



What Is Cellulitis? What Causes Cellulitis?

Thursday 4 June 2009 - 9am PST

Infectious Diseases / Bacteria / Viruses

Dermatology

Cellulitis and cellulite are two completely different things. Cellulitis is a bacterial infection of the dermis - the deep layer of skin - as well as the subcutaneous tissues (fat and soft tissue layer) that are under the skin. While cellulite is caused by fatty deposits under the skin that give it an orange peel or cottage cheese look. This article is about the bacterial infection - cellulitis.

Bacteria are present on the skin and do not generally cause any harm. However, if they go deep into the skin they can cause infection. They generally get in through cuts, grazes or bites. People with eczema or psoriasis have a higher risk of bacteria getting into the skin.

What causes cellulitis?

Bacteria, most commonly streptococci or staphylococci groups, get under the skin and cause infection. Streptococci and staphylococci groups are commonly found on the surface of the skin and cause no harm - but if they get under the skin they can. For the bacteria to get in they need a route - a break in the skin caused by:

- An ulcer
- A burn
- A bite
- A graze
- A cut
- Some skin conditions, such as eczema, athlete's foot, or psoriasis

The bacteria may also enter by some other route, such as through the blood or lymphatic system. This is most likely if no potential entry route can be identified on the skin of the patient.

Who are more susceptible to cellulitis?

- **Obese people** - obese people are more likely to have swelling in their legs. This raises the chances of developing cellulitis.

- **People with a weakened immune system** - such as patients undergoing chemotherapy or radiotherapy, those with AIDS/HIV, and very elderly people.
- **People with diabetes** - if the diabetes is not properly treated or controlled the patient's immune system will be weaker, he/she will have circulatory problems which can lead to skin ulcers. Poor control of blood glucose levels allows bacteria to grow faster in the affected tissue and facilitates rapid progression if the infection enters the bloodstream.
- **People with blood circulation problems** - if a person has poor circulation he/she is more likely to develop skin infections because the blood supply is not ideal for fighting off infections.
- **People with chickenpox and shingles** - chicken pox and shingles cause skin blisters. If the blisters break they become ideal routes for bacteria to get into the skin.
- **People with lymphodema** - people with lymphodema tend to have swollen skin which is more likely to crack. Cracks in the skin may become perfect entry routes for bacteria.
- **People who have had cellulitis before** - anybody who has had cellulitis has a higher risk of developing it again compared to others.
- **People who inject illegal drugs** - drug addicts who do not have access to a regular supply of clean needles are more likely suffer from infections deep inside the skin.
- **Highly densely populated areas** - there is a higher incidence of cellulitis among people who share common living quarters, such as military installations, school/college dormitories, and homeless shelters.

What are the symptoms of cellulitis?

Although symptoms may appear in any part of the body, the legs are most commonly affected. The affected area will become:

- Warm
- Tender, inflamed
- Swollen
- Red
- Painful

Some patients may have blisters.

The infected person may also have a [fever](#), chills, nausea, and he/she may shiver.

Swollen lymph glands - these may become tender. If the cellulitis has affected the patient's leg the lymph glands in the groin will be tender.

How is cellulitis diagnosed?

Diagnosis is usually fairly straightforward and does not generally require any complicated tests. A GP (general practitioner, primary care physician) can do this. The doctor will examine the patient and assess the symptoms. The number of cases where [Lyme disease](#) has been misdiagnosed as staph- or strep-induced cellulitis is growing.

It is important to discard the possibility that some other condition may have caused the symptoms, such as [varicose eczema](#).

The doctor may take a swab (sample) if there is an open wound. This will help him/her find out what type of bacteria it is.

After treatment the patient needs to come back for a follow-up so that the doctor can confirm that the treatment has worked.

What is the treatment for cellulitis?

■ Medication

Cellulitis nearly always responds rapidly to [antibiotics](#). Some patients experience a slight worsening of the reddening of the skin at the start of antibiotic treatment - this usually subsides within a couple of days. Anyone who experiences fever or vomiting after two days of antibiotic treatment should contact their doctor immediately. Most doctors in the UK prescribe flucloxacillin for cellulitis. For those who cannot take flucloxacillin, erythromycin is a good alternative. Treatment will generally last 7 days. If a patient's infection was caused by contaminated water he/she may have to take two antibiotics simultaneously - usually doxycycline, or ciprofloxacin combined with flucloxacillin or erythromycin.

Oral antibiotics will be given to patients whose infection has not spread to the bloodstream or lymph system, and if they do not have any medical problems. Otherwise the medication may be administered intravenously or by injection.

■ Things you can do yourself

- Drink plenty of water
- Keep the affected area elevated, this helps reduce swelling and pain
- Take a pain killer if you need to (check with your doctor). If you have had stomach problems, such as a [peptic ulcer](#), ask your doctor what painkiller you can take. If you have [asthma](#), check with your doctor

before taking a pain medication. Doctors do not recommend [aspirin](#) for cellulitis pain treatment. In some countries the pharmacist can be a useful source of advice.

Treatment in hospital

Some patients with severe cellulitis may require hospital treatment, especially if the cellulitis is deteriorating, if the patient has a high fever, vomiting, fails to respond to treatment, or has recurrences of cellulitis. Most people who are treated in hospital will receive their antibiotic through a vein in their arm (intravenously, using a drip).

What are the complications of cellulitis?

In the vast majority of cases cellulitis treatment is effective and the patient will have no complications. A small percentage of patients may have serious complications. The risk of complications is higher if the cellulite is not treated.

■ Blood poisoning (septicemia)

When the bacteria get into the bloodstream the patient has a higher risk of developing septicemia. A person with septicemia will have a fever, accelerated heart beat, rapid breathing, [hypotension](#) (low [blood pressure](#)), dizziness when standing up, [diarrhea](#), reduced urine flow, sweaty and cold skin, and pale skin. It is not uncommon for patients to eventually lose consciousness. Anybody who suspects blood poisoning should call the emergency services (ambulance) immediately.

■ Infection goes elsewhere

This is very unusual, but the bacteria that caused the cellulitis can spread to other parts of the body, including muscle, bone or the heart valves. If this happens the patient needs treatment immediately.

■ Permanent swelling

People who do not have their cellulitis treated have a higher risk of eventually having a permanent swelling in the affected area.

Is cellulitis preventable?

Some cases of cellulitis are not preventable. There are things people can do to reduce their chances of developing it. However, there are no large studies confirm some of the suggestions below.

■ Treat your cuts and grazes

If your skin is broken because of a cut, bite or graze, keep it clean and disinfected. Apply antiseptic cream after running tap water on the damaged area. Keep the cut covered with a plaster (band aid) or dressing. Keep the dressing clean and dry.

■ Reduce the likelihood of scratching and infecting your skin

If your fingernails are short and you have itchy skin you are less likely to create an opening for the bacteria to get in when you scratch your skin. Make sure your fingernails are clean.

■ Don't let your skin go dry

Use moisturizers to prevent your skin from cracking if your skin is dry. If you have greasy skin you will not need to do this.

■ Lose weight if you are obese

[Obesity](#) raises the risk of developing cellulitis.

■ Diet and lifestyle

If you eat a well a well-balanced diet including plenty of fruits and vegetables, and do regular exercise, your immune system will benefit. Your immune system will have a better chance of fighting off any bacteria that penetrate through the skin.

■ Protect your skin

If you are going to do some gardening there are things you can do to protect your skin from cuts and grazes; wear gloves, wear long sleeves if you are going to reach into prickly bushes, do not wear shorts if there is a likelihood of grazing the skin of your legs.

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References

There are no references listed for this article.

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