Leg ulcers
Leg ulcers affect around one per cent of the Australian population. The most common cause is poor circulation. The type of medical treatment depends on whether the wound is caused by problems with veins or arteries.

Medical treatment aims to improve blood flow to the area and promote healing of the ulcer. Treatment options include compression bandages, dressings and surgery.

Wounds on the lower leg are often caused by problems with veins or arteries, or a combination of both. The further away from the heart, the longer wounds may take to heal, particularly in people over 50 years of age.

Around one per cent of the Australian population suffers from leg ulcers (chronic venous leg ulceration). The most common cause is poor blood circulation, particularly the inability of the veins to return deoxygenated blood from the legs back to the heart.

Other causes or risk factors include prolonged pressure on an area (such as long-term lying in bed in one position, which may cause bed sores), badly managed diabetes, high cholesterol, smoking, dietary problems and poor arterial circulation.

Older people are at greater risk, and the number of women with leg ulcers is slightly higher than men because women have a longer lifespan. Treatment options include compression bandages, medication, surgery and (more recently) hyperbaric oxygen therapy.

Leg ulcers, the calf muscle and poor circulation

Generally, veins carry deoxygenated blood from the body to the heart, then on to the lungs. Veins have one-way valves to prevent blood from running backwards. The contraction of muscles helps to massage blood along the veins.

The calf acts as a pump, using muscular contraction in combination with deep veins and chambers to help push the blood back up through the veins. This pumping action can be affected by a variety of problems, including blockages in the deep veins, venous insufficiency or venous disease.

It is not known how poor vein circulation triggers a leg ulcer. One theory proposes that white blood cells from the immune system are trapped inside the tiny capillaries, where they then attack and destroy the nearby skin tissue. High numbers of white blood cells and their by-products have been found in the pus of leg ulcers.

Symptoms of leg ulcers

Symptoms of a leg ulcer include:

- that they are commonly found on the lower leg and ankle
- a sunken, asymmetrically shaped wound
- the edges of the ulcer are clearly defined from the surrounding skin
- the surrounding skin is intact, but inflamed
- the surrounding skin may be pigmented, hardened or calloused
- yellowish-white exudate (pus)
- pain, particularly while standing
- varicose veins in the leg.

Risk factors for leg ulcers

A number of different factors can increase a person’s risk of chronic venous leg ulceration, including:

- Age – peripheral circulation becomes less efficient with old age.
- Varicose veins – the one-way valves that stop blood from travelling backwards in the vein stop working. The pooling of blood stretches and distorts the vein.
- Cigarette smoking – tobacco is known to constrict the vessels of the circulatory system.
- Arterial disease – vein problems are more likely if the person already has other diseases of the arteries.
- Certain disorders – these include diabetes and arthritis.
- Pressure sores – bed-bound people are at risk of pressure sores, which are areas of damage to the skin caused by constant pressure or friction.
- Medication – some cardiovascular medications can contribute to leg oedema (swelling due to a build-up of fluid) and altered circulation.
Diagnosis of leg ulcers

The doctor or specialist will take your complete medical and surgical history. They may also:

- examine the wound
- perform some tests to measure the blood flow in your lower leg, such as the ankle-brachial index. This test compares blood pressure readings taken at the ankle and at the arm using a device called a Doppler machine
- recommend an angiogram (special X-ray examination of the arteries) for an arterial ulcer, to find out if the artery needs surgery to clear the blockage.

Treatment for leg ulcers

Medical treatment aims to improve blood flow to the area and promote healing of the ulcer. The type of treatment depends on whether the wound is caused by problems with veins or arteries.

Treatment for arterial ulcers is often urgent. Compression bandages must not be used, as this will reduce the blood supply even further. Surgery may be needed to clear out the blocked artery (angioplasty). In some cases, the section of blocked artery may require surgical replacement (by-pass surgery). In severe cases, the lower leg may have to be amputated.

