

Staphylococcus aureus

Staphylococcus aureus (*S. aureus* or "staph") has long been recognized as one of the most important bacteria that cause disease in humans. It is the leading cause of skin and soft tissue infections such as abscesses (boils), furuncles, and cellulitis. Although most staph infections are not serious, *S. aureus* can cause serious infections such as bloodstream infections, pneumonia, or bone and joint infections.

Signs and symptoms of infection

- Most infections caused by *S. aureus* are skin and soft tissue infections such as abscesses or cellulitis.

Abscess

- Pocket of infection that forms at the site of injury.
- Usually filled with pus.
- Area surrounding the abscess is usually red, painful and swollen and the skin surrounding the abscess can feel warm to the touch.

Cellulitis

- An infection of the underlying layers of the skin.
- Usually results from a scrape or cut in the skin which allows bacteria to enter, although no injury may be apparent.
- Cellulitis can occur anywhere in the body, but most often occurs on the legs or arms.
- Symptoms include redness, swelling, and pain at the site of infection.
- *S. aureus* can also cause serious infections such as pneumonia (infection of the lungs) or bacteremia (bloodstream infection).
 - Symptoms of these infections include: difficulty breathing, malaise, fever, or chills.
- If you suspect you may have an infection with *S. aureus* contact your healthcare provider.

Duration of illness

- Some people can be colonized with *S. aureus* and never get an infection.
 - For those people who do get an infection, the time from exposure to development of disease can be from days to years.
- Many common skin infections caused by *S. aureus* will heal without medical treatment.
 - However, some skin infections will require incision and drainage of the infected site and some infections may require antibiotics.

- Most skin infections will heal within a few weeks.
 - More serious skin infections can take longer to heal if treatment is delayed or if ineffective treatment is given.
- Some serious *S. aureus* infections (such as pneumonia or bloodstream infections) typically require hospitalization and treatment with intravenous antibiotics.

Transmission

- *S. aureus* is most often spread to others by contaminated hands.
- The skin and mucous membranes are usually an effective barrier against infection. However, if these barriers are breached (e.g., skin damage due to trauma or mucosal damage due to viral infection) *S. aureus* may gain access to underlying tissues or the bloodstream and cause infection.
- Persons who are immunocompromised or who have invasive medical devices are particularly vulnerable to infection.

MRSA transmission:

- Traditionally, Methicillin-resistant *Staphylococcus aureus* (MRSA) infections have been associated with hospitalization or other healthcare-associated risk factors.
- In recent years physicians and other healthcare providers have observed an increasing number of people with MRSA infections who lack traditional healthcare-associated risk factors. These people appear to have community-associated infections.

Complications

- Most skin infections resolve without treatment, however, some infections require incision and drainage or antibiotic treatment to cure the infection.
- Skin infections that are left untreated can develop into more serious life-threatening infections such as infections of the bone or blood.
- Some people experience repeated infections with *S. aureus*.
- There is a possibility for longer lasting or more severe infections with Methicillin-resistant *Staphylococcus aureus* (MRSA) if the initial antibiotic prescribed is not capable of killing the bacteria.

