

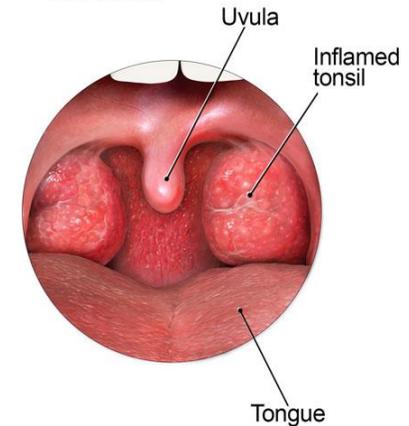
Health Condition Module 48 – Sore Throats - Pharyngitis and Tonsillitis

The average person swallows about once every two minutes; something you will become painfully aware of if you have a sore throat! The average adult gets 2-3 sore throats a year. Older people tend to have them less frequently, as over time they build up immunity against many of the causative viruses. Throat symptoms are one of the most common reasons people go see their doctor, ranking above high blood pressure, back problems, and rashes. Most sore throats don't need the care of a doctor, but which ones do? And how can we best care for the people coming to the pharmacy to see us for help? Remember, most people are busy, have jobs to go to and families to look after; they need to be at their best every day, so let's help them feel as good as possible!

Healthy throat



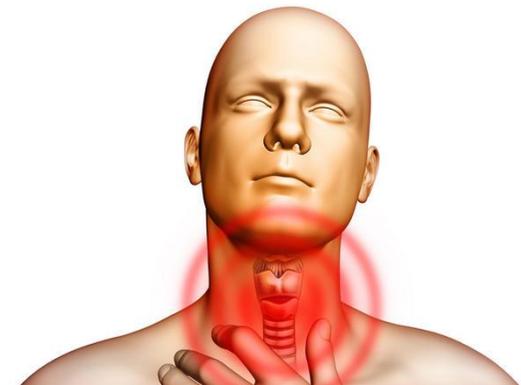
Sore throat



So what happens when you get a sore throat?

Sore throats (pharyngitis) are very common. A sore throat also refers to pain, itchiness, or irritation of the throat (or pharynx, as it is known medically). Soreness in the throat may be the only symptom, but usually there are also one or more of the following accompanying symptoms:

- A hoarse voice.
- A mild cough.
- A high temperature (fever).
- A headache.



- A feeling of wanting to be sick (nausea).
- Tiredness.
- Swollen glands in your neck.
- Pain when you swallow.
- White patches on the tonsils

You may have difficulty swallowing food and liquids, and the pain may get worse when you try to swallow. In most cases the soreness typically gets worse over two to three days and then usually gradually goes within a week. The symptoms of a sore throat can be acute—they come on suddenly and last for several days—or chronic, meaning they persist for weeks or even months. In about one in ten cases the soreness lasts longer than a week.

So what actually CAUSES a sore throat?

Sore throats are generally caused by one of the following:

- Viruses
- Bacteria
- Allergies
- Muscle strain
- Air quality
- Gastroesophageal Reflux

1. Viral infections

The cause of a sore throat isn't always obvious, but the majority of sore throats are caused by a viral infection. The most common viral cause are the viruses that cause the common cold (mostly rhinoviruses), which cause more than 90 % of the sore throat cases you will see in adults in the pharmacy. Most people with a cold/flu usually experience a sore throat as one of the first symptoms.

Some of these viruses can directly attack your throat, which can cause little ulcerations to form on the delicate lining of your pharynx, located by your tonsils.

This can trigger a burning sensation that continues even when you're not using your throat.

Some of the symptoms which usually accompany a sore throat when it is caused by a viral infection are:

- Coughing
- Sneezing
- Runny nose
- Watery eyes
- Mild body aches
- Mild fever
- Mild headaches

If you have some of these other symptoms, it's likely that a virus is causing your condition. The sore throat will tend to subside after a day or two, with other symptoms lingering on. In the case of a mild cold, you can often relieve your symptoms with over-the-counter (OTC) products such as throat gargles and pain relieving lozenges; the cold will then naturally go away after a few days, as your immune system fights off the virus.

For the flu, the symptoms tend to come on very quickly and you will feel much more uncomfortable, especially with the fever and aching muscles, and you generally feel much worse and more tired than you would with a cold. However, in most cases again, the illness will generally clear in a few days. In the meantime, plenty of fluids and OTC medications, as above, will help to relieve your symptoms.

