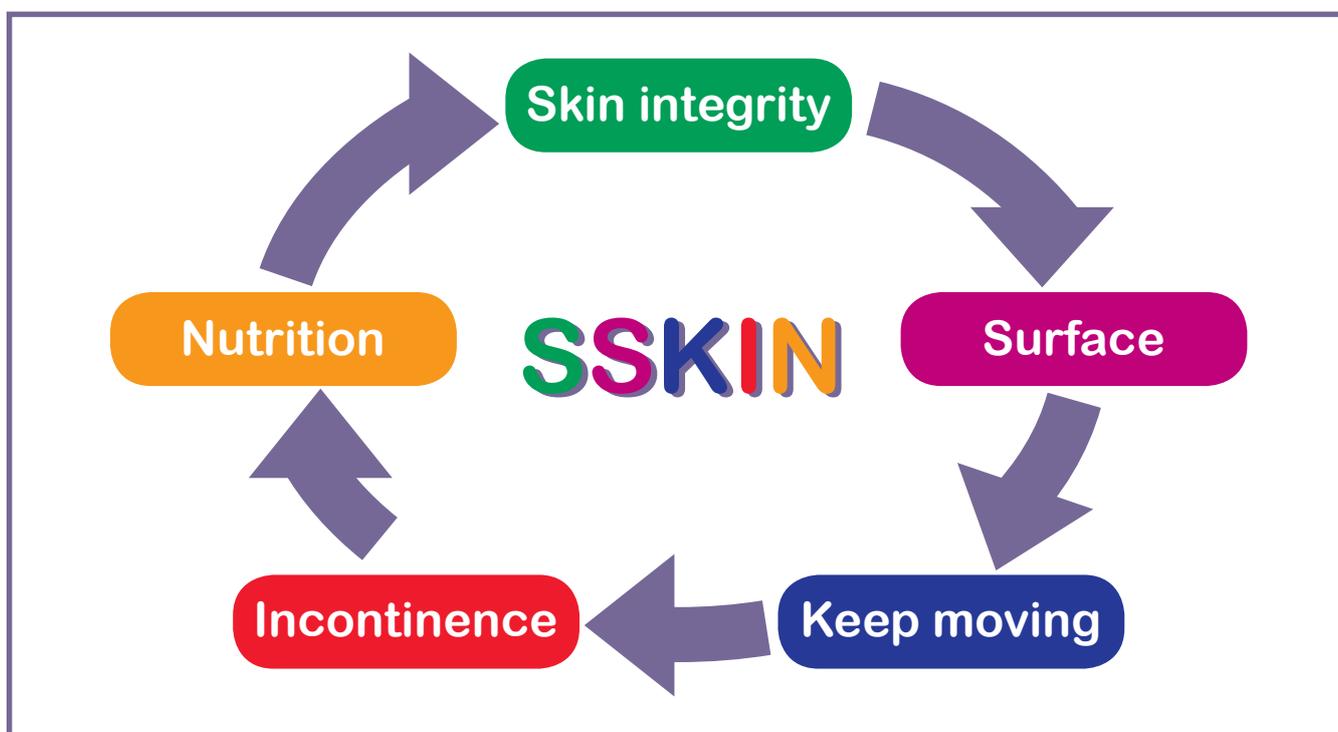


Pressure ulcers (bed sores) and what can be done to prevent them

Patient Information Leaflet

A guide for patients, their family and carers



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Introduction

Pressure ulcers are also known as pressure sores or bed sores. They occur when the skin and underlying tissue becomes damaged. In very serious cases, the underlying muscle and bone can also be damaged.

People who are unable to move some or all of their body due to illness, paralysis or advanced age often develop pressure ulcers.

Your healthcare professional will assess whether you are at risk of developing a pressure ulcer. This will involve them examining you and asking you some questions. Please see page 7 for further information.

Your skin should be assessed regularly to check for signs of pressure ulcer development. How often your skin is checked depends on your level of risk and your general health.

How common are pressure ulcers?

