

## UNIVERSITY STUDENT HEALTH SERVICES • Fact Sheet

## CELLULITIS

**WHAT IS IT?**

Cellulitis is an infection of the surface of the skin and its deeper levels: the dermis and subcutaneous tissue.

- The most common site for developing cellulitis is the leg, especially the areas around the shin and ankle. However, cellulitis can occur anywhere on the body.
- If left untreated, the infection can spread rapidly. In severe cases, it can infect adjacent bone, joint spaces, or the bloodstream, which can be life-threatening.

**WHAT CAUSES IT?**

Cellulitis occurs when bacteria enter a break in the skin, multiply, and cause an infection. Cuts and scrapes are common entry points, as well as areas of dry, flaky skin (eg. eczema, psoriasis, fungal skin infections) and insect bites. Cellulitis can also occur in cases where there is no obvious break in the skin, such as in chronic swelling of the legs.

- The two bacteria most often responsible for cellulitis are *streptococcus* and *staphylococcus*.
- A type of *staphylococcus* infection that is resistant to penicillin-type antibiotics known as MRSA (methicillin resistant *staphylococcus aureus*) has become more common and is likely to be the cause when an abscess (a pocket of pus in the dermis or subcutaneous tissue) is present.
- Cellulitis that results from special circumstances (eg. animal bites, hot tub use, injuries while swimming in rivers/lakes/oceans, etc.) are usually due to other less common bacterial organisms.

**WHO DOES IT AFFECT?**

Anyone can develop cellulitis. However, those at greater risk include individuals who have chronic skin conditions, diabetes, weakened immune systems, obesity, and limb swelling from poor circulation.

**WHAT ARE THE SYMPTOMS?**

Cellulitis usually begins as a swollen, red area of the skin that is painful and warm to the touch. It typically has indistinct borders and is only on one side of the body. Symptoms may develop over hours or days. Left untreated, the infection can expand quickly in the skin.

- Red streaking of the skin is a sign of a rapidly spreading infection and requires urgent medical attention.
- Associated symptoms may include fever, chills, palpitations, muscle aches, and swollen lymph nodes near the site of the infection.

**IS IT CONTAGIOUS?**

Because cellulitis is an infection involving deeper layers of the skin, it is not as contagious as a superficial skin infection, such as impetigo.

If the infected area is producing drainage, it should be covered with a clean dry bandage to prevent the spread of infection to others.

**HOW IS IT DIAGNOSED?**

Cellulitis is usually diagnosed based on a person's symptoms and physical exam findings. Further testing may include the following:

- Bloodwork that shows an elevated number of white blood cells (cells that fight infection) helps to support the diagnosis.
- A wound culture may be taken if an abscess is present to identify the specific bacteria causing the infection. In these cases, MRSA is often suspected.
- Further tests may be needed to rule out other serious causes of your symptoms. For example, a blood clot deep in the veins of the arm or leg can also present with redness, swelling, and tenderness.

## **WHAT IS THE TREATMENT?**

### **❖ ANTIBIOTICS**

- Cellulitis responds well to a course of antibiotics.
  - Fevers and chills should resolve within 1-2 days of starting antibiotics.
  - It may take a little longer (1-3 days) to see improvements in the skin. It is not unusual if the area of redness spreads a little further or deepens during early treatment; however, pain and fever should be improving.
  - If symptoms worsen significantly during the first 2-3 days of treatment, it is important to return to clinic for further evaluation.
- Even if you feel better, it is important to finish the entire antibiotic course, typically over 5-7 days, to completely cure the infection. Some infections may require 14 days of treatment.
- Severe infections may require hospitalization and intravenous (IV) antibiotics.
- If an abscess is present, outpatient surgical drainage and/or antibiotic coverage for MRSA may be necessary.

### **❖ OTHER TREATMENT TIPS**

- **Over-the-counter medications** such as acetaminophen (Tylenol) can help decrease pain and control fevers. Some experts suggest avoiding anti-inflammatory medications, such as ibuprofen (Advil or Motrin), in cases of moderate or severe infection as these medications may mask worsening infection.
- **Elevate the affected arm or leg** to help decrease swelling, which can decrease antibiotic penetration into infected tissue. The affected arm/hand should be elevated above the level of the heart; the affected heel should be above the knee, and the affected knee should be above the hip.
- **Cover the infection** with a clean, dry bandage if you have drainage or areas of open skin.
  - This helps to keep bacteria out and also prevents the spread of infection to others.
  - Change the bandage daily and whenever it becomes wet or dirty.
- **Wash the wound daily** as part of your normal bathing and with dressing changes. Cleanse the area gently with soap and water, and dry well before covering with a bandage.
- **Monitor the infection** during treatment to make sure that the redness, pain, and swelling is improving. It's also a good idea to check your temperature regularly. Contact your provider if redness is spreading quickly, pain is increasing, or you are running fevers 101°F or higher.

## **HOW CAN I PREVENT IT?**

Maintaining good skin hygiene is essential:

- Wash your hands frequently with soap and water. Proper technique is important:
  - Wet your hands with soap and water, and rub them together for 15-30 seconds (about the time it takes to sing "Happy Birthday" twice) before rinsing and drying thoroughly.
- Alcohol-based hand sanitizers are good alternatives if a sink is not available. However, visibly soiled hands should be washed with soap and water. To be effective, hand sanitizers should be rubbed over the entire surface of the hands and wrists until dry.
- Keep your skin well-moisturized and your nails trimmed and clean.
- Be careful shaving as fine cuts in the skin can serve as entry points for bacteria. Use shaving cream to protect the skin. Avoid dull razors, and do not share razors.
- Wear protective shoes and gloves when needed.
- If you have cuts, scrapes, or other areas of open skin, keep them covered until the skin has healed over.
- Do not pick at any peeling or open areas of skin. Do not squeeze or pop any bumps or blisters on the skin.
- Adhere to skin care instructions following the application of body art, such as piercings and tattoos. Seek medical care as soon as possible if you develop signs of infection.

**RECOMMENDED WEBSITES:** [www.mayoclinic.org](http://www.mayoclinic.org), [www.medicinenet.com](http://www.medicinenet.com)