Treatment for chronic venous leg ulceration includes:

- cleaning the wound – using wet and dry dressings and ointments, or surgery to remove the dead tissue
- specialised dressings – a whole range of products are available to help the various stages of wound healing. Dressings are changed less often these days, because frequent dressing changes remove healthy cells as well
- compression treatment – boosts internal pressure, using either elasticised bandages or stockings. This is particularly effective if multiple layers are used
- medication – includes pain-relieving medication and oral antibiotics if infection is present
- supplements – there is evidence that leg ulcers may heal faster with mineral and vitamin supplements, but only if the person suffers from a deficiency. Zinc, iron and vitamin C may be used
- skin graft – is a surgical procedure, where healthy skin is grafted onto the prepared wound site
- skin cancer and infection – if ulcers fail to heal or if they increase in size, both these conditions will need to be ruled out
- hyperbaric oxygen – this is now an accepted treatment for ulcers that resist other methods of healing, such as diabetic ulcers.

Long-term outlook after a leg ulcer

Unless the underlying conditions that contributed to your leg ulcer are addressed and treated, you are at risk of developing other ulcers. Options can include treatment for varicose veins, quitting cigarettes, improving your diet and taking regular exercise (such as 30 minutes of walking every day).

You should avoid hot baths and sitting still for too long. It can help to keep the affected leg elevated above the level of your heart whenever practical.

Diabetics must aim for optimum control of their blood sugar and take particular care of their feet.

Where to get help

- Your doctor
- Hospital staff

Things to remember

- Leg ulcers affect around one per cent of the Australian population.
- The most common cause is poor circulation.
- The type of medical treatment depends on whether the wound is caused by problems with veins or with arteries.
- Medical treatment aims to improve blood flow to the area and promote healing of the ulcer.
- Treatment options include compression bandages, dressings and surgery.

References


Send us your feedback

- Rate this website
- Your comments

betterhealth.vic.gov.au
1/4 How would you rate this website?

- Excellent
- Good
- Average
- Fair
- Poor

Next  Submit Now  Cancel

Send us your feedback

- Rate this website
- Your comments
- Questions
- Your details

Please note that we cannot answer personal medical queries. If you are looking for health or medical advice we recommend that you:

- talk to your doctor or pharmacist
- dial triple zero (000) in an emergency
- ring NURSE-ON-CALL Tel. 1300 60 60 24.

2/4 Your Comments

Tell us who you are  Select an option

Enter your comments below (optional)

Next  Submit Now  Cancel

Send us your feedback

- Rate this website
- Your comments
- Questions
- Your details

3/4 Questions

What are you here to do?  Looking for information on

Did you find what you were looking for?

- Yes
- No

Next  Submit Now  Cancel

Send us your feedback

- Rate this website
- Your comments
- Questions
- Your details

4/4 Your details

Postcode

Email Address

Submit Now  Cancel

Send us your feedback

Thank you. Your feedback has been successfully sent.

More information
Skin

The following content is displayed as Tabs. Once you have activated a link navigate to the end of the list to view its associated content. The activated link is defined as Active Tab

- Skin basics
- Skin cancer
- Skin health
- Skin conditions
- Skin irritations
- Burns, sores and infections
- Skin changes

Skin basics

- Birthmarks
  In most cases, we do not know what causes birthmarks. Most are harmless, happen by chance and are not caused by anything the mother did wrong in pregnancy...
- Blushing and flushing
  Severe blushing can make it difficult for the person to feel comfortable in social or professional situations...
- Skin explained
  The skin is a good indicator of health - if someone is sick, it often shows in their skin...
- Wounds - how to care for them
  Chronic wounds are more likely to heal if they are treated with moist rather than dry dressings...
- Wrinkles
  Sun exposure, smoking and ageing are the main causes of wrinkles...