Pressure ulcers are a widespread and often underestimated health problem. For example, in the UK, it's estimated that between 4 and 10% of all patients admitted to hospital will develop at least one pressure ulcer. For elderly people with mobility problems, the figure can be as high as 70%.

It is our aim to have no avoidable pressure ulcers in our care. Even with the best possible medical and nursing care, pressure ulcers can be difficult to prevent in particularly vulnerable people.

Likely outcomes (prognosis)

In some cases, pressure ulcers present a minor inconvenience that can be treated with some simple nursing care. However, sometimes they can cause extensive damage to the skin, and lead to life-threatening infections. **To prevent pressure ulcers progressing, it is extremely important that they are treated as soon as they appear.**

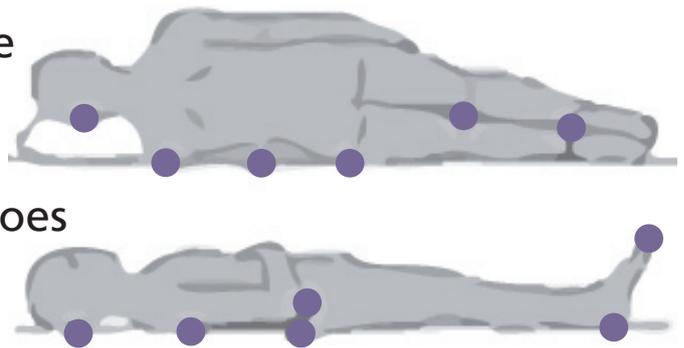
The aim of treatment is to relieve the pressure on affected areas. Some specialist equipment such as mattresses or specialised dressings may be used in order to achieve this.

Symptoms - what to look for

The areas that are most at risk of developing pressure ulcers are the parts of the body that are not covered by a high level of body fat and are in direct contact with a supporting surface, such as a bed or chair.

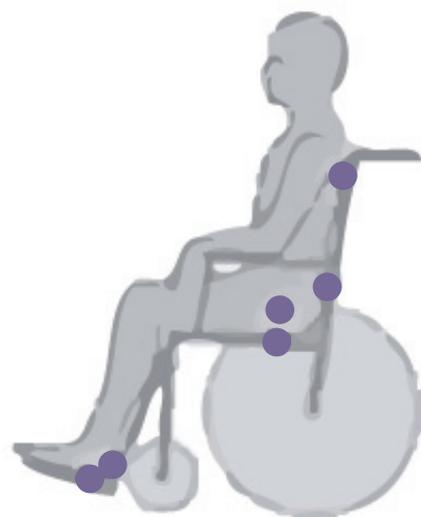
For example, if you are lying down a lot, you are at risk of developing pressure ulcers on:

- your shoulders or shoulder blades
- your elbows and your rib cage
- the back of your head
- the rims of your ears
- your knees, ankles, heels, or toes
- your lower back, or hipbone
- your buttocks and thighs
- the genitals (in men).



If you are a wheelchair user or sit in a chair for long periods of time you are at risk of developing pressure ulcers on:

- your buttocks
- your tailbone - the small bone at the bottom of your spine
- your spine
- your shoulder blades, and
- the back of your arms and legs.



Early symptoms

- red patches of skin on light skinned people and bluish/purplish patches on dark skinned people that don't go away
- blisters, or damage to the skin
- swelling
- patches of hot skin
- patches of hard skin
- patches of cool skin.

If you or your carer notice possible signs of damage you should tell someone in your healthcare team immediately – one of the nurses if you are in a hospital or care home, or your community nurse or GP if you are at home.

Categories of pressure ulcers

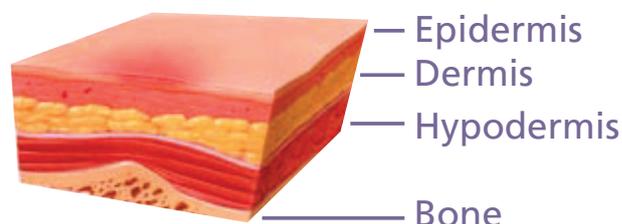
Health professionals use a categorising system to describe the severity of pressure ulcers. These are described below.

