

## Strep Throat

Strep Throat is an illness known to every parent and almost every child. It is one of the most common bacterial diseases of childhood, but still resists efforts to develop a vaccine against it. More than ten million people are infected by Strep every year, and we certainly see our share here in Waldo County.

Strep Throat is caused by a bacterium named Group A Streptococcus. Well known symptoms are sore throat, painful swallowing, and fever. People with this infection typically have bright red throats and swollen tonsils sometimes featuring white patches. While white patches can help to diagnose a throat infection, they do not reliably indicate Strep. Most Strep throat patients will also find swollen, tender lymph nodes under the jaw. Some may have a red, sandpapery rash on the trunk which is called scarletina: these children have 'scarlet fever.'

One of the interesting but difficult aspects of practicing medicine is seeing two people with the exact same germ, but exhibiting completely different symptoms. While the above paragraph describes the classic case, I have seen Strep cause fever and vomiting, rash alone, or fever alone. Of course, a person cannot have Strep unless they caught it from someone, so I am always careful to ask if they have had any contacts with Strep. Children under two only rarely get Strep infections, but when they do, they get a runny nose and fever instead of a typical sore throat.

There are a few other well-known manifestations of Group A Strep, including impetigo and necrotizing fasciitis. Impetigo is a common childhood rash, often found on the face, causing scabbing, sometimes blistering, and a characteristic amber-colored crust. It is easily spread among children who are known to pick their scabs.

Necrotizing fasciitis, besides being difficult to pronounce (and spell) is well-known to the public under its other name: 'flesh-eating bacteria.' In fact, it is none other than the same germ that causes Strep throat. It is still unclear to medical scientists why this familiar organism can sometimes take on such an aggressive personality. By somehow getting by the body's first line of defense, the skin, necrotizing fasciitis can become a fast-acting killer. If it gets to the muscle or fat under the skin, Group A Strep can devour flesh over a matter of hours. Luckily, it is quite rare. Obviously, if you have a wound which is red and draining, or increasingly painful hour by hour, you should certainly seek medical attention.

Simple cases of strep are usually easily treated by a prescription antibiotic and symptoms resolve in a day or two. Invasive strep needs at least intravenous antibiotics and sometimes will not remit without surgical excision. Another rare complication of Strep is kidney damage manifested by blood in the urine. This phenomenon, called glomerulonephritis, usually follows streptococcal skin infections.

The most bizarre complication of Strep infection is called Acute Rheumatic Fever. It occurs in untreated Strep infection, and then only in selected individuals who may be predisposed to this illness. This disease usually starts after several weeks of sickness, causing joint pain and swelling, strange bumps under the skin, or a rash. Other symptoms may include sudden aimless movements of the extremities and heart murmur. This is quite a rare complication, but can cause permanent heart valve damage.

Therefore, this complication may be the most compelling reason to seek medical attention if you have a fever and a sore throat.

Strep throat is clearly a contagious illness. Children with Strep throat can transmit it by their saliva or mucus secretions, but it is not typically spread through the air. Standard hand washing and preventing cup-sharing are the best way to control infection. It usually takes two to five days for an individual who is exposed to the disease to get sick.

Thankfully, the rapid Strep test has revolutionized the diagnosis of Strep throat, and within minutes we can know if an individual is sick with the disease. After 24 hours on antibiotics, the level of bacteria in an infected person's throat has diminished enough to limit contagion. When a child is diagnosed, parents should alert any playmates from the previous few days. Toothbrushes may also hold the bacterium, so they should be replaced during treatment to prevent re-infection. Be sure to finish the entire course of antibiotics to avoid getting it again. Children with fever and a Strep contact should have a medical evaluation, even if they do not have a sore throat.

Up to 20% of those treated with antibiotics may still harbor Strep after treatment. In fact, there are thousands of people who have Strep in their throats but have absolutely no fever or illness of any kind. These individuals are called Strep carriers, and are difficult to find, as they have no complaints. When other people in their families start to get sick repeatedly, we can sometimes find a carrier behind it. Usually Strep carriers are not treated unless someone is getting sick from it.

Group A Strep is a fascinating germ because it may either cause no symptoms or it can make people very sick with permanent heart damage, cardiovascular collapse or kidney failure. Luckily, the cases we see are usually somewhere in the middle and with prompt medical attention, Strep should remain more of a nuisance than a threat.