

# Sore Throats

Hilliard Pediatrics, Inc. - Dr. Tim Teller, MD

## Introduction

Sore throats commonly occur for children. They can be caused by many things, including viral illnesses, Strep throat, nasal and sinus drainage, coughing, and allergies. Viruses that cause sore throats include many upper respiratory (“cold and cough”) viruses, influenza viruses, the croup (parainfluenza) virus, the bronchiolitis (RSV) virus, the hand-foot-and-mouth (coxsackie) virus, the “mono” or mononucleosis (Epstein-Barr) virus, adenovirus, enterovirus, and many others.

## Expected Course

Most sore throats will last a few days to a week (depending on their cause, perhaps longer) without any specific treatment. The sore throat from Strep throat, even if not diagnosed and treated, will generally run its course and resolve within 5 to 7 days. A sore throat caused by a viral infection generally gets better when the viral infection runs its course (in as little as a few days to as long as 10-14 days depending on the virus). A mild, intermittent sore throat due to coughing or allergies could linger for some time.

## Distinguishing Different Causes of Sore Throat

There are no “absolutes” with sore throats, unfortunately. In other words, we cannot always tell by someone’s symptoms what is causing the sore throat without examining them and possibly doing a test to determine whether they have Strep throat. But some signs and symptoms help us determine what may be causing the sore throat.

- **Strep throat** often has a sudden onset of a sore throat, pain with swallowing, a muffled (or “marbles in the back of the throat”) voice, fever, swollen “glands” (lymph nodes) in the neck, an upset stomach, and headache. Children with Strep throat often do not have “cold” symptoms (a runny nose). Occasionally, children with Strep have a fine, rough “sand-paper” rash that often looks worse in the “creases” of the skin (at the elbow, waist, etc.). It is unusual but not impossible for children less than 2 years of age to get Strep throat. Of all the possible changes to the appearance of someone’s throat and tonsils when they have Strep throat, the only change that points to the cause being Strep more than half of the time is tiny red dots on the area of the mouth called the soft palate (these are called palatal petechiae and are just above the uvula that hangs down between the tonsils). Although you can have swollen red tonsils with Strep, sometimes with a whitish patches or coating to the tonsils, these signs also often occur with the viral sore throats and do not help distinguish Strep throat from other causes of sore throat.
- **Cold (upper respiratory) viruses** cause the majority of sore throats. Because cold viruses can cause similar signs and symptoms as Strep throat, it may be difficult to determine which sore throats are caused by colds and which are caused by Strep without seeing the child for an

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appointment. Because cold viruses so often have a runny nose and a cough as symptoms, this can help distinguish a sore throat due to a cold versus Strep throat. Many cold viruses are accompanied by a fever. See [Colds](#) protocol.

- **Sinus drainage** can cause a very sore throat. The sore throat of sinus drainage would generally occur with obvious thick, discolored sinus (nasal) drainage, sometimes not out the front of the nose but be just “post-nasal drip” down the throat from the nasal and sinus passages. This would likely occur without a fever, although a sinus infection can cause a fever.
- **Allergies** can cause a sore throat. Nasal allergies often have sneezing, itchy nose or eyes, and clear, watery nasal drainage. Depending on the cause, allergies can be year-round or seasonal. Allergies do not cause a fever. See [Allergies](#) protocol.
- **Croup** can cause a sore throat. Croup is a respiratory virus that causes a variety of symptoms, including a hoarse voice (laryngitis), a barky (like a seal barking) cough, runny or congested nose, and fever. See [Croup](#) protocol.
- **Hand-foot-and mouth disease** is a common childhood illness caused by a family of viruses called enteroviruses. Children with hand-foot-and-mouth disease often have canker-sore-like ulcers in their mouth, small blisters on their hands and feet, fever, achiness and headache, a decreased appetite, and grouchiness. See [Hand, Foot, and Mouth](#) protocol.
- **Influenza** (the “flu”) causes a high fever, headache, sore throat, dry cough, runny or stuffy nose, muscle achiness, extreme tiredness, and occasional diarrhea, vomiting, and nausea. If this combination of symptoms occur during the “flu” season, the sore throat is much more likely to be due to the influenza virus rather than Strep throat.
- **Herpangina** causes ulcers in the back of the throat and the back of the roof of the mouth, along with fever. The illness is caused by enteroviruses, the same family of viruses that cause hand-foot-and-mouth disease. It generally lasts 5-7 days and is treated the same way as hand-foot-and-mouth disease.
- **Mono** (mononucleosis) is a viral illness that can cause sore throat in children. Children and teens with “mono” typically are very tired, have dramatically swollen “glands” in the neck, and have a persistent fever. The tonsils typically look large and inflamed with a white coating during a mononucleosis infection. “Mono” can last for weeks.
- **Tonsillar abscesses** are rare causes of sore throat, but occur when a pus-pocket forms at or near one tonsil, causing extreme difficulty swallowing (often with drooling of the saliva), high fever, and swollen “glands” (lymph nodes) in the neck. With a Tonsillar abscess, one side of the throat will be very inflamed and swollen. This is a medical emergency and children should be seen at Nationwide Children's Hospital Emergency Department right away.

## Testing for Strep Throat

- The test to determine whether someone has Strep throat involves swabbing the throat and tonsil area with two long “Q-Tip” like swabs. The germs on the swabs are then tested with a “rapid Strep” test (that takes about 6 minutes) in the office. If someone has Strep throat, the “rapid Strep” test will show a “positive” (there is a Strep infection) result 8 or 9 out of 10 times. The other 1 or 2 out of 10 times, it is the over-night throat culture test will show a

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“positive” result. ***There is no other way to tell for certain if someone has Strep throat without testing.*** Interestingly, 3 nationally-famous ear, nose, and throat specialists in the U.S. did a study where they found that their chances of accurately guessing whether someone had Strep throat or not after hearing their symptoms and examining the sick child was less than 50%! You also might be surprised to know that of all the Strep tests we do in a year, only about 1 in 5 are positive for Strep. The other 4 out of 5 are viral infections.

- We realize that these Strep tests are not well liked amongst our patients, but they are very important. We try to make them as quick and gentle as possible while still doing what we need to do: swab the tonsil and throat areas.
- Because of the resistance to antibiotics for many germs, including Strep, and the difficulty with determining if someone has Strep without doing the test, no matter what the history of exposure (siblings, parents, best friends at school) to Strep is for the patient, a Strep test needs to be done. We see many families where one child has Strep throat while another child in the same family at the same time has a viral infection. There is a 1 in 4 chance that Strep will spread to a family member.

## Treatment for Sore Throats

- If your child is found to have **Strep throat** on the “rapid Strep” test, we will write a prescription for an antibiotic before you leave the office. If the first test is “negative” (no Strep is found) but the over-night throat culture is “positive” (Strep is found), we will notify you by phone and call in the antibiotic. Note that we *only call* those families where the test is positive the next day. It is very important to complete the full 10 day course of the antibiotic.
- The only common cause of sore throat will improve with a course of **antibiotics** is Strep throat. “Cold” viruses, allergies, the “flu”, croup, hand-foot-and-mouth disease, and mono that cause sore throats will resolve without antibiotic treatment. Because it can be difficult to determine when sinus infection symptoms are caused by an upper respiratory virus versus a bacterial cause, we generally will wait for sinus symptoms to continue for 10-14 days or more before treating with an antibiotic. We treat Strep throat for three reasons:
  1. The person with Strep throat will get better faster with antibiotic treatment,
  2. We can reduce the contagiousness (chances of spreading the Strep bacteria from one person to another) by treating, as **24 hours** after beginning antibiotics the person with Strep throat is no longer contagious, and
  3. To prevent acute rheumatic fever, an inflammatory reaction in the heart, joints, skin, and brain that occurs with about 2% of cases of untreated Strep throat.
- Children with Strep throat are contagious and should stay home until they are no longer contagious. With the high dose Amoxicillin used to treat Strep throat, you are not contagious the next morning as long as the first dose is given by 5 p.m. With twice a day Amoxicillin, you are no longer contagious 24 hours after starting the antibiotic. Children who do not have Strep can generally return to school when they are feeling better and any fever has passed. Children with a sore throat of any cause should be discouraged from sharing anything that touches their mouth (drinks, forks and spoons, toothbrushes, and kisses near or on the mouth) until they feel better. Like with many other illnesses, frequent hand washing helps.

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- With all cases of sore throat, children often need **treatment of the symptoms** of sore throat and pain with swallowing even if these treatments will *not cure* the symptoms. Many of these treatments are familiar to adults, as we have needed to do this for ourselves when we are sick with a sore throat. For young children, drinking cold water or juice, or eating a frozen treat like popsicles, ice cream, or sherbet will often help. Older children can do these things, as well as use over-the-counter throat lozenges (I think Hall's® Fruit Breezers and the N'Ice® brand of throat lozenges work fine and have an agreeable taste for kids and adults). In addition, drinking warm tea (decaffeinated honey lemon tea works well with added milk and honey to taste) and **gargling with salt water** often help. To gargle with warm salt water, mix one teaspoon of table salt into 8 ounces of warm water. Stand over the sink. Take a mouthful of the salt water and gargle with it, spitting it out into the sink when finished. Go through the entire glass of water, repeatedly gargling then spitting it out. This can safely be repeated every hour or two as needed.

## What to Do When

**If your child has a sore throat** => call during regular office hours to discuss with the nurse whether an office visit is needed or come in at 8 a.m. for walk-ins. Note that if it is after-hours or over the weekend, many of our families will utilize Nationwide Children's Hospital Urgent Care centers to determine if their child has Strep throat. Although it is safe to wait until the next business day to see a child, it is fine to use the Urgent Care.

**If your child has Strep throat and does not improve within 2-3 days (48-72 hours) on the antibiotic** => call during regular office hours. Although most cases of Strep respond quickly to the antibiotic, occasionally a different antibiotic is needed.

**If your child is being treated for Strep throat and they are getting much worse, with difficulty swallowing their own saliva (spit)** => call us immediately, even after hours. We may need to have your child seen right away to determine if they have developed an abscess (or pus pocket) at their tonsils. This is a medical emergency.

**If your child was diagnosed with Strep and had a fine, sandpaper rash with it, but now after completing the antibiotic treatment, areas of the skin are peeling** => this is common in "Scarlet Fever" and the skin will simply flake off on its own. A moisturizer can be applied if the peeling skin is bothersome.

**If your child has had repeated separate Strep** => we will discuss a referral to an ear, nose, and throat ("ENT") specialist to have the tonsils removed. We also currently recommend a referral to the "ENT" if a child shows signs of large tonsils with difficulty swallowing or sleep apnea (long pauses in the breathing during sleep of 15-20 or more seconds).

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**If your child was seen in the office and was found to have a negative Strep test and is not feeling better in a couple days but is not worse =>** most of these children just need to keep doing things to keep their throat more comfortable and treat any fever. Remember that depending on the cause, a sore throat might linger for a few days.

**If your child was tested for Strep and was negative but is having lingering fever, sore throat, swollen glands, and tiredness for days afterwards =>** we want to see you child back to evaluate for the possibility of “Mono” (mononucleosis), a viral illness that can linger for weeks. Although antibiotics cannot help with Mono, we will discuss with you having your child have a blood test for Mono.