Category one

A category one pressure ulcer is the most superficial type of ulcer. The affected area of skin appears discoloured and is red in white

people and purple or blue in people with darker coloured skin.

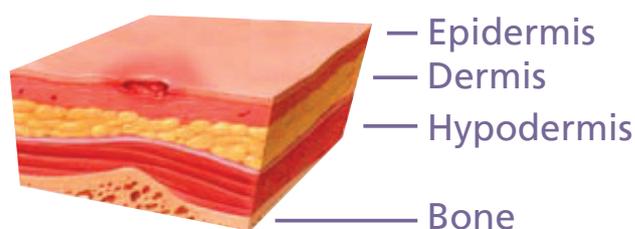
In a category one pressure ulcer, the skin remains intact, but it may hurt, or itch, and may feel either warm and soft, or hard to the touch.



Category two

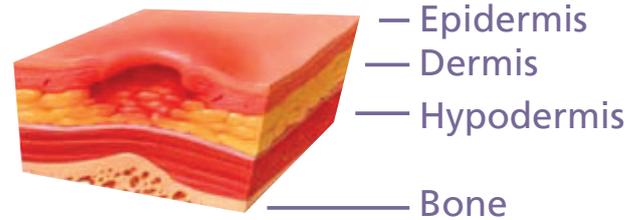
In a category two pressure ulcer, some of the outer surface of the skin (the epidermis) or the deeper layer of skin (the dermis) is

damaged, leading to skin loss. The ulcer looks like an open wound or a blister.



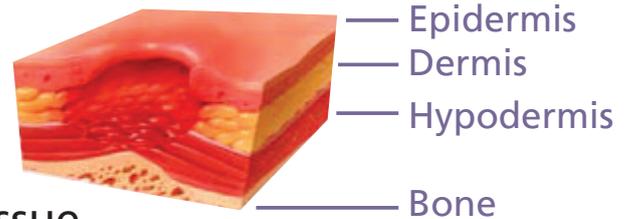
Category three

In a category three pressure ulcer, skin loss occurs throughout the entire thickness of the skin and the underlying tissue is also damaged. The underlying muscles and bone are not damaged. The ulcer may appear as a deep cavity-like wound.



Category four

A category four pressure ulcer is the most severe type of ulcer. The skin is severely damaged and the surrounding tissue begins to die (tissue necrosis). The underlying muscles or bone may also be damaged.



People with category four pressure ulcers have a high risk of developing a life-threatening infection.

Causes

Pressure ulcers develop when sustained pressure interrupts the blood supply to parts of the body. Blood contains oxygen and other nutrients that are required to keep tissue healthy. Without a constant supply of blood, tissue damage occurs and the tissue will eventually die.

Pressure ulcers do not develop in people with normal mobility because the body automatically makes hundreds of regular movements which prevent pressure from building up on any one part of the body. For example, when you are asleep, you may think that you are lying still, but it is not uncommon to shift position up to twenty times a night.

If a person is unable to move regularly - for example, due to illness, injury, or paralysis - **pressure ulcers can quickly develop, sometimes over the course of a few hours. It is really important to get medical advice as soon as possible.**

Types of damage which can lead to pressure ulcers developing

There are four main reasons why pressure ulcers develop. These are listed below.

Pressure - is the weight of the body pressing down on the skin onto a firm surface.

Shear - the layers of the skin are forced to slide over one another or over deeper tissues. For example when you slide down, or are pulled up a bed or chair or when you are transferring to and from your wheelchair.

Friction - is caused by something, such as a mattress or clothing rubbing against the surface of the skin.

Moisture - is another risk factor for pressure ulcers. It can irritate the skin and make it more vulnerable to damage. This is the reason why people with urinary or bowel incontinence have an increased risk of getting pressure ulcers.