NOTE- ANTIBIOTICS DO NOT KILL VIRUSES and are useless to treat viral sore throats.

Another viral illness causing sore throats is Glandular fever, caused by the Epstein-Barr virus . This virus causes a very severe sore throat, high temperature, swollen glands in the throat and sometimes under the armpits, and fatigue (extreme tiredness) which may last for weeks. The usual cold /flu symptoms of runny noses and coughs don't usually appear with glandular fever, and most people get it in childhood and have very few symptoms. It is most severe in teenagers and young adults, and it can be contagious for months with the virus remaining in the saliva. The chance of spreading the virus is small while people are ill, but victims should avoid kissing other people. As it is also caused by a virus, all we can really do to help patients is to treat the symptoms with OTC medicines, and encourage rest until energy levels return.

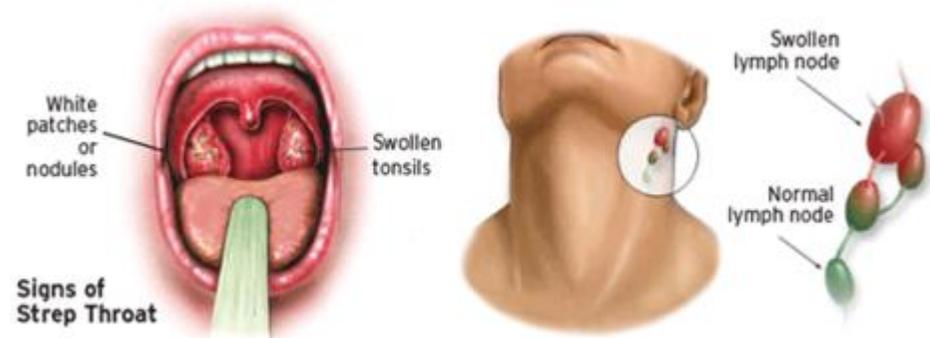
As with all respiratory viruses, to stop the spread of infection, good hygiene is essential, such as covering the mouth if coughing, routine washing of hands, using alcohol gels before eating, etc.

2. Bacterial infections

A sore throat can also be caused by bacteria, although this is much less common than those which are caused by a virus. The most common bacterial infections we will see in the pharmacy are bacterial infections of the tonsils (bacterial tonsillitis caused by "Streptococcal" bacteria) and "Strep throat," which is a bacterial infection where not only the tonsils but also the surrounding tissue may be infected and inflamed. The tonsils are the tissue masses located on either side of the back of the throat. "Strep throat," which is caused by Group A Streptococcus bacteria is the cause of one in three children's sore throats.

The symptoms of tonsillitis and other Strep throat infections are usually more severe than symptoms of a sore throat with a cold virus. You won't usually experience sneezing, congestion, or cough with strep throat/tonsillitis. Some of the symptoms which usually accompany a sore throat when it is caused by a bacterial infection are:

- Red throat, sometimes with white patches on it
- Swollen lymph nodes in the neck
- Difficulty swallowing
- A sudden fever (which usually peaks on the second day)
- Headache
- Chills
- Nausea
- Loss of appetite
- Abnormal taste
- Bad breath



Because it is caused by bacteria, strep throat and other bacterial infections such as bacterial tonsillitis, may be treated with antibiotics. However, as with viral throat infections, bacterial throat infections tend to be cleared by your immune system within a few days, so symptomatic relief is helpful until the infection clears. If the infection is severe or is not easing after a few days, an antibiotic may be helpful. Advise the customer to seek medical help in a few days if things do not improve, or seek help immediately if a few days have passed and the tonsils are clearly inflamed. The pharmacist may have a look; they are very easy to see when inflamed, and usually have white spots of pus on them. Note that the infection within the tonsil will not be treated by surface agents (gargles, lozenges etc), which is why systemic treatment with oral antibiotics may be necessary, but surface acting antibacterial sprays, gargles or lozenges may remove the white pus on the tonsils and assist with the pain relief. The tonsils will still be red and swollen.