Skin cancer

- Melanoma
  If untreated, melanomas can spread to other parts of the body and may be fatal..
- Skin cancer
  Check all of your skin, not just sun-exposed areas. If you notice anything unusual, including any change in shape, colour or size of a spot, or the development of a spot, visit your doctor as soon as...
- Skin cancer - children
  Encourage your child to be SunSmart ? whatever their age...
- Skin cancer - protecting outdoor workers
  People who work outdoors are in one of the highest risk groups for skin cancer...
- Skin cancer - risk factors
  The major cause of skin cancer is over exposure to ultraviolet radiation from the sun or other sources, such as solariums...
- Skin cancer - tanning
  A suntan is a sign of skin damage ? there is no such thing as a 'safe' tan...

Skin health

- Healthy ageing - the skin
  Many age-related skin changes can be reduced with healthy lifestyle choices and good skin care...
- Stretch marks
  Over time, stretch marks lose their bright colouring and become silvery, shimmering lines...
- Sunburn
  Even mild sunburn can cause permanent skin damage and may increase your risk of skin cancer...
- Sun protection in the snow
  Winter activities such as snow skiing or snowboarding pose a high risk of sunburn...

betterhealth.vic.gov.au
Skin conditions

- **Acne**
  Acne is common and can make people of all ages feel embarrassed, but treatments can help if acne is causing distress.

- **Bowen's disease**
  Bowen’s disease produces persistent red scaly patches on the skin that are neither sore nor itchy.

- **Eczema (atopic dermatitis)**
  Eczema can vary in severity, and symptoms may flare up or subside from day to day.

- **Erythema nodosum**
  Erythema nodosum appears as red tender lumps, most commonly on the shins.

- **Leprosy (Hansen’s disease)**
  Once a person with leprosy begins treatment they quickly become non-infectious.

- **McCune-Albright syndrome**
  The severity of symptoms or how a child with McCune-Albright syndrome will be affected throughout life is difficult to predict.

- **Psoriasis**
  There is no cure for psoriasis, but it can be well controlled with treatment.

- **Raynaud's phenomenon**
  Raynaud's phenomenon can be a sign of a more serious underlying condition, so see your doctor if you experience it.

- **Rosacea**
  In men, severe rosacea can cause the nose to become reddened and enlarged (rhinophyma).

- **Scleroderma**
  The most common symptom of scleroderma is a thickening and hardening of the skin, particularly of the hands and face.

- **Tinea**
  Tinea is contagious and can be spread by skin-to-skin contact or indirectly through towels, clothes or floors.

Skin irritations

- **Bedbugs**
  Bedbugs have highly developed mouth parts that can pierce skin.

- **Bites and stings – first aid**
  If you are bitten or stung by an insect or animal, apply first aid and seek medical treatment as soon as possible.

- **Body lice**
  Body lice can spread from one person to another when the environmental conditions are crowded and unhygienic.

- **Cradle cap**
  Cradle cap is not contagious and it is not caused by poor hygiene or bad parenting.

- **Dandruff and itchy scalp**
  Itching scalp can be caused by a number of conditions, including dandruff, seborrhoeic dermatitis and psoriasis.

- **Fleas**
  Fleas are parasites that feed off the blood of humans and animals, and can spread infection.

- **Hives**
  Hives (urticaria) is a reaction to the release of histamine into the skin.

- **Nappy rash**
  Most babies get nappy rash at some stage, no matter how well they are cared for.

- **Scabies**

betterhealth.vic.gov.au
If you have scabies, your sexual partners and all members of your household will also need to be treated.

Burns, sores and infections

- Bites and stings – first aid
  If you are bitten or stung by an insect or animal, apply first aid and seek medical treatment as soon as possible.

- Blisters
  A blister is one of the body’s responses to injury or friction.

- Buds
  Some areas of the body are more susceptible to buds, including the face, throat, armpits, groin and buttocks.

- Burns and scalds
  Immediate first aid for all burns is to hold the burn under cool running water for at least 20 minutes.

- Burns and scalds - children
  Most hot tap water scald injuries to children happen in the bathroom.

- Buruli ulcer
  Since the ulcer gets bigger with time, early diagnosis and prompt treatment of Baarsdale disease can keep skin loss to a minimum.

- Cellulitis
  Cellulitis is a bacterial infection of the skin that occurs most commonly on the lower legs and in areas where the skin is damaged or inflamed.