Risk factors for pressure ulcers

The known risk factors for the development of pressure ulcers are listed below.

- **Mobility problems** - problems moving or being unable to change position without assistance.
- **Inability to feel pain** - in a part, or all of the body as a result of nerve damage.
- **Incontinence** - prolonged exposure to moisture can irritate the skin and make it vulnerable to damage (see page 10).
- **A poor diet** - a lack of good nutrition can weaken the immune system and slow the healing process (see page 11).
- **Obesity.**
- **Smoking** - reduces your blood's ability to carry oxygen around the body (see page 11).
- **Having a pre-existing health condition** that affects the blood circulation system, such as diabetes, or arteriosclerosis (hardening of the arteries).
- **Weight loss, or muscle loss** - reduced levels of fat and muscle result in the skin being placed under a higher level of pressure.

- **Being elderly** - elderly people tend to have thinner skin and reduced levels of muscle and fat.
- **Having a health condition** such as cerebral palsy that causes muscle spasms or stiffness. Spasms and stiffness will place your skin under increased shear and friction pressure.
- **Having spinal damage** which means that you will be unable to move some, or all of your body.
- **Illness** - any physical or mental illness that affects how much you move about, your appetite or how much you sleep, for example a chest infection or depression. Any illness that reduces your awareness of the need to move or induces movements that increase friction/pressure risk, for example dementia, Huntington's or Parkinson's Disease.
- **Having a learning disability** - people with profound and multiple disabilities for example scoliosis (abnormal curvature of the spine), internal spinal supports and dislocated joints are more at risk. Some behaviours and cognitive impairment associated with learning disability can also affect risk.

Diagnosis

Risk assessment

Pressure ulcers are easily diagnosed by visual examination. However it is our aim to prevent ulcers occurring in the first place. An important part of the diagnostic process is to assess your level of risk for developing them.

As part of the risk assessment process, the health professionals involved in your care will consider:

- your general health
- your ability to move
- whether you have any problems that may affect your posture
- whether you have any symptoms that may indicate the presence of infection
- your mental health
- whether you have had pressure ulcers in the past
- whether you are incontinent
- your diet, and
- how well your blood circulation system is working.

As part of this assessment, you may be referred for blood and urine tests. Blood tests can be a good way of assessing your general state of health and whether your diet is providing enough nutrition.

Urine tests can be used to check how well your kidneys are working and whether you have a urinary tract infection (an infection of the kidneys, bladder, or urethra). These types of infection can be of concern if you are incontinent, or if you have experienced spinal damage.

You (and your carer if appropriate) should be fully informed about your care and involved in decisions about your care.

Self assessment

If you have been assessed as at risk of developing pressure ulcers and are not in a hospital or care home, you may be advised to carry out daily checks for early symptoms (please also see page 4). The health care staff looking after you will respect and take into consideration your knowledge and experience, especially if you have been at risk of pressure ulcers for a long time. If you or your carer need advice or training on how to check for, or prevent pressure ulcers, please do not hesitate to ask your nurse.

Using a mirror can be helpful for checking parts of your body that are hard to see, such as your back or buttocks.

If you notice any possible signs of damage, even if you don't think it is a pressure ulcer you should contact your nurse or healthcare team immediately. If you are not in a hospital or care home you will find their contact details on the back cover of this leaflet.

Preventing pressure ulcers - SSKIN explained

As part of your treatment plan, your care team will discuss with you the best way to prevent pressure ulcers. This will be based on your individual circumstances and the SSKIN approach.



Skin integrity

Your skin should be checked regularly for any signs of damage or discolouration. **If you notice anything, please tell us immediately.**

Surface

Your healthcare professional will advise you on how to make sure that surfaces such as mattresses, chairs, sheets, cushions and pillows are appropriate to you individually and your risk of developing a pressure ulcer. A range of special mattresses and cushions are available that can be used to relieve pressure on vulnerable parts of the body. Your care team will discuss what types of mattresses and cushions are best for you.

