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Staphylococcal Infections

Also called: Staph

What are Staphylococcal (staph) infections?

Staphylococcus (staph) is a group of bacteria. There are more than 30 types. A type called *Staphylococcus aureus* causes most infections.

Staph bacteria can cause many different types of infections, including:

- Skin infections [<https://medlineplus.gov/skininfections.html>] , which are the most common types of staph infections.
- Bacteremia, an infection of the bloodstream. This can lead to sepsis [<https://medlineplus.gov/sepsis.html>] , a very serious immune response to infection.
- Bone infections [<https://medlineplus.gov/boneinfections.html>] .
- Endocarditis [<https://medlineplus.gov/endocarditis.html>] , an infection of the inner lining of the heart chambers and valves.
- Food poisoning [<https://medlineplus.gov/foodborneillness.html>] .
- Pneumonia [<https://medlineplus.gov/pneumonia.html>] .
- Toxic shock syndrome (TSS), a life-threatening condition caused by toxins from certain types of bacteria.

What causes staph infections?

Some people carry staph bacteria on their skin or in their noses, but they do not get an infection. But if they get a cut or wound, the bacteria can enter the body and cause an infection.

Staph bacteria can spread from person to person. They can also spread on objects, such as towels, clothing, door handles, athletic equipment, and remotes. If you have staph and do not handle food properly when you are preparing it, you can also spread staph to others.

Who is more likely to get a staph infection?

Anyone can develop a staph infection, but certain people are more likely to get one, including those who:

- Have a chronic condition such as diabetes [<https://medlineplus.gov/diabetes.html>] , cancer, vascular disease [<https://medlineplus.gov/vasculardiseases.html>] , eczema [<https://medlineplus.gov/eczema.html>] , and lung disease [<https://medlineplus.gov/lungdiseases.html>]
- Have a weakened immune system, such as from HIV [<https://medlineplus.gov/hiv.html>] , medicines to prevent organ rejection, or chemotherapy [<https://medlineplus.gov/cancerchemotherapy.html>]
- Had surgery
- Are in the hospital
- Use a catheter, breathing tube, or feeding tube
- Have an implanted device, such as a pacemaker [<https://medlineplus.gov/pacemakersandimplantabledefibrillators.html>] or artificial joint or heart valve
- Have burns [<https://medlineplus.gov/burns.html>] , especially if they are deep or cover a large area of the body
- Are on dialysis [<https://medlineplus.gov/dialysis.html>]

- Inject illegal drugs
- Do contact sports, since you may have skin-to-skin contact with others or share equipment

What are the symptoms of staph infections?

The symptoms of a staph infection depend on the type of infection:

- Skin infections can look like pimples or boils. They may be red, swollen, and painful. Sometimes there is pus or other drainage. They can turn into impetigo [<https://medlineplus.gov/impetigo.html>] , which turns into a crust on the skin, or cellulitis [<https://medlineplus.gov/cellulitis.html>] , a swollen, red area of skin that feels hot.
- Bone infections can cause pain, swelling, warmth, and redness in the infected area. You may also have chills and a fever [<https://medlineplus.gov/fever.html>] .
- Endocarditis causes some flu-like symptoms: fever [<https://medlineplus.gov/fever.html>] , chills, and fatigue. It also causes symptoms such as rapid heartbeat, shortness of breath, and fluid buildup in your arms or legs.
- Food poisoning typically causes nausea and vomiting [<https://medlineplus.gov/nauseaandvomiting.html>] , diarrhea [<https://medlineplus.gov/diarrhea.html>] , and fever. If you lose too many fluids, you may also become dehydrated [<https://medlineplus.gov/dehydration.html>] .
- Pneumonia symptoms include a high fever, chills, and cough that doesn't get better. You may also have chest pain [<https://medlineplus.gov/chestpain.html>] and shortness of breath [<https://medlineplus.gov/breathingproblems.html>] .
- Toxic shock syndrome (TSS) causes high fever, sudden low blood pressure, vomiting, diarrhea, and confusion. You may have a sunburn-like rash somewhere on your body. TSS can lead to organ failure.

