

6 Subtle Signs of a Staph Infection You Need to Know

There are plenty of infections that you get on a regular basis, such as a cold or a stomach bug, and don't even think twice. You do what you need to do to treat it and recover and you move on. But then there are other common infections, like staph infections, that just *feel* more serious (even though there are millions of staph infections in the U.S. every year, according to the [Cleveland Clinic](#)).

Meet the experts: [William B. Miller, Jr. M.D.](#), infectious disease expert and evolutionary biologist; [Paul Fey, Ph.D.](#), the associate director of the Center for Staphylococcal Research at the University of Nebraska Medical Center; [Joshua Zeichner, M.D.](#), director of cosmetic and clinical research in dermatology at Mount Sinai Hospital in New York City; [Gary Goldenberg, M.D.](#), assistant clinical professor of dermatology at the Icahn School of Medicine at Mount Sinai Hospital; [Richard Watkins, M.D.](#), infectious diseases physician and a professor of internal medicine at Northeast Ohio Medical University.

While most staph infections are mild or easy to treat, some can become dangerous. That's why it's critical to know the signs of a staph infection that warrant putting in a call to your doctor. Here, dermatologists and infectious disease experts share what to look for.

What is a staph infection?

Put simply, a staph infection is caused by a specific type of bacteria, typically *Staphylococcus aureus*, though other strains can also cause infection, said [William B. Miller, Jr. M.D.](#), infectious disease expert, evolutionary biologist, and author of [Bioverse: How the Cellular World Contains the Secrets to Life's Biggest Questions](#). "Staphylococcus bacteria

are very widely distributed on nearly all surfaces and some staph normally live on our skin.” Staph infections are extremely common, estimated at over one million cases annually in the United States, he added. “Most are mild and do not need treatment.”

Staphylococcus is a group of bacteria and there are more than 30 different types, per the [U.S. National Library of Medicine](#). They are known as “commensal” microorganisms because they’re friendly enough to live on our bodies without causing any problems, said [Paul Fey, Ph.D.](#), the associate director of the Center for Staphylococcal Research at the University of Nebraska Medical Center. “You can find staph in your nose, on your skin, and sometimes in other mucous membranes like your anus,” he explained.

Types of staph infections

While staph bacteria are courteous houseguests when confined to their normal quarters, they can cause infections and illness (most commonly caused by *Staphylococcus aureus*) if they gain access to areas of your body where they don’t belong. There are different types of staph infections, Dr. Fey said, and they show up in different ways.

“Staph infections most commonly develop when there is a break in the skin, giving the staph an entry point for infection,” explained [Joshua Zeichner, M.D.](#), director of cosmetic and clinical research in dermatology at Mount Sinai Hospital in New York City. “This may occur after regular cuts and scrapes, nicks from shaving, or even open skin because of athlete’s foot.”

In addition to minor local skin infections, staph can also enter the body and cause other problems, the most serious of which is an immune system reaction to an infection known as sepsis, said [Gary Goldenberg, M.D.](#), assistant clinical professor of dermatology at the Icahn School of Medicine at Mount Sinai Hospital. “People can die from a staph infection if it gets into the bloodstream or infects internal organs,” he said.

What about MRSA?

You've probably heard of MRSA—pronounced “mer-sa”—which stands for “methicillin-resistant *Staphylococcus aureus*,” Dr. Fey explained. As the name states, this is a type of staph that has [developed resistance to certain antibiotic drugs](#), including a commonly used type called methicillin.

In most cases, MRSA infections manifest just the same as other types of staph infections—meaning they show up as skin boils or pustules, he said. But MRSA can also lead to some of the more serious skin and blood infections mentioned above. In those cases, MRSA's drug resistance may make it tougher to treat.

That's why “staph infections need to be treated immediately,” Dr. Goldenberg said, which could range anywhere from topical or oral antibiotics for superficial skin infections to IV antibiotics for more serious infections.

Who is at risk for staph infections?

Anyone can get a staph infection, said Dr. Miller. “Some people carry staph bacteria that are harmless to them but can cause symptomatic infection in others which can be spread by person-to-person contact.” In other cases, there are identifiable underlying risk factors.

According to the [Mayo Clinic](#), individuals who are immunosuppressed because of chronic diseases (such as diabetes or HIV), cancer treatment, or recently post-operative are more susceptible. Anyone with a heart valve, indwelling catheter, or artificial joint is at higher risk. Drug use is specifically associated with a higher risk for staph infections. Staphylococcus infections can also be spread through improper food handling, leading to food poisoning.

Most staph infections, especially those that involve the skin, are transmitted by skin-to-skin contact, added [Richard Watkins, M.D.](#), infectious diseases physician and a professor of internal medicine at Northeast Ohio Medical University. Because staph infections are typically

transmitted through close contact, incarcerated people and athletes also have higher risk, he said.

Signs of a staph infection

Not sure what to watch for? Here are the telltale signs of a staph infection you should know how to recognize and when to seek treatment.