3. Allergies

Sometimes allergies that cause the production of mucus in the sinus and nasal passages can cause post nasal drip, where excess mucus accumulates in the back of the throat, especially at night. This accumulation can irritate your throat and cause pain and inflammation. Usually it feels scratchy or tickly more than an actual pain, and it tends to be worse during the season when your allergens are most prevalent. There will be not be some symptoms that we see with viral or bacterial infections (fever, aches etc) although sneezes and nasal congestion may be present. Clearly, treating the allergy (see hay fever module) should solve this problem.

4. Muscle strain

We may all have lost our voice due to singing and shouting too loud for too long, but you can also experience throat pain by changing the pattern of using our throat muscles that control our larynx. Those in new jobs where they need to speak more loudly, or more often than usual (e.g. teachers), may end up with chronic sore throats. It can be treated with anti-inflammatories, but vocal coaching may be necessary to prevent a long term problem.

5. Air quality

There are two big causes of sore throats due to air quality; i.e. low air humidity drying out the throat tissue, and smoke or other irritants in the air we breathe. In cases of low air humidity, natural or caused by heaters/dehumidifiers, the lining of the throat can become dried out and irritated. This is easily treated by drinking fluids, chewing gum, or sucking sweets and lozenges. For those patients with obstructed nasal breathing, especially at night, breathing directly through the mouth without the air humidifying benefits of breathing through the nose can lead to rough, scratchy throats, especially first thing in the morning. Using a humidifier can also help.

6. Gastroesophageal reflux

More specifically known as laryngopharyngeal reflux, it is basically heartburn from stomach acid, but in the throat. It may occur without there being any stomach or oesophageal heartburn symptoms. The strong acid and digestive juices from the stomach travel up the oesophagus (especially at night when lying flat) to the throat or voice box where they irritate the delicate tissue. A tiny amount of stomach acid can cause a lot of irritation in the throat tissue. As a result you can get a sore throat or a hoarse voice, both of which are usually worse in the morning. It can sometimes lead to a persistent dry cough, and a need to clear the throat. The standard antacid tablets (H2 antagonists (zantac/rantidine), or the stronger Proton Pump inhibitors (Somac/Pantoprazole) and their generics will stop the symptoms quickly; both of these medicines being available from the pharmacist. Lifestyle changes may also be needed (diet, quit smoking etc). Please see the "heartburn & indigestion" module for further information.

How to best treat the symptoms of a sore throat

Remembering that if it is a viral or bacterial infection our bodies will usually fight off the bug within a few days to a week, so we need to assist our healing bodies by drinking plenty of fluids, resting, and getting plenty of sleep.

We can treat the symptoms of sore throats with pain relievers orally such as Paracetamol and Ibuprofen, and with pain relieving lozenges, sprays and gargles. With good questioning of the patient we should be able to work out what the cause of the sore throat is, and hopefully limit how far it progresses, or perhaps even prevent its return if it is allergic, or due to acid reflux.

1. **Viral throat infections** -Given that most sore throats have a viral cause, wouldn't it be great to be able to destroy the virus, especially at the start of the sore, scratchy throat stage?

Anti-viral gargles: There is one very effective anti-viral gargle we can use first line to try and stop a sore throat from getting worse, or perhaps even extending on to becoming a head cold; i.e. Betadine gargle. The Povidone-Iodine in Betadine and its generic equivalents (e.g. Difflam throat gargle with iodine) are anti-viral, anti-bacterial and anti-fungal. If we are speaking with the patient and conclude that they have a viral sore throat – for example the sore throat is associated with head cold symptoms and a mild, not high, fever – then Betadine gargle may be the best way to stop the virus from spreading and replicating, and limit how bad the

infection becomes. It will also provide some relief after gargling. It is not, however, a nice tasting option, but if it controls the throat symptoms your customer will still be grateful for your help!

Anaesthetic Lozenges and sprays: It is important to note lozenges that have antibacterial ingredients will not work to kill a virus on the throat. They may be useful against Strep throat (hence "Strepsils" - the clue is in the name), but 9 out of 10 times are a good tasting soother rather than an effective weapon against the viral cause of the most sore throats. Some lozenges are certainly worth using for some relief, in combination with the Betadine gargle. The local anaesthetic containing versions of the lozenges, such as Strepsils Plus (contains Lignocaine) and Difflam Plus (contains Benzocaine) will provide great relief from the discomfort of a sore throat.

