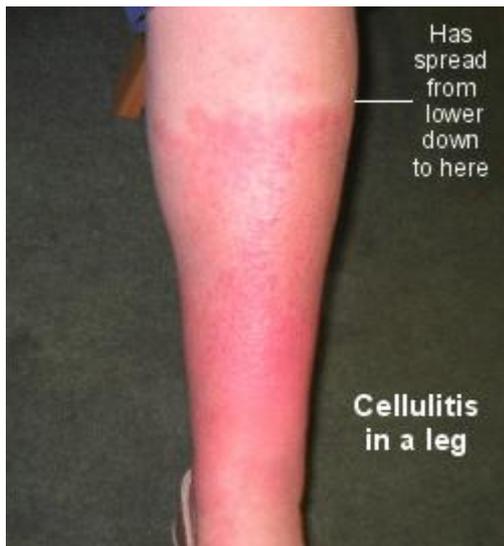


Information for Patients

You have been asked to attend the Ambulatory Emergency Care [AEC] at Kingston Hospital for continuing treatment for Cellulitis.

Cellulitis is an infection of the skin and the tissues just below the skin surface. Any area of the skin can be affected but the leg is the most common site. A course of antibiotics will usually clear the infection. If you have a cellulitis of the leg, as much as possible keep your foot raised higher than your hip. This helps to prevent excess swelling which may ease pain. Examples of how to raise your leg in this way are given below.

What is cellulitis?



Cellulitis is an infection of the deep layer of skin (dermis) and the layer of fat and tissues just under the skin (the subcutaneous tissues).

Erysipelas is an infection of the skin which is nearer to the skin surface (more superficial) than cellulitis.

In reality, it is difficult to tell how deep an infection is, so cellulitis and erysipelas are much the same thing.

What causes cellulitis?

The skin is a good barrier against infection. However, a break in the skin from a cut, skin ulcer, injection, athlete's foot, scratch, etc, is a way in which bacteria (germs) can get into and under the skin. A tiny cut is all that is needed to allow bacteria in.

We all have some bacteria that live on our skin which normally do not cause any problems. However, if your skin is damaged or broken in some way, the bacteria can get in. The bacteria may then multiply and spread along under the skin surface to cause an infection. A cut, graze, etc, is found in many cases to be the root cause. However, sometimes the infection occurs for no apparent reason with no break in the skin found. Various different types of bacteria can cause cellulitis.

Who gets cellulitis?

Cellulitis is a common problem. It can affect anyone. However, there are some things that can make you more prone to cellulitis. For example, if you:

- Have athlete's foot (see below).
- Have skin abrasions (cuts).
- Have swollen legs (for various reasons), or are overweight or obese.
- Have previously had an episode of cellulitis.
- Have a poor immune system - for example, if you take steroids or chemotherapy.
- Have poorly-controlled diabetes.
- Are an intravenous drug user.
- Have had an insect bite.
- Have skin problems such as eczema.

A common cause of cellulitis is due to athlete's foot

Athlete's foot is usually a mild fungal skin infection. However, it can cause tiny cracks in the skin between the toes. Bacteria may then get under the skin and travel up to cause a cellulitis in the calf (but without an apparent infection of the foot).

The cellulitis can be treated, but it may recur if the athlete's foot is not also treated. Unless athlete's foot is looked for, it can easily be missed as the source of the problem. Some people have two, three or more bouts of cellulitis before it is realised that the infection in the leg is due to the minor skin cracks between the toes. People more prone to cellulitis, such as those with swollen legs and those who are overweight, should be careful to treat any athlete's foot promptly. Itchiness between the toes is the first sign of athlete's foot. (See separate leaflet called '*Athlete's Foot (Tinea Pedis)*' for details.)

What are the symptoms of cellulitis?

The lower part of the leg is the most common site for cellulitis to develop. However, cellulitis can affect any area of the skin. Affected skin feels warm, may look swollen, and looks red and inflamed. The infected area may spread and is usually tender. Sometimes blisters occur on the skin. The nearest glands may swell and become tender. This is because they

are fighting off the infection to stop it spreading to other parts of the body. For example, the glands in the groin may swell during cellulitis of the leg.