People who are thought to be at risk of developing pressure ulcers, or who have pre-existing category one or two pressure ulcers usually benefit from resting on a specially designed foam mattress which relieves the pressure on their body.

Keeping moving - changing position

Making regular and frequent changes to your position is one of the most effective ways of preventing pressure ulcers. As a general rule wheelchair users will need to change their position at least once every 15-30 minutes. People who are confined to bed will need to change their position at least once every two hours.

If you are unable to change position yourself, a carer or relative will be required to assist you.

Regularly moving your body and changing your position is one of the best ways to prevent pressure ulcers developing, and to relieve pressure on category one and category two pressure ulcers.

Once your risk assessment has been completed, your care team will draw up a 'repositioning timetable' in agreement with you, which will state how often you need to be moved. For some people this may be as often as once every 15 minutes, while others may need to be moved only once every two hours.

A nurse or physiotherapist may also give you training and advice about:

- correct sitting and lying positions
- how you can adjust your sitting and lying position
- how often you need to move or be moved
- how best to support your feet
- how to keep a good posture, and
- how to use any special equipment.

Incontinence

Prolonged exposure to moisture makes skin more vulnerable. You should wash using a mild soap to minimise the risk of irritation to the skin, ideally one with a Ph balance of 5.5 and gently pat your skin dry. Your healthcare professional will be able to advise if any further creams are necessary, for example barrier creams or whether you should wash with a cream called hydromol.

Nutrition

Eating well and drinking enough water is very important. A healthy diet that contains an adequate amount of protein and a good variety of vitamins and minerals can help prevent skin damage occurring and speed up the healing process. Certain dietary supplements such as protein, zinc and vitamin C have been shown to accelerate wound healing. If your diet lacks these vitamins and minerals, your skin may become more vulnerable to the development of pressure ulcers. If this is the case, you may be referred to a dietitian so that a diet plan can be drawn up for you.

If you are currently experiencing a reduced appetite due to a pre-existing health condition:

- Try eating smaller meals throughout the day rather than two or three larger meals. Setting a timetable highlighting when you should eat, rather than waiting until you feel hungry, should help to ensure that you receive the nutrition your body needs.
- Limit fluids during your meals because this can make you feel fuller than you actually are. Drink most of your fluids 30-60 minutes before you have a meal.
- Try drinking specially made nutritional drinks or puréed foods and soups if you find swallowing difficult.

If you are a vegetarian, it is important that you eat high-protein alternatives to meat. Quorn, cheese, yoghurt, peanut butter, custard, beans and nuts are all good sources of protein.

Quit smoking

If you are a smoker, giving up is one of the most effective ways to prevent the development of pressure ulcers. Smoking reduces the levels of oxygen in your blood, as well as weakening your immune system, increasing your risk of getting pressure ulcers.

For free, confidential advice, please ask your healthcare professional or telephone [0845 045 2828](tel:0845 045 2828).

Treatment

Your care team

Pressure ulcers may arise as a result of many contributory factors, so your care may be provided by a care team made up of many different types of health professionals. This is sometimes known as a multi-disciplinary team (MDT).

Members of a MDT may include nurses, incontinence advisor, physiotherapist, dietitian and specialist doctors. During treatment we may ask for your permission to photograph your pressure ulcer. This will help us to monitor progress.

Keeping moving - changing position

If you have a pressure ulcer, lying or sitting on the ulcer should be avoided as it will make it worse. Regular repositioning will allow the ulcer to heal and avoid further damage.

Mattresses and cushions

Please see page 9 (surface section). People with a category three or four pressure ulcer will require a more sophisticated mattress or bed system. For example, there are mattresses that can be connected to a constant flow of air, which is automatically regulated in order to reduce pressure as and when required.

Dressings

Specially designed dressings and bandages are available that can be used to protect pressure ulcers and speed up the healing process. A variety of dressings are available. Your healthcare professional will advise on which is best for you.