1. Skin boils or pustules

Pus-filled or inflamed skin blemishes are by far the most common type of staph infection, Dr. Fey said.

“Let’s say you have a [mosquito bite](#) on your arm, and you have staph on your finger because you’ve been scratching or touching your nose,” he says. If you scratch your bug bite or some other place where your skin is broken, the staph bacteria on your finger can infect that wound and cause a big, red, painful, pus-filled blemish to form. You could also develop a rash-like cluster of raised blisters called impetigo, he said.

“It’s fairly common in the ER for people to come in thinking they have a large spider bite, when really they have a staph infection,” Dr. Fey added.

2. Cellulitis

Staph is actually the most common cause of cellulitis, a common and potentially serious bacterial skin infection, Dr. Goldenberg said. “It can occur in completely healthy people or in those with weak immune systems.”

Staph usually enters the skin through a cut or [eczema patch](#) and causes a local infection, leading to skin inflammation, Dr. Goldenberg explained. This can present as a warm, red, swollen area of skin that is tender or painful to the touch, most commonly on the lower legs, face, or arms, per the [Mayo Clinic](#). It may also be accompanied by a fever or chills.

While it may seem like no big deal, *any* skin condition that feels unusually painful or irritated should be evaluated by your doctor ASAP, as

cellulitis can progress rapidly. “Deep infections like boils or infections of the legs should get immediate attention,” said Dr. Zeichner.

3. Food poisoning

When a food is exposed to staph, the bacteria multiply and produce toxins. It’s those toxins that can make you sick, and they can lead to symptoms like vomiting, diarrhea, and stomach pain, typically within 30 minutes to eight hours after ingesting the contaminated food, according to the [Centers for Disease Control and Prevention \(CDC\)](#). However, it’s important to note that a fever is not typically something you’d experience from staph-related food poisoning, Dr. Fey said.

The best ways to avoid staph-related food poisoning is to make sure your food is handled at the right temperature, the CDC says. Hot foods should be kept at 140°F or hotter and cold foods at 40°F or colder. And, of course, it doesn’t hurt to wash your hands thoroughly for at least 20 seconds with soap before cooking or eating.

4. Fever and low blood pressure

In some cases—usually when someone’s exposed to staph in a hospital setting, like during surgery—staph bacteria can get into your bloodstream, Dr. Fey said.

This can cause a blood infection known as bacteremia, which can initially lead to a fever and low blood pressure, according to the [Cleveland Clinic](#). Once in your blood, this kind of staph infection can spread to your heart, bones, and other organs—and result in a number of serious or even deadly infections. Those include [pneumonia](#), meningitis, and a type of bone infection called osteomyelitis, which could lead to swelling or warmth in the infected area, according to the [Mayo Clinic](#).

Bacteremia could also lead to an infection of the lining of your heart known as endocarditis. Symptoms—like fever, [chills](#), [night sweats](#), [joint pain](#), pale skin, and weakness—can develop very slowly, suddenly, or even come and go, per the [National Library of Medicine](#).

5. Toxic shock syndrome

When the toxins staph produces accumulate in the bloodstream, they can cause a particular type of blood poisoning known as toxic shock syndrome (TSS). According to [Johns Hopkins Medicine](#), symptoms of TSS include a sudden, high fever, vomiting or diarrhea, muscles aches, headaches, a red, flat rash, and decreased urine output.

TSS is rare, though. The condition affects fewer than four in 100,000 people in the U.S., according to the [National Library of Medicine](#).

6. Sepsis

If a staph skin infection is left untreated, it can eventually enter the bloodstream and lead to [sepsis](#), Dr. Goldenberg said, which is an intense immune system reaction to an infection that sends harmful inflammatory chemicals into the blood and other internal organs. This can block proper blood flow and potentially cause your organs to shut down, which can be fatal. Someone with sepsis might have one or more of the following symptoms, according to the [CDC](#):

- A high heart rate
- Fever, shivering, or feeling very cold
- Confusion or disorientation
- Shortness of breath
- Extreme pain or discomfort
- Clammy or sweaty skin

How is a staph infection diagnosed?

Simple infections can be diagnosed clinically, said [David Cennimo, M.D.](#), assistant professor of medicine-pediatrics infectious disease at Rutgers New Jersey Medical School. “Often, you want to drain a collection, meaning drain the pus of any boils and send it to the lab, and see what bacteria is there.” He adds that if the staph infection has traveled to the bloodstream, your doctor will likely take blood samples to grow a blood culture to determine if the infection is indeed caused by staph bacteria.

How is a staph infection treated?

There are several antibiotics that treat staph infections, both oral and intravenous ones, said Dr. Watkins. “Usually, the person is no longer contagious once the symptoms are resolved.” However, some people become carriers of staph and can pass it on even when they don’t have symptoms of active infection.

Depending on the resistance, some staph infections are pretty sensitive to most antibiotics and some have more resistance, said Dr. Cennimo. He says that the usual course for treatment can be “anywhere between a week and six weeks of antibiotics.”
