

# Cellulitis

## Patient Information Leaflet

You have been diagnosed with a condition called cellulitis.

Instead of automatic admission to hospital you have been assessed as suitable to receive all or most of your medication and treatment at home from the Intermediate Care/District Nursing Team.

You may need a 'one off' hospital appointment (with discharge on the same day) but you will then be sent home for the rest of your treatment.

**It is important that you contact your Intermediate Care/ District Nursing Team or your GP (contact numbers on the back cover of this leaflet) immediately if there are any changes in your condition or you experience any of the following symptoms:**

- The redness and swelling spreads further
- You start to feel feverish or more unwell
- Pain increases
- You feel warmer and your temperature is rising
- You become confused
- Your blood glucose levels become unstable (Diabetics only)

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## What is cellulitis?

Cellulitis is 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. Cellulite is a cosmetic problem that is caused by fatty deposits that form under the skin, and it has no relation to cellulitis.

### Bacteria and the skin

Several different types of bacteria live on the surface of the skin. Usually, bacteria do not cause any harm to the body, but if they pass deeper into the skin, this can cause infection.

Bacteria often enter the body through a damaged or broken area of skin, such as a cut, graze or bite. Also, if you have a skin condition, such as eczema, your risk of bacteria entering your skin is increased.

Once bacteria are inside the skin, they start to produce substances that break down the natural barriers that normally prevent bacteria from spreading into the deeper tissue. This enables infection and inflammation to spread.

Cellulitis is a common condition, and most cases can be effectively treated using antibiotics at home. However, in more serious cases, hospital treatment may be required.

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## Symptoms of cellulitis

Cellulitis most commonly affects one of your legs, but symptoms can develop in any area of your body. The condition affects your skin in several ways, causing it to become:

- red
- hot
- tender.
- painful
- swollen and

If you have cellulitis, you may also find that blisters develop on your skin.

Cellulitis can make you feel generally unwell, causing symptoms such as:

- fever
- shivering and
- nausea
- chills.

These symptoms may occur before, or after, your skin symptoms develop.

### Swollen glands

Sometimes, cellulitis can also cause your lymph glands (part of your body's immune system) near to the affected area to become swollen and tender.

For example, if you have cellulitis in your leg, the glands in your groin may swell. This is because your lymph glands are trying to fight off the cellulitis infection to stop it spreading to other parts of your body.

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## Causes of cellulitis

### Bacteria

Cellulitis is caused by a bacterial infection of the skin and the tissues underneath it.

The streptococci, or staphylococci, groups of bacteria are the most common cause of infection because these bacteria already live on the skin's surface.

Cellulitis usually occurs when the surface of your skin becomes damaged because this creates an entry point for the bacteria, allowing them to attack the skin and tissue underneath. A break in the skin may be caused by a:

- cut
- graze
- burn
- bite
- skin ulcer or a
- skin condition, such as atopic eczema (an itchy skin condition that causes the skin to become dry, red and cracked), or athlete's foot.

Some people who develop cellulitis do not have an identifiable wound, or break, in their skin. In such cases, the infection is usually introduced via the blood, or the lymphatic system (a series of vessels and glands that is part of the immune system), and this can be serious.

### Risk factors

There are a number of factors, and other conditions, which may increase your risk of developing cellulitis. Some of these factors are outlined on the next page.

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## **Obesity**

Being overweight can cause swelling in your legs which may increase your risk of developing cellulitis.

## **A weakened immune system**

Your immune system may be weakened if you are undergoing chemotherapy, or you have a condition such as HIV or AIDS. If your immune system is weakened, it makes it harder for your body to fight off infection.

## **Poorly controlled diabetes**

If you have diabetes that is not being adequately treated, or controlled, it can weaken your immune system. Poorly controlled diabetes can also affect your circulation which can sometimes cause skin ulcers to develop. Skin ulcers are a common entry point for bacteria.

## **Circulation problems**

Having poor circulation can increase your risk of developing skin infections in the places where your body does not have adequate blood supply.

## **Chickenpox and shingles**

Chickenpox and shingles often cause blisters to develop on your skin. If the blisters are broken, or scratched, it can damage your skin and provide an entry point for bacteria.

## **Lymphoedema**

Lymphoedema is a condition that causes fluid to build up under your skin. If your skin becomes very swollen it may crack, creating an entry point for bacteria.