How are staph infections diagnosed?

Your health care provider will do a physical exam and ask about your symptoms. Often, providers can tell if you have a staph skin infection by looking at it. To check for other types of staph infections, providers may do a culture [<https://medlineplus.gov/lab-tests/bacteria-culture-test/>] , with a skin scraping, tissue sample, stool sample, or throat or nasal swabs. There may be other tests, such as imaging tests [<https://medlineplus.gov/diagnosticimaging.html>] , depending on the type of infection.

What are the treatments for staph infections?

Treatment for staph infections is antibiotics [<https://medlineplus.gov/antibiotics.html>] . Depending on the type of infection, the antibiotics might be a cream, ointment, medicines (to swallow), or intravenous (IV) medicine. If you have an infected wound, your provider might drain it. Sometimes you may need surgery for bone infections.

Some staph infections, such as MRSA [<https://medlineplus.gov/mrsa.html>] (methicillin-resistant Staphylococcus aureus), are resistant to many antibiotics [<https://medlineplus.gov/antibioticresistance.html>] . There are still certain antibiotics that can treat these infections.

Can staph infections be prevented?

Certain steps can help to prevent staph infections:

- Use good hygiene [<https://medlineplus.gov/germsandhygiene.html>] , including washing your hands often.
- Don't share towels, sheets, or clothing with someone who has a staph infection.
- It's best not to share athletic equipment. If you do need to share, make sure that it is properly cleaned and dried before you use it.
- Practice food safety [<https://medlineplus.gov/foodsafety.html>] , including not preparing food for others when you have a staph infection.
- If you have a cut or wound, keep it covered.

Start Here

- Staph Infections [<https://kidshealth.org/en/parents/staphylococcus.html>] (Nemours Foundation)
Also in Spanish [<https://kidshealth.org/es/parents/staphylococcus.html>]
- Staph Infections [<https://www.mayoclinic.org/diseases-conditions/staph-infections/symptoms-causes/syc-20356221?p=1>] (Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/staph-infections/symptoms-causes/syc-20356221?p=1>]

Related Issues

- Seasonal Flu and Staph Infection [<https://www.cdc.gov/flu/signs-symptoms/flustaph.html>] (Centers for Disease Control and Prevention)

Specifics

- About Vancomycin-Resistant Staphylococcus aureus [<https://www.cdc.gov/staphylococcus-aureus/about/vancomycin-resistant-staph.html>] (Centers for Disease Control and Prevention)
- Boils and Carbuncles [<https://www.mayoclinic.org/diseases-conditions/boils-and-carbuncles/symptoms-causes/syc-20353770?p=1>] (Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/boils-and-carbuncles/symptoms-causes/syc-20353770?p=1>]
- Toxic Shock Syndrome [<https://familydoctor.org/condition/toxic-shock-syndrome/?adfree=true>] (American Academy of Family Physicians)
- Toxic Shock Syndrome [<https://www.mayoclinic.org/diseases-conditions/toxic-shock-syndrome/symptoms-causes/syc-20355384?p=1>] (Mayo Foundation for Medical Education and Research)

Images

- Boils (Furunculosis) [<https://skinsight.com/skin-conditions/furunculosis-boil/?lmiw9cApl=1>] (VisualDX)

Clinical Trials

- ClinicalTrials.gov: Staphylococcal Infections [<https://clinicaltrials.gov/search?cond=%22Staphylococcal+Infections%22&aggFilters=status:not%20rec>]  (National Institutes of Health)

Journal Articles

References and abstracts from MEDLINE/PubMed (National Library of Medicine)