- Chilblains
  The symptoms of chilblains are made worse with sudden temperature changes.

- Cold sores
  Cold sores are blisters around the mouth and nose, caused by the herpes simplex virus.

- Cysts
  Cysts may be as small as a blister or large enough to hold litres of fluid.

- Frostbite
  Exhaustion, hunger and dehydration further lower the body’s defences against frostbite.

- Impetigo - school sores
  Impetigo, or school sores, is a highly contagious skin infection that commonly affects school-aged children.

- Leg ulcers
  Age, varicose veins, smoking and arterial disease increase the risk of leg ulcers.

- Molluscum contagiosum
  Molluscum contagiosum can be mistaken for genital warts or pimples, check with your doctor for an accurate diagnosis.

- Pityriasis rosea
  Generally, pityriasis rosea is a one-off event - once it has gone, the rash doesn’t reappear.

- Pressure sores
  Pressure sores can be difficult to treat and may lead to serious complications.

- Shingles
  Shingles is caused by the same virus responsible for chickenpox.

- Skin cuts and abrasions
  The body begins repairing a wound immediately and the process may continue for days, weeks, months or even years.

- Tinea
  Tinea is contagious and can be spread by skin-to-skin contact or indirectly through towels, clothes or floors.

- Warts
Warts can be stubborn, so you may need to use more than one type of treatment...

Skin changes

- **Cosmetic surgery**
  Cosmetic surgery carries risks and, in some cases, the results are not what you may anticipate...

- **Home tattooing**
  Home tattooing, or getting tattoos overseas, puts you at risk of serious complications that can be debilitating and life-long...

- **Piercings**
  If you want to have your body pierced, choose an experienced, registered practitioner to reduce the risks of infection and scarring...

- **Tattoos**
  If you want to get a tattoo, choose an experienced, registered practitioner to reduce the risks of infection and scarring...

Related Information

- **Pityriasis rosea**
  Generally, pityriasis rosea is a one-off event - once it has gone, the rash doesn't reappear...

- **Boils**
  Some areas of the body are more susceptible to boils, including the face, throat, armpits, groin and buttocks...

- **Cellulitis**
  Cellulitis is a bacterial infection of the skin that occurs most commonly on the lower legs and in areas where the skin is damaged or inflamed...

- **Warts**
  Warts can be stubborn, so you may need to use more than one type of treatment...

- **Tinea**
  Tinea is contagious and can be spread by skin-to-skin contact or indirectly through towels, clothes or floors...

Home

Related information on other websites

- [DermNet NZ - Leg ulcers](http://www.dermnetnz.org/)

Content Partner

This page has been produced in consultation with and approved by: Better Health Channel - (need new cp)

Last updated: August 2014

Page content currently being reviewed.

Content on this website is provided for information purposes only. Information about a therapy, service, product or treatment does not in any way endorse or support such therapy, service, product or treatment and is not intended to replace advice from your doctor or other registered health professional. The information and materials contained on this website are not intended to constitute a comprehensive guide concerning all aspects of the therapy, product or treatment described on the website. All users are urged to always seek advice from a registered health care professional for diagnosis and answers to their medical questions and to ascertain whether the particular therapy, service, product or treatment described on the website is suitable in their circumstances. The State of Victoria and the Department of Health & Human Services shall not bear any liability for reliance by any user on the materials contained on this website.

betterhealth.vic.gov.au
My Health Life helps you manage your health
With tools, information and recommendations tailored to you, it’s your personal and secure health dashboard.

Learn more

Medical Dictionary
Enter a search term
Search

Search for your topic using the Merriam Webster medical dictionary

Service Search

Service Search
Find services near you

Service: Select a service
Location:

Type a minimum of three characters then press UP or DOWN on the keyboard to navigate the autocompleted search results

Eg. Melbourne or 3000

Find a service

If you are worried about your health, please consult your general practitioner.

Find a doctor
Need to find a doctor in your local area? Take a look at the general practitioners entry in our health service profiles.

see general practitioner

betterhealth.vic.gov.au