## **Previous episodes of cellulitis**

If you have had a previous episode of cellulitis your risk of having further episodes in the future will be increased.

## **Intravenous drug use**

People who inject illegal drugs have an increased risk of developing cellulitis because poor needle hygiene can increase the risk of infection.

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## Diagnosing cellulitis

Your GP will normally be able to diagnose cellulitis by assessing your symptoms.

Before making a diagnosis, your GP may have to rule out other conditions which may cause your skin to become swollen and inflamed, such as varicose eczema (an itchy skin condition that causes inflammation and can lead to skin ulcers).

If you have an open wound in your skin, your GP may have to take a swab of cells from the wound for assessment to see what type of bacteria is causing the infection.

You will not normally require any other kind of test for cellulitis.

## Treating cellulitis

### Antibiotics

Most cases of cellulitis are treated using antibiotics. Cellulitis usually responds quickly to antibiotics and you should soon find your symptoms starting to ease.

You may notice that your skin initially becomes redder when you first start taking the antibiotics, but this is normally only a temporary reaction. The redness should start to fade within 48 hours.

**If your symptoms worsen 48 hours after taking the antibiotics, or you start to develop symptoms such as a high temperature or vomiting you should contact your Intermediate Care/District Nursing Team or your GP (contact numbers on the back cover of this leaflet) immediately.**

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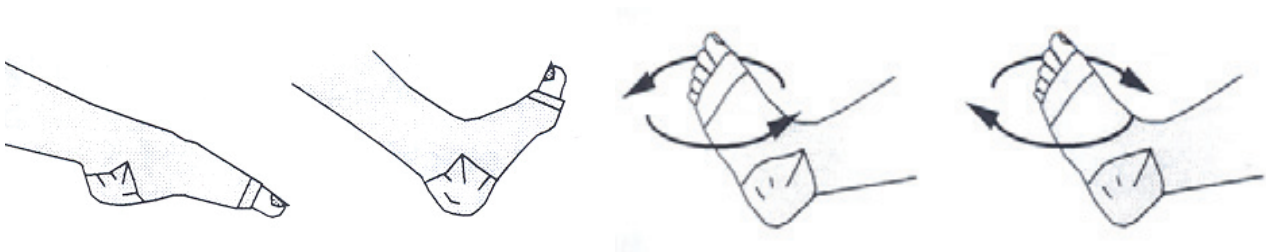
The most commonly prescribed antibiotic medicine for cellulitis is flucloxacillin. However, if flucloxacillin is not suitable, you may be prescribed doxycycline instead. You will normally have to take these antibiotics for seven days. In some cases, you may have an injection of teicoplanin, or be given two antibiotics together.

## Self-care

If you have cellulitis, there are some things that you can do at home in order to help ease your symptoms and speed your recovery.

- **Finish the course of any prescribed oral antibiotics**, even though you may feel better and the redness is subsiding.
- If your cellulitis is on your leg, elevate it above hip level whenever you sit down. If it affects your arm, lift the lower arm above the level of your elbow.
- If this is uncomfortable lie on a sofa or bed as much as possible to help the drainage and circulation in the limb.
- Although rest and elevation are essential, you must also mobilise your ankle joint and walk to the toilet.
- It is important to drink plenty of clear fluids eg. water, squash or tea.

## Ankle exercises



Your nurse can advise on how often you should do these exercises.

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## Pain relief

If your cellulitis is causing you pain or fever, **it is important that you take pain relief so that you are able to exercise your ankle and can visit the toilet.** Taking an over-the-counter (OTC) painkilling medication may help to ease your symptoms. Both paracetamol and ibuprofen are suitable forms of painkilling medication for cellulitis.

You should not take ibuprofen if you have, or have had in the past, stomach problems such as a peptic ulcer. It may also be unsuitable if you have asthma.

Aspirin is **NOT** recommended for treating pain that is caused by cellulitis. Speak to your pharmacist if you are unsure about which painkiller is best for you.

## Hospital treatment

You have been assessed as being suitable to receive all, or most of your medication and treatment at home from the Intermediate Care/District Nursing Team.

In some cases hospital treatment may be necessary if:

- your cellulitis is severe or rapidly deteriorating,
- you have severe secondary symptoms such as fever or vomiting,
- you fail to respond to antibiotics or
- you have cellulitis on a recurring basis.

