

Staphylococcus aureus



Staphylococcus aureus (*S. aureus*), often referred to simply as 'staph' or 'golden staph', are bacteria commonly found on the skin and in the noses of healthy people. When bacteria are living on or in the human body, but are not causing infection, it is called 'colonisation', and the person is said to be a 'carrier'. Humans are most often colonised with *S. aureus* in their noses but it is also found on the skin and other body sites. Over time, 20% of the population will almost always be colonised with *S. aureus*, 60% of the population will be colonised with *S. aureus* off and on, while another 20% are almost never colonised with *S. aureus*.

In the past, most serious *S. aureus* infections were treated with a type of antimicrobial agent related to penicillin. Over the past 50 years treatment of these infections has become more difficult because *S. aureus* bacteria have become resistant to certain antibiotics (making them ineffective for treatment). These bacteria are known as MRSA (methicillin resistant *Staphylococcus aureus*). MRSA can be acquired in hospital or the community. MRSA are no more virulent (able to overcome the immune system) than other types of *S. aureus* although when infection occurs there are fewer appropriate antibiotics available.

How this is spread

Skin-to-skin contact with a person carrying the bacteria on their skin (with or without symptoms) and sharing towels or linen can spread the bacteria, particularly within families.

Lack of hand washing during food preparation can result in *S. aureus* from hands contaminating food, which may lead to food poisoning.

Signs and symptoms

Occasionally, *S. aureus* can cause infection. These bacteria are one of the most common causes of skin infections such as pimples and boils. *S. aureus* is also a cause of food poisoning.

S. aureus can also cause serious and sometimes fatal infections, such as bloodstream infections, surgical wound infections, pneumonia (lung infection or inflammation) and toxic shock syndrome.

Diagnosis

The diagnosis of *S. aureus* infection is made by growing the bacteria from specimens such as pus or blood.

Incubation period

(time between becoming infected and developing symptoms)

Some people can be colonised 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.

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Infectious period

(time during which an infected person can infect others)

As long as the organism is carried on the skin. A person does not have to have symptoms of infection to be able to transmit the bacteria.

Treatment

People who carry the bacteria on their skin or in their nose will only require antibiotics under special circumstances.

Infections with *S. aureus* (including MRSA) can be treated with appropriate antibiotics, although the resistance to available antibiotics is increasing. 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 will require antibiotics. Most skin infections will heal within a few weeks, but more serious skin infections can take longer to heal if treatment is delayed or if ineffective treatment is given.

More serious types of *S. aureus* infections (such as pneumonia or bloodstream infections) typically require hospitalisation and treatment with intravenous antibiotics.

Prevention

- > Exclusion from childcare, preschool, school and work is not necessary unless infected skin lesions on exposed surfaces cannot be completely covered with a dressing.
- > Standard precautions in the form of strict hand washing by care givers and good personal hygiene on the part of the infected person are the most effective means of control.

- > Boils and infected wounds should be covered with clean, dry dressings until they are healed. Pus or drainage from wounds is very infectious.
- > Clean your hands frequently with soap and water or an alcohol based hand rub, especially after changing bandages or touching wounds.
- > Dispose of used dressings promptly, in a sealed plastic bag.
- > Clothing, sheets and towels of an infected person should be washed with detergent in hot water. Ideally they should be dried in sunlight, or in a clothes dryer on the hot setting.
- > Do not share personal items such as razors, towels or similar items with others.
- > In hospital, there are some patients, such as those with wounds, where infection with MRSA could pose a special risk. Therefore when a hospital patient is found to carry or have an infection with MRSA, additional precautions may be taken to prevent transmission of MRSA. Use of a single room with ensuite facilities is recommended. Staff and visitors should follow the hospital's recommended precautions.

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Useful links

Food Safety website –

www.sahealth.sa.gov.au/foodsafety

> Preventing food poisoning at home

SA Health website – www.sahealth.sa.gov.au

> Hand hygiene

> Handling blood and other body substances

> Toxic shock syndrome (TSS)

You've Got What? 5th Edition

Communicable Disease Control Branch

Telephone: 1300 232 272 Email: HealthCommunicableDiseases@sa.gov.au

The SA Health Disclaimer for this resource is located at www.sahealth.sa.gov.au/youvegotwhat



This document has been reviewed and endorsed by SQCAG* for consumers and the community FEBRUARY 2016.

Public-I3-A1

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*SA Health Safety and Quality Community Advisory Group



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