- Article: Evolution of strain diversity and virulence factor repertoire in pediatric Staphylococcus... [<https://www.ncbi.nlm.nih.gov/pubmed/40743055>]
- Article: The impact of rifampin on the efficacy of implant retention and... [<https://www.ncbi.nlm.nih.gov/pubmed/40740346>]
- Article: Study of Class 1, 2, and 3 Integrons, Antibiotic Resistance Patterns,... [<https://www.ncbi.nlm.nih.gov/pubmed/40732751>]
- Staphylococcal Infections -- see more articles [<https://pubmed.ncbi.nlm.nih.gov/?term=%22Staphylococcal+Infections%22%5Bmajr%3Anoexp%5D+AND+humans%5Bmh%5D+AND+english%5Bla%5D+AND+%22last+2+Years%22+%5Bdat%5D+NOT+%28letter%5Bpt%5D+OR+case+reports%5Bpt%5D+OR+editorial%5Bpt%5D+OR+comment%5Bpt%5D%29+AND+free+full+text%5Bsb%5D+>]

Find an Expert

- National Institute of Allergy and Infectious Diseases [<https://www.niaid.nih.gov/>] 

Children

- Staphylococcal Infections [<https://www.healthychildren.org/English/health-issues/conditions/infections/pages/Staphylococcal-Infections.aspx>] (American Academy of Pediatrics)
Also in Spanish [<https://www.healthychildren.org/spanish/health-issues/conditions/infections/paginas/staphylococcal-infections.aspx>]

Teenagers

- Skin Abscesses [<https://kidshealth.org/en/teens/abscess.html>] (Nemours Foundation)
Also in Spanish [<https://kidshealth.org/es/teens/abscess.html>]
- Toxic Shock Syndrome (For Teens) [<https://kidshealth.org/en/teens/tss.html>] (Nemours Foundation)
Also in Spanish [<https://kidshealth.org/es/teens/tss.html>]

Women

- Staphylococcus aureus (Staph infection) and Pregnancy [<https://mothertobaby.org/fact-sheets/staphylococcus-aureus-pregnancy/>] (Organization of Teratology Information Specialists)
Also in Spanish [<https://mothertobaby.org/es/hojas-informativas/estafilococo-aureus/pdf/>]

Patient Handouts

- Boils [<https://medlineplus.gov/ency/article/001474.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/001474.htm>]
- Carbuncle [<https://medlineplus.gov/ency/article/000825.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000825.htm>]
- Scalded skin syndrome [<https://medlineplus.gov/ency/article/001352.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/001352.htm>]
- Staph infections -- self-care at home [<https://medlineplus.gov/ency/patientinstructions/000686.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000686.htm>]
- Toxic shock syndrome [<https://medlineplus.gov/ency/article/000653.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000653.htm>]
- Tracheitis [<https://medlineplus.gov/ency/article/000988.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000988.htm>]



MEDICAL ENCYCLOPEDIA

Boils [<https://medlineplus.gov/ency/article/001474.htm>]

Carbuncle [<https://medlineplus.gov/ency/article/000825.htm>]

Nasopharyngeal culture [<https://medlineplus.gov/ency/article/003747.htm>]

Nikolsky sign [<https://medlineplus.gov/ency/article/003285.htm>]

Scalded skin syndrome [<https://medlineplus.gov/ency/article/001352.htm>]

Staph infections -- self-care at home [<https://medlineplus.gov/ency/patientinstructions/000686.htm>]

Toxic shock syndrome [<https://medlineplus.gov/ency/article/000653.htm>]

Tracheitis [<https://medlineplus.gov/ency/article/000988.htm>]

Related Health Topics

Cellulitis [<https://medlineplus.gov/cellulitis.html>]

Impetigo [<https://medlineplus.gov/impetigo.html>]

National Institutes of Health

The primary NIH organization for research on *Staphylococcal Infections* is the National Institute of Allergy and Infectious Diseases [<http://www.niaid.nih.gov/>]

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