Topical Negative Pressure (TNP)

In some instances, such as large or very deep wounds or wounds that are producing high volumes of fluid, your healthcare professional may discuss using TNP. This is a mechanical wound care treatment that uses controlled negative pressure to assist and accelerate wound healing and consists of a wound dressing containing a drainage tube attached to a small vacuum pump. The pump comes with a carry bag so this will not affect your mobility during treatment and can be applied to patients in their own home as well as in hospitals.

Antibiotics

If you have a pressure ulcer, you may be given antibiotics if it becomes infected by bacteria. Antibiotics may also be given as a precaution, to prevent a secondary infection developing.

Anti-microbial dressings may also be applied directly to any pressure ulcers to clear out any bacteria that may be present.

Your diet

Please see nutrition information on page 11.

Removing damaged skin

In some cases it may be necessary to remove dead tissue from the ulcer in order to stimulate the healing process. This is known as debridement.

If there is a small amount of dead tissue it may be possible to remove it using specially designed dressings and paste.

Larger amounts of dead tissue may be removed using mechanical means. If this is necessary, you will be referred to another health service provider. Some methods of mechanical debridement are:

- cleansing and pressure irrigation - where dead tissue is removed using high-pressure water jets,
- ultrasound - where dead tissue is removed using low-frequency energy waves, and
- laser - where dead tissue is removed using focused beams of light.

Larvae therapy

Larvae therapy - also known as maggot therapy - is an alternative method of debridement. Larvae are ideal for debridement because they feed on dead and infected tissue without touching healthy tissue. They are contained within a dressing and help fight infection by releasing substances that kill bacteria and stimulate the healing process.

Surgery

Sometimes it may not be possible for a category three or four pressure ulcer to heal, and surgery will be required to clean or seal the wound and prevent any further tissue damage occurring. If this is the case you will be given further information.

A widely used surgical technique for the treatment of pressure ulcers is known as flap replacement (sometimes referred to as flap reconstruction). During this technique, the surgeon will use a scalpel to debride the ulcer of dead tissue.

Complications

Even with the best possible medical care, complications (which can occasionally be life-threatening) can arise from category three or four pressure ulcers. These complications are:

- Cellulitis - a bacterial infection of the deep layer of skin (dermis) and the layer of fat and soft tissues (the subcutaneous tissues) that lie underneath the skin. The infection can make your skin red, swollen and painful. Cellulitis is not the same as cellulite.
- Blood poisoning
- Bone and joint infection
- Necrotising fasciitis (commonly known as 'flesh-eating' bacteria)
- Gas gangrene - a rare but serious form of infection that occurs when a pressure ulcer becomes infected with the clostridium bacteria.

Any open wound is susceptible to infection including MRSA.

A reminder of early symptoms - what to look for

- red patches of skin on light skinned people and bluish/purplish patches on dark skinned people that don't go away
- blisters, or damage to the skin
- swelling
- patches of hot skin
- patches of hard skin
- patches of cool skin.

Who to contact

If you or your carer notice possible signs of damage you should tell someone in your healthcare team immediately – one of the nurses if you are in hospital or a care home, or your community nurse or GP if you are at home.

Contact numbers

Community Nurse:

Your GP:

Out of hours contact numbers

Community Nurse:

Out of hours GP Service:

If you need this information in another language
or format please telephone 0116 295 0994 or
email: Patient.Information@leicspart.nhs.uk

Arabic

إذا كنت في حاجة إلى قراءة هذه المعلومات بلغة أخرى أو بتنسيق مختلف، يرجى الاتصال بهاتف رقم 0116 295 0994 أو إرسال بريد إلكتروني إلى: Patient.Information@leicspart.nhs.uk

Bengali

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Traditional Chinese

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Gujarati

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Hindi

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Polish

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Punjabi

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Somali

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Urdu

اگر آپ کو یہ معلومات کسی اور زبان یا صورت میں درکار ہوں تو براہ کرم اس ٹیلی فون نمبر 0116 295 0994 یا ای میل پر رابطہ کریں Patient.Information@leicspart.nhs.uk