You may feel unwell and have a fever. Indeed, the first symptom is often to feel feverish and shivery for up to 24 hours before any changes to the skin appear.

With erysipelas, the face or a leg are commonly affected. If erysipelas affects the face, infection has often travelled from the nasal (nose) passages from a recent infection of the nasal passages. On the face, infection typically spreads from the nose area across both cheeks. Infection elsewhere produces similar symptoms to cellulitis.

Is cellulitis serious?

Cellulitis can range from affecting a small area of skin to being a large, spreading infection affecting a large area of skin. Therefore, cellulitis can range from mild to serious. Without treatment, a 'battle' is fought between the immune system and the invading bacteria. Often, the body would fight off the bacteria and the infection would clear. However, a spreading cellulitis that is getting worse can be worrying. Therefore, treatment is usually advised as soon as cellulitis is diagnosed to stop it spreading to become serious.

In particular - cellulitis around the eye (periorbital cellulitis) needs urgent treatment. This mainly affects young children and initially causes redness and swelling of the eyelids.

Possible complications of untreated cellulitis include:

- Septicaemia (blood poisoning) which can be life-threatening.
- An abscess forming (a ball of pus in the infected area).
- Muscle or bone infections which can be serious.
- A cellulitis around an eye can spread to infect the brain.
- Bacteria that get into the bloodstream can cause an infection of the heart valves.

Also, if the cellulitis is severe before it is treated, it can leave long-term damage to lymph drainage from affected tissues. This means that in some cases the swelling of tissues may remain, become worse, and can become permanent after the infection has gone.

So, **the 'take home message' is:** if you have a patch of skin that is red, warm and seems to be getting larger, then see a doctor as soon as possible. With treatment, most people with cellulitis make a full recovery without any complications developing.

What is the treatment for cellulitis?

Antibiotics

A course of antibiotic tablets will usually clear cellulitis. A seven day course (sometimes more) is usually needed. Symptoms should soon ease once you start the tablets. (However, there may be an initial increase in redness when treatment is started before it starts to fade.) Your doctor will usually arrange to see you again a few days after starting treatment. However, you should see a doctor sooner if the area of infection continues to spread or you become worse after you start antibiotics. Some bacteria are resistant to some antibiotics. Therefore, a change in antibiotic may be needed if the infection does not improve with the

first antibiotic. You should also see a doctor sooner if you are unable to tolerate (take) the antibiotics. Your doctor may need to prescribe a different antibiotic.

If you have severe cellulitis, or have a mild cellulitis that does not improve with antibiotic tablets, then you may need intravenous antibiotic treatment. This is where the antibiotic is injected into a vein. Some people with severe cellulitis become very unwell and need to be treated in hospital straight away with intravenous antibiotics.

Elevation

Elevating (raising) the affected body part uses gravity to help prevent excess swelling, which may also ease pain. Do this as much as possible until the infection clears.

If you have a cellulitis of the leg, 'raised' means that your foot is higher than your hip so gravity helps to reduce the swelling. When they are told to elevate a leg, many people put their leg on a chair or foot-stool. This is rarely sufficient (even if the chair reclines) as the ankle has to be higher than the hip for elevation to be useful. The easiest way to raise your leg is to lie on a sofa with your heel up on the arm of the sofa (but avoid pressure on the calf). Or, lie on a sofa with your foot on two or three thick cushions. When in bed, put your foot on several pillows so that it is higher than your hip. Alternatively, empty a deep drawer and put it under the mattress at the foot of your bed.

You may need to keep your foot elevated as much as possible for a few days. However, to aid circulation, you should go for short walks every now and then, and wiggle your toes regularly when your foot is raised.

If you have cellulitis in a forearm or hand, a high sling can help to raise the affected area.

