

#### Louisiana Office of Public Health Infectious Disease Epidemiology Section

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## Information on Staphylococcus aureus

#### Staphylococci are very common germs (bacteria)

Staphylococcus aureus, often referred to simply as "staph," is a bacteria commonly found on the skin of healthy people. One person out of three usually carries staph on their skin, in their nose or in the rectum. These people are said to be 'colonized' or are also called 'carriers'.

#### Staphylococci can cause some illnesses

However, when an injury such as a puncture wound introduces the organism into some other part of the body, the staphylococcus bacteria can secrete toxic substances that tunnel into tissues, destroying and dissolving matter along the way. The bacteria can produce pus containing abscesses anywhere on or in the body. These infections can be minor (such as pimples, boils, furuncles and carbuncles and other skin conditions) or serious (such as blood infections or pneumonia).

#### Boils and skin infections

A boil starts as infection of a hair follicle. These are the tiny pits at the base of the hair. As the staph starts to multiply, white blood cells, which are part of the body's system of defense against bacteria, gather at the site to fight the infection. White blood cells, bacteria and dead skin cells form the pus in the infected area.

Carbuncles are groups of boils connected together.

**Folliculitis** is a smaller version of a boil. Small, white- headed pimples erupt around hair follicles anywhere on the body. Friction, blockage of the follicle, or injury (such as a cut from shaving) can cause a rash-like eruption.

**Cellulitis** is a skin infection that is not as well limited as a boil. A red, tender swelling develops in the skin and spreads gradually for a day or two. Red lines appear running from the infected area along lymph vessels to nearby lymph glands such as those in the groin. The lymph glands may swell, become red and fever appears.

**Staphylococcal scalded skin syndrome** Staphylococcus bacteria produce a toxin (poison) that forms fluid-filled blisters that dislodge the top layer of skin.

**Toxic shock syndrome** In this disease a staphylococcal infection somewhere in the body, releases a toxin into the bloodstream that causes fever, diarrhea and a sunburn-like rash that leads eventually to skin peeling. Toxic shock syndrome was widely publicized in the early 1980s because of an epidemic associated with staphylococcal infections caused by using super-absorbent tampons. Toxic shock syndrome may also occur after surgery, or other staphylococcal infections. The full-blown syndrome may lead to profound lowering of blood pressure and damage to the liver, kidneys and other organs; it can be fatal if not treated promptly.

Wound complications Any skin wounds, whether they are caused by an injury or made during surgery, can be complicated by infections caused by Staphylococcus bacteria ordinarily found on the skin. Symptoms and signs are the oozing of pus, pain, redness, heat, fever and chills.

Other staphylococcal infections: Staphylococcus bacteria can infect any part of your body. In the eye, they can cause styes, some types of conjunctivitis and orbital cellulitis. In the breast they can cause a breast abscess, particularly in nursing mothers. Staphylococcal infections may develop in bones and joints from bacteria that circulate in the bloodstream; it tends to lodge in the long bones of the arms and legs, or somewhere within the vertebrae. In the lungs, staphylococcal pneumonia can develop. This type of pneumonia may occur if the bacteria circulate in the bloodstream, if an abscess lodges on one of the valves on the right side of the heart, or along with influenza. If Staphylococcus infects the inner lining of the heart, endocarditis will develop. This disorder can cause irreversible heart damage and is fatal in some cases.

Staphylococcal food poisoning with cramps, vomiting and diarrhea can occur if you eat food that contains toxins produced by the bacteria. Staphylococcus infrequently causes a colon infection if you take an antibiotic medication that kills many kinds of bacteria, including those that normally live in the digestive tract. This may upset the balance of microorganisms in the intestines, so that staphylococci then over multiply and cause abdominal pain, a swollen abdomen and bloody diarrhea.

#### Some people are more susceptible to these infections

If you have an illness such as chronic liver or kidney disease, diabetes; or cancer, you are particularly susceptible to infection by Staphylococcus bacteria.

#### Staph infections are treatable

In mild cases of staphylococcal infection such as folliculitis or boils, cleaning the infected area with soap and water, letting the pus drain and eliminating the cause of the infection often clears up the problem. If the infection persists despite self-help treatment, or if you have severe symptoms, see your physician. Antibiotics are not necessary to treat all staphylococcal infections. Your physician will decide whether an antibiotic will help.

# Patients who are only colonized with staph do not need treatment.

### Common disinfectants are effective against Staph

Household disinfectants are effective against staphs. Use according to label instructions

### How to prevent staph infections

- Wash hands regularly
- Shower everyday to keep the skin clean
- Disinfect promptly minor skin cuts, abrasions and keep them covered
- Do not "pick" at areas of redness. Do not squeeze the base of large pimples. Squeezing areas of redness only results in spreading the infection. Disinfect the surface of an area of redness.