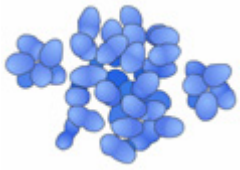
Staphylococcal Infections

Introduction

Staphylococcus, or staph for short, is a type of bacteria. It causes different types of infections. Skin infections are the most common.



Staph Bacteria

Staph bacteria can survive for a long time in the body and on the skin. They can also live on surfaces or objects touched by an infected person. People that have contact with the bacteria can become infected. The best way to prevent staph is to keep hands and wounds clean.

This reference summary explains the symptoms, causes, diagnosis and treatment of staphylococcus infections. A special section on the prevention of staph infections is also included.

Staphylococcal Infections

Staphylococcus is a type of bacteria. When the bacteria cause infection, the illness is commonly called a staph infection.

There are over 30 types of bacteria that can cause staph infections. But Staphylococcus aureus causes most staph infections. This program focuses on staph infections caused by staphylococcus aureus.

Staph infections cause a number of health problems, including:

- Skin infections.
- Pneumonia.
- Food poisoning.
- Toxic shock syndrome.
- Blood poisoning.

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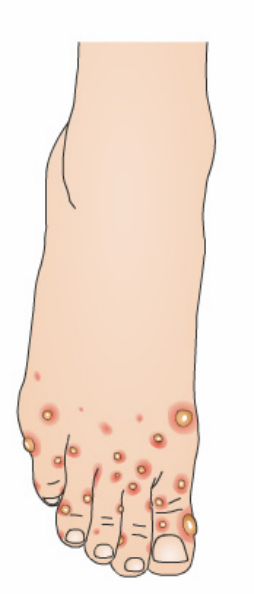
Skin infections are the most common. They can look like pimples or boils and can be red, swollen and painful. They may sometimes have pus or other drainage.
Skin infections caused by staph bacteria can turn into impetigo. Impetigo is a skin infection that causes pus-filled sores. The sores turn into a crust on the skin.
Skin infections caused by staph bacteria can also turn into cellulitis. Cellulitis causes a swollen, red area of skin that feels hot.
Anyone can get a staph skin infection. You are more likely to get one if you have a cut or scratch. You are also more likely to get a staph skin infection if you have contact with a person or surface that has staph bacteria.



Cellulitis Sores

The best way to prevent staph is to keep hands and wounds clean. Most staph skin infections are easily treated with antibiotics or by draining the infection.

Some staph bacteria, such as MRSA, are resistant to certain antibiotics. This makes infections harder to treat and poses a major threat to public health. MRSA stands for methicillin-resistant Staphylococcus aureus.

Symptoms

Staph infections can cause many health problems, ranging from minor to life-threatening. The symptoms of a staph infection depend on the location and severity of the infection.

Skin infections caused by staph bacteria include:

- Boils.
- Impetigo.
- Cellulitis.
- Staphylococcal scalded skin syndrome.

Boils are the most common type of staph infection. A boil is a pocket of pus that develops in a hair follicle or oil gland. Boils may break open and spill pus or blood. They happen mostly under the arms or around the groin or buttocks.

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Impetigo is a contagious and often painful rash. It can develop at any age. It is most common in young children and infants. When caused by staph bacteria, impetigo often features large blisters that may leak fluid and develop a yellowish-brown crust. The sores are most often found around the nose and mouth.

Impetigo Sores

Cellulitis is an infection of the deeper layers of skin. It causes skin redness and swelling. The skin may develop sores or areas of oozing discharge. Cellulitis mostly happens in the lower legs and feet of older people.

Staph bacteria can lead to staphylococcal scalded skin syndrome. This may cause fever, a rash and blisters. When the blisters break, the top layer of skin comes off. It leaves a red, raw surface that looks like a burn. It is most often found in newborns.

Although skin infections are the most common symptom of staph infections, the bacteria can cause other health problems. These include:

- Blood poisoning.
- Toxic shock syndrome.
- Septic arthritis.

Blood poisoning, also known as bacteremia, happens when the bacteria enter a person's bloodstream. An ongoing fever is one sign of blood poisoning.

Bacteria in the blood can travel to locations deep within your body and produce infections. The infections can affect:

- Internal organs, such as your brain, heart or lungs.
- Bones and muscles.
- Artificial joints, cardiac pacemakers and other surgically implanted devices.

Toxic shock syndrome is a life threatening condition caused by toxins that some strains of staph bacteria produce. It has been linked to the use of certain types of tampons, skin wounds and surgery.

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Toxic shock syndrome often develops suddenly. It usually includes the following symptoms:

- A rash on your palms and soles that resembles a sunburn.
- Confusion.
- Headache.
- High fever.
- Muscle aches.
- Nausea and vomiting.
- Seizures.

Staph infection can also lead to septic arthritis, which is a painful infection of a joint. Septic arthritis causes:

- Joint swelling.
- Severe pain in the affected joint.
- Fever.
- Shaking or chills.

The bacteria often affect the knees. Other joints can also be affected, such as the ankle, hip, wrist, elbow or shoulder joints.

Causes

People can carry staph bacteria from one area of their body to another. They can pass it to other people through dirty hands or fingernails.

People are more likely to get a staph infection if they have a cut or scratch that allows the bacteria to enter the body.

Staph bacteria are very durable. They can survive on surfaces or objects long after an infected person touches them. Staph bacteria are able to survive:

- In dry environments.
- Extremes of temperature.
- High levels of salt.

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The bacteria can even live on objects like pillowcases or towels long enough to transfer to the next person who touches them. Since the bacteria can survive extreme temperatures, washing clothes or bedding with hot water might not be enough to kill them.