Other things that may help include:

- Painkillers such as paracetamol or ibuprofen can ease pain and reduce fever.
- Treatment of athlete's foot if it is present. (See separate leaflet called '*Athlete's Foot (Tinea Pedis)*' for details.)
- Using a moisturiser cream and soap substitute on the affected area of skin until it heals. This helps to prevent the skin from becoming dry and damaged.
- Drinking plenty of fluids to help prevent dehydration.
- Having a tetanus booster vaccination if you have had a cut or dirty wound and your tetanus injections are not up-to-date.

What to look out for

Most people with cellulitis recover fully without any complications. However, serious and life-threatening complications may develop in some cases. These are mentioned above. In addition, a condition to be aware of which is similar to cellulitis and can sometimes at first be mistaken for cellulitis is called necrotising fasciitis.

Necrotising fasciitis

This is also an infection that affects the skin and the tissues under the skin (the subcutaneous tissues). It is similar to cellulitis but is always very serious. Various bacteria

can cause necrotising fasciitis, but most commonly it is due to the streptococcus bacterium.

Necrotising fasciitis is one of the fastest-spreading infections known. It is sometimes called the 'flesh-eating' disease. However, the bacteria that cause this infection do not 'eat flesh'. What happens is that they release toxins (poisons) which destroy the nearby tissues such as skin and muscle tissue.

As with cellulitis, the infection of necrotising fasciitis typically starts from a wound in the skin - and this is often very minor, such as a scratch. This allows bacteria into the skin. Typically, the affected skin at first becomes very painful - but in the early stages this is often without any obvious redness or inflammation of the skin. The disease then progresses rapidly (over hours) and the affected tissues then typically become swollen, red, and may blister. You feel very ill - which may seem out of proportion to the 'look' of the skin at first.

Fairly quickly, the affected skin becomes violet or purple, blisters and dies (necroses) along with the subcutaneous tissues. The toxins and infection can affect the rest of the body causing organ failure. Severe cases progress within hours and the death rate from this infection is high (it can be as high as 3 in 10 people or more), even with treatment.

So, symptoms to take special note of are:

- Pain 'out of proportion' to the look of the skin changes.
- Feeling unwell and becoming ill 'out of proportion' to the look of the skin.
- Symptoms that get worse rapidly - either skin symptoms, or how you feel generally.
- Affected skin that goes dusky, purple or blisters.

Necrotising fasciitis is a medical emergency - you need immediate treatment.

But remember, most cases of infected skin are cellulitis and are not necrotising fasciitis. Cellulitis is common and necrotising fasciitis is rare. This section is added for the sake of completeness and for you to be aware of what to look out for.

How can I prevent cellulitis?

Cellulitis may not always be preventable. However, the following may help to reduce your risk of developing cellulitis in some cases:

- Clean any cuts or wounds that you may have. You can wash them under running tap water. You may want to use an antiseptic cream. You can also cover the cut or wound with a plaster. However, make sure that you change the plaster regularly (particularly if it becomes wet or dirty).
- Don't let your skin become too dry. Dry skin can crack easily and bacteria can enter through the skin cracks. Use a moisturiser regularly on your skin.
- Avoid scratching your skin if possible. Conditions such as eczema can make skin very itchy. If your fingernails are long, they can cause breaks in the skin when you are scratching. These breaks can be an entry point for bacteria. So, keep your fingernails short and avoid scratching as much as possible.

Ambulatory Care

You have been assessed and the condition you are being treated for is one that is usually treated in an ambulatory setting. What this means is that you do not need to stay in hospital to be treated and can receive your treatment or monitoring at home. The care delivered in this way has been carefully studied nationally and is felt to be as safe as keep you in hospital whilst offering the opportunity for you to get better whilst being based at home. You will be monitored from this unit.

If you have any queries or concerns about having your treatment or assessment done in this way then please talk to one of the staff or ring the contact numbers below.

Your Appointments:

Date	Time	Location

If you feel unwell before your appointment please contact

08:00 – 20:00

AEC

0208 934 3883

20:00 – 08:00

ED

0208 546 7711 ext 2178