Once you are in hospital, you will normally require antibiotics to be given intravenously (through a vein in your arm).

## Complications of cellulitis

Most cases of cellulitis can be effectively treated using antibiotics and will not result in any complications or long-term health problems.

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However, in a small number of cases, cellulitis can lead to serious complications particularly if the condition is left untreated.

### Septicaemia

If the bacteria which infect your skin and tissue get into your bloodstream, it can lead to a condition known as septicaemia (blood poisoning). Symptoms of septicaemia may include:

- fever
- fast heart beat
- fast breathing
- low blood pressure (hypotension), which will cause you to feel dizzy when you stand up
- a change in mental behaviour such as confusion or disorientation
- diarrhoea
- reduced urine flow
- cold, clammy skin
- pale skin and
- loss of consciousness.

**If you are displaying these symptoms, you should seek emergency medical attention by calling 999 to ask for an ambulance.**

### Infection in other parts of the body

In very rare cases the infection that causes cellulitis can spread to other parts of your body:

- muscle,
- bone, or
- heart valves.

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Infection in these parts of the body can be serious and will require intensive treatment. However, it is important to be aware that this is rare, and most cases of cellulitis will not spread from the original location.

### Swelling

If you have cellulitis and it remains untreated, your risk of developing permanent swelling in your legs or other affected body part may increase.

This is because an advanced infection can stop lymph (the fluid which surrounds your tissues) from draining away. In severe cases, the swelling may be long-lasting or permanent.

### After care

Once the inflammation is subsiding, it is important to care for the skin on your legs to prevent further problems.

- Wash feet/legs daily in warm water using non-soap/non perfumed moisturiser e.g. Aqueous cream, Hydromol.
- Moisturisers/emollients can reduce the lifetime of the elastic in your hosiery, therefore allow time for it to soak in or apply in the evening after removal of hosiery (a stockinette can be applied to protect your bed linen e.g. Clinifast).
- As the cellulitis gets better the surface layer of skin will loosen and 'slough off'. It is important to maintain skin hygiene and moisturise the skin regularly e.g. morning and evening to increase elasticity and suppleness and prevent cracking – another source of infection.
- Do not allow scabs or dry skin scales to form, these can allow bacteria to build up underneath un-noticed and are a potential source of further infection.
- Avoid direct exposure of your legs to sunlight or trauma.

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- If you have been advised to wear compression hosiery, renew these every 3 months as they can lose their effectiveness over time. You will need to measure the largest part of your ankle and calf or your pharmacist can measure these for you so that the correct size hosiery is ordered.

## Preventing cellulitis

Not all cases of cellulitis can be prevented. However, there are some steps that you can take to help reduce the risk of developing the condition as well as other forms of infection.

### Treating skin wounds

Make sure that any cuts, grazes or bites that you have are kept clean. Wash the damaged skin under running tap water and, if necessary, apply an antiseptic cream.

You should keep the wound covered, either with a plaster or dressing. Make sure that you change the plaster or dressing if it becomes wet or dirty. Plasters and dressings will help reduce the risk of scratching and they will also help to create a barrier against bacteria entering the skin.

### Keep your fingernails short

If you have an itchy skin condition such as atopic eczema, or chickenpox, you should keep your fingernails clean and short at all times.

If you do scratch your skin and your fingernails are short and clean, the risk of skin damage and infection will be reduced. You should also wash your hands regularly, particularly when treating, or touching your wound or skin condition.

### Keep your skin moisturised

If your skin is dry, or prone to cracking, make sure that you keep your skin well moisturised. Cracked skin can create an entry point for bacteria.

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## Contact numbers

District Nurse:

Intermediate Care Team:

Your GP:

## Out of hours contact numbers

District Nurse:

Intermediate Care Team:

Out of hours GP Service:

**If you would like this information in another language or format, please contact the Patient Information Officer on 0116 295 0903**

**Visit our website: [www.leicspt.nhs.uk](http://www.leicspt.nhs.uk)**

### References

Leicestershire County and Rutland Primary Care Cellulitis Pathway NP084

[10 August 2009]

NHS Choices:

<http://www.nhs.uk/Conditions/Cellulitis/Pages/Introduction.aspx>

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