Staph bacteria do not always cause infections. Many people carry the bacteria and never develop an infection. When staph infections do happen, they are often caused by bacteria the person has been carrying for a long time.

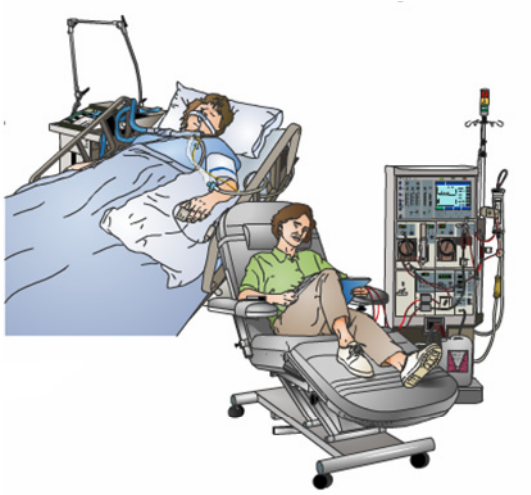
Risk Factors

There are many things that increase a person's risk of developing staph infections. These are known as risk factors. For example, people receiving care in a medical facility have a higher risk for staph infections than people who have not been hospitalized.

Even though medical facilities are routinely cleaned and disinfected, staph infections are strong enough to survive in them. In this setting, staph bacteria can infect vulnerable patients. Vulnerable patients are those who have:

- Burns.
- Serious underlying health problems, such as diabetes.
- Surgical wounds.
- Weakened immune systems.

Diabetes is a group of diseases that cause high blood sugar. Having too much sugar in the blood can cause weight loss, frequent urination, increased thirst and hunger and many other serious health problems.



Staph bacteria can also get into the body through medical tubing that connects to the internal organs. Examples include:

- Breathing intubation.
- Dialysis.
- Feeding tubes.
- Intravascular catheters.
- Urinary catheters.

Athletes also have an increased risk for staph infections. This is because Staph bacteria can easily spread through cuts, abrasions and skin-to-skin contact. Athletes can spread staph infections by sharing razors, towels, uniforms or equipment.
Not everybody who has risk factors for a staph infection will develop one. Some people will develop a staph infection even if they have no risk factors.

Diagnosis

If you have the symptoms of a staph infection, your health care provider will try to find out if staph bacteria are the cause. Otherwise, there may be another cause of your symptoms.

Staph infections are most often diagnosed through a physical exam and tests to look for signs of the bacteria. During a physical exam, your health care provider will check your skin for lesions.

Your health care provider will likely need to collect and test a tissue, pus or nasal fluid sample for signs of staph bacteria. The samples are used in the lab to grow bacteria that then can be identified.

Treatment

Staph infections are often treated using one or more of the following treatment methods:

- Antibiotic medication.
- Wound drainage.
- Device removal.

Antibiotics are special medicines used to fight bacterial infections. Your health care provider may perform tests to identify the type of staph bacteria causing the infection. This helps the health care provider decide which antibiotic will work best.

Antibiotics must be taken exactly as prescribed by your health care provider. You must take the full amount for as many days as your health care provider recommends. Stopping antibiotics too soon may allow the bacteria to survive and become stronger.

Many kinds of staph bacteria have become resistant to one or more antibiotic. Up to half of the staph bacteria found in health care facilities are resistant to common antibiotics, such as MRSA.

Sometimes a staph infection can be treated by draining a wound. If a skin infection has caused a sore on your skin, your health care provider may drain the fluid from it.

If a staph infection involves an implantable device, such as a pacemaker or artificial joint, your health care provider may remove the device. For the removal of some devices, surgery is necessary.

Prevention

You can lower your risk for staph infections in several easy ways:

- Wash your hands.
- Cover wounds.
- Change tampons often.
- Avoid loaning personal items.

Careful hand washing is the best way to defend against germs, including staph bacteria. Wash your hands for at least 20 to 30 seconds. Next, dry them with a disposable towel. Use a second towel to turn off the faucet. You can also use a hand sanitizer containing at least 62% alcohol.

You should also keep cuts and other damaged skin clean and covered. Use sterile, dry bandages until wounded skin heals. Pus from infected sores may contain staph bacteria. Keeping wounds covered will help keep the bacteria from spreading.

Women can reduce the risk of getting toxic shock syndrome by changing their tampons often. This means changing tampons at least every four to eight hours. The risk can be lowered even more by using low absorbency tampons and alternating between tampons and sanitary napkins.

Staph infections can also be prevented by keeping personal items personal. Avoid sharing things like towels, sheets, razors, clothing and athletic equipment with other people.

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If you have a cut or sore, you can prevent the spread of staph bacteria by washing towels and linens with detergent and hot water with bleach. Dry the laundry in a hot dryer.

Summary

Staphylococcus, or staph for short, is a type of bacteria that can cause skin infections, pneumonia, food poisoning, toxic shock syndrome and blood poisoning. Skin infections are the most common.

Staph bacteria are carried by people. They can survive for a long time in the body, on the skin and on surfaces or objects touched by an infected person. People that come into contact with the bacteria can become infected.

Staph infections are most often diagnosed through a physical exam and tests to look for signs of the bacteria. An infection may be treated using antibiotic medication or wound drainage. If the infection affects an area of the body containing an implantable device, the device may be removed.

MRSA strains of staph bacteria are resistant to most types of antibiotics. This is an increasing problem for health care facilities, where staph infections commonly affect people with weakened immune systems.

You can lower your risk for staph infections in several easy ways:

- Wash your hands.
- Cover wounds.
- Change tampons often.
- Avoid loaning personal items.