm limb due to cellulitis and surrounding tissue infection from the untreated ulcer. Glucose levels will also rise in response to the infection, which is often a way in which diabetic patients realize something is wrong.

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Treatment includes improving glucose control, wound care and treatment of the infection and possible cellulitis. Diabetic foot ulcers can also occur in combination with arterial ulcers. In these instances, it is critical that a thorough vascular assessment is performed and that the underlying peripheral vascular disease is treated, otherwise there is a greater risk of the wound not healing and losing the leg.