Anti-inflammatory lozenges, sprays and gargles: Some sore throat products contain ingredients that may take down the swelling in the sore throat. Again, as with local anaesthetic products, if it is a viral sore throat it's less effective if we are also not killing the virus with an Iodine gargle. Difflam Plus lozenges contain an extra ingredient – an anti-inflammatory – Benzydamine, to take down some throat swelling and pain. They should give even more relief than Strepsils Plus lozenges. Strepsils have an anti-inflammatory range of lozenges, without a local anaesthetic in them, and Difflam sprays and gargles do not contain local anaesthetics.

Anaesthetic and anti-inflammatory lozenges and sprays are certainly convenient, whereas Betadine, even in its ready to use form, is less so; but Betadine 3-4 times a day is a much underused weapon in the battle to limit how long we have a sore throat for, and for how bad it may become. The combination will really help your customers get relief and move forwards with their day. It is our job to help them understand this! ☺

Oral pain relief: Paracetamol, and especially Ibuprofen with its anti-inflammatory properties, can give relief from viral sore throats and other symptoms associated with head colds and flu. Alternating the two agents (taking 1 then the other every 3 hours) is often a very effective way to control pain and inflammatory symptoms.

Other relief: sucking ice, or sweets, may give some relief.

Maintaining an adequate fluid intake is also important, as fever can lead to dehydration which can make us feel worse, and people often consume less food and fluids with a sore throat because of the discomfort of swallowing.

2. **Bacterial sore throats** – If the bacteria is on the surface of the throat, antibacterial agents will help to fight the infection while your immune system is fighting the good fight against the bacteria. Note that Betadine gargle and other iodine gargles are antibacterial as well as anti-viral, and Strepsils and Difflam lozenges also both contain effective antibacterial agents, so we have some useful weapons to treat Strep throat. Clearly the anti-inflammatory and anaesthetic lozenges will give the best pain relief until the infection is controlled and symptoms subside – the antibacterial lozenges (e.g. regular Strepsils) without relieving agents will not be as helpful. For Strep infections on the surface of AND within the tonsils, we can only treat the surface infection with lozenges, sprays or gargles. If the tonsils remain enlarged, then the infection remains within, and prescribed antibiotics taken orally may be required to really bring the infected tonsils and the symptoms under control. If it is tonsillitis, you may be able to see the white spots on the inflamed tonsils if you look at the throat of your patient, and their breath will often be unpleasant.

If a sore throat has not resolved after a couple of days, and a high temperature but no other head cold symptoms are evident, it may be bacterial, so referral to a doctor is sensible. In the past, after repeated episodes of tonsillitis, removal of the tonsils may have been advised, but that now happens for only the most severely affected patients. For repeated episodes of Strep throat antibiotics are usually the best treatment, with symptomatic relief until the pain and fever has settled.

3. **Allergies** – Hay fever can lead to nasal and sinus congestion, and a post-nasal drip while lying down can lead to a sore throat, especially in the morning. Non-sedating antihistamines and steroid nasal sprays will control the cause of the sore throat very rapidly (see the hay fever module).
4. **Muscle strain** – exercising some restraint at rock concerts and on the footy field sidelines should limit how often this happens. The discomfort is due to inflammation of the vocal cords in the larynx, and anti-inflammatory tablets, lozenges and sprays along with resting the voice, will help speed recovery.
5. **Air quality** – For sore throats caused by factors that are not associated with infection or allergy, changing the environment, if possible, may help if low humidity (use humidifiers) or direct irritants (e.g. smoke) are causing the problem. Sometimes the throat will dry out due to mouth breathing during sleep as a consequence of obstructed nasal passages, leading to throat discomfort. If the obstruction is not due to allergic congestion (e.g. hay fever) a referral to a doctor is wise. Drinking plenty of fluids, sucking sweets, ice or medicated lozenges will all help relieve the symptoms, but are not fixing the cause.

