

Cellulitis

Cellulitis is a bacterial infection of the skin that can affect any part of the body. It causes local inflammation of the outer layers of the skin. But it can spread to deeper tissues of skin, muscles, lymph nodes or the bloodstream. The face and lower legs are most often affected. In the legs, the areas near the shins and ankles may be affected.

If left untreated, the infection can enter your bloodstream and become life threatening. Cellulitis can lead to:

- Widespread infection and shock (sepsis)
- Inflammation of the lymph vessels (lymphangitis)
- Tissue death (gangrene)
- Inflammation of the membranes that surround the brain and spinal cord (meningitis)

Cellulitis can also cause damage to the lymphatic system and make it harder to manage lymphedema, a condition in which extra fluid collects in tissue and causes swelling.

Symptoms



If you have lymphedema, the symptoms of cellulitis may appear in the affected arm or leg, hand or foot or chest wall. Get medical help **right away** if you have symptoms such as:

- Skin that is warm, red in color or inflammation that increases in size as the infection spreads
- Skin that is tight, glossy or “stretched” in appearance
- Pain that is dull, tender or painful to touch in the affected area
- Skin lesions, rash, red streaks or blotchy appearance
- Fever, chills, shaking, sweating, fatigue, muscle aches or general ill feeling
- Nausea or vomiting
- Joint stiffness caused by swelling of the tissue over the joint
- Hair loss at the site of infection

Causes

The 2 most common types of bacteria that cause cellulitis are group A *Streptococcus* (strep) and *Staphylococcus aureus* (staph). Other types include group B *Streptococcus*, *Streptococcus pneumoniae* (pneumococcus) and *Hemophilus influenzae*. These bacteria can enter the body through the nose or a break in the skin, such as a puncture wound, ulcerated area, surgery site, cut, scrape, insect bite (spider bite), cat scratch or animal bite. Areas of dry, flaky or inflamed skin (dermatitis or eczema) can also be entry points for bacteria. This allows bacteria to enter the skin and grow, causing infection and swelling. In cancer patients, cellulitis may be caused by lymphedema or a weak immune system.

Risk Factors

Risk factors that may place you at greater risk for developing cellulitis include:

- **Age** – Infants and the elderly are at greater risk of developing infections.
- **History of peripheral vascular disease** – If a break in the skin occurs where your blood circulation is poor, you may be at greater risk of getting an infection.
- **Weakened immune system** – Illnesses that cause a weakened immune system, such as lymphocytic leukemia or HIV, may place you at greater risk of cellulitis.
- **Use of immunosuppressive or corticosteroid medicines** – These medicines can make the immune system weak, causing a greater risk of infection.
- **Diabetes** – Diabetes weakens your immune system. This illness can cause chronic ulcers of the feet, which can increase your risk of infection.
- **Fungal or viral skin infections such as chickenpox and shingles** – Often chickenpox and shingles cause blisters on the skin that can rupture. These broken blisters can serve as an entry point for bacteria.
- **Chronic swelling of the arms or legs caused by lymphedema** – Swollen tissue may crack, leaving the skin at greater risk of infections.
- **Recent injury to the skin or a break in the skin by wound, insect bite, cut or scrape** – A break in the skin can serve as an entry point for bacteria.

Diagnosis

The doctor will do a physical exam, ask about your symptoms and do blood tests to check if you have an infection.

Treatment

The first goal of treating cellulitis is to control the infection and prevent complications. If the infection is severe, you will be admitted to the hospital and receive intravenous (IV) antibiotics. If the infection is mild, your doctor will order antibiotics for you to take by mouth. In most cases, cellulitis is cured within 7 to 10 days with antibiotic treatment.

In addition to antibiotic treatment and medicine to control pain, the infected area is elevated, usually higher than the heart, to minimize swelling. Keep the area clean. You can also apply a warm, moist washcloth to the area. This will help increase the blood supply to the tissues and help fight the infection. **Do not** use antibiotic ointments or creams unless instructed by your doctor. Rest until your symptoms improve.

Prevention

Follow these guidelines to help prevent cellulitis:

- Practice good personal hygiene to reduce risk of infection.
 - Wash your hands regularly with soap and water for at least 20 seconds.
 - Keep skin moist and intact including hands and cuticles soft.

- Apply a moisturizing lotion often to prevent your skin from becoming chapped, dry or cracked.
 - **Do not** cut the cuticles on your affected hand. Use cuticle softener cream and gently ease the cuticle back with a cotton swab.
 - Keep your nail edges smooth and do not bite your fingernails.
 - Use your own instruments when you get a manicure and pedicure.
 - Check your nails for signs of a fungal infection such as discolored, thick, crumbed edges or cracks.
 - Call your doctor if your nails are infected
- **If you have lymphedema, avoid using your affected arm or leg when receiving vaccines or injections or when having blood drawn.**
 - There will be times when you will need to use the affected arm (for example, with a bilateral mastectomy) or leg. If you have questions about using your affected arm or leg, ask your doctor.
- **Avoid excessive heat, such as saunas, whirlpool spas or showers.**
 - Keep yourself cool in hot weather by not sunbathing and by staying in air-conditioned places.
- **Prevent burns.**
 - Use long, padded mitts near the oven, grill or fireplace.
 - Protect yourself from sunburn by using a sunscreen with a sun protection factor (SPF) of at least 15 or higher or by wearing long sleeves.
- **Avoid cuts and scratches.**
 - Take care of any cuts or scratches right away. Wash them thoroughly, apply an antibacterial ointment and cover with a bandage. Change bandages often and watch for signs of infection.
 - Use an electric shaver when shaving under the arm to prevent razor cuts.
 - Wear heavy gloves and long-sleeved shirts while doing yard work, gardening or housework that may cause scratches or cuts.
 - Use a thimble to protect against puncture wounds while sewing.
 - Use a cutting board while chopping or slicing foods.
 - Use heavy-duty gloves when shelling shrimp or crawfish.
 - Use insect spray to help prevent insect bites.
 - Keep wounds and sores clean and protected with a bandage. Change the bandage daily or sooner if it becomes wet or dirty.
- **Avoid harsh detergents or deodorants.**
 - Wear rubber gloves if your hands will be in water for an extended length of time or in contact with harsh chemicals or cleaning solutions.