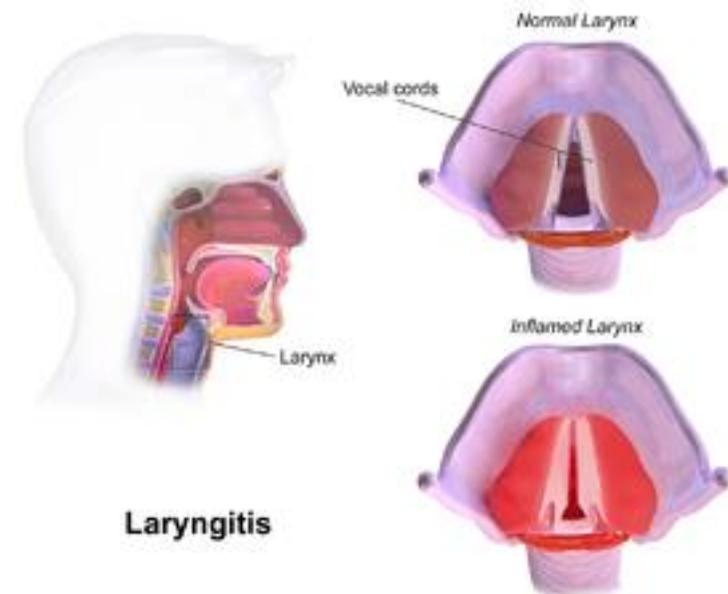
6. **Gastroesophageal reflux** – If a sore throat is due to the direct irritation from stomach acid on the throat tissue we need to advise on lifestyle factors to minimise the reflux, and offer medications that will reduce the acidity of the stomach acid should it continue to reach the throat because of the reflux. Ranitidine and Pantoprazole (see the indigestion and heartburn module) are very effective and available from the pharmacy. Lozenges may help give some relief while symptoms and irritation are still present.

Another common throat condition you may see - Laryngitis

One other throat problem you may be familiar with is laryngitis, an inflammation of the larynx (voice box), which is lower down than the pharynx.

Symptoms of laryngitis can appear suddenly, and usually get worse over a period of 2-3 days, and usually gets better within a week without treatment. Common symptoms include hoarseness, difficulty speaking, sore throat, mild fever, irritating cough and a constant need to clear the throat.

In most cases it is due to either a viral infection (cold or flu), or damage to the larynx by straining the voice. To help the symptoms subside it is important to get lots of fluids, and rest the voice. The vocal cords vibrate as air passes by them, producing sound, but not if they are damaged or inflamed. Anti-inflammatory tablets orally, and anti-inflammatory sprays may be useful to take the swelling out of the vocal cords and bring the voice back to normal.



Optimal Care products for your sore throat – to reiterate, here is a quick summary of treatment options available in the pharmacy:

- Betadine throat gargle – anti viral, anti-bacterial, anti-fungal – VERY useful in both viral and bacterial throat conditions
- Difflam throat lozenges – contain both anti-inflammatory AND anaesthetic in some of these lozenges – useful for reduction in pain and inflammation. Antibacterial agents contained may assist in bacterial throat conditions. Important to note these are MUCH better than regular Strepsils which will only contain antibacterial alone.
- Strepsils plus – antibacterial PLUS has a local anaesthetic to numb the painful area
- Difflam spray / strepsils spray – anti-inflammatory only for pain and swelling
- Paracetamol and ibuprofen – taken orally for relief of pain and inflammation. Will also help with some associated symptoms; e.g. fever. Please remember many cold & flu preparations already contain paracetamol/ibuprofen so it is important the customer knows not to double up in this case!



Optimal care products containing "complementary" medicines and herbs may exert some effect on the immune system beyond just acting as throat soothers, to decrease sore throat and cold duration, or severity (e.g. Throat Clear lozenges). The following will give you information on some of the more popular ingredients and their evidence of efficacy thus far:

Echinacea

- Echinacea is thought to help boost the immune system and alleviate symptoms of the common cold. Its preparations can differ greatly depending on the type and parts of the plant used and the manufacturing methods, however, and the overwhelming majority of products haven't been tested in clinical trials. A [Cochrane review of echinacea](#) found that some preparations might be effective for the early treatment of colds in adults, but results aren't consistent. Beneficial effects of other preparations might exist but haven't been shown in good-quality trials.

Vitamin C (ascorbic acid)

- Vitamin C appears in throat lozenges in various forms. It is thought to help reduce the duration of the common cold; however, a [Cochrane review of vitamin C](#) found that it didn't show any benefit in doses up to 4g daily.

Zinc

- Zinc is thought to reduce symptoms of the common cold, including a sore throat. A 1999 Cochrane review found that evidence was inconclusive as to whether zinc lozenges were an effective treatment for symptoms of the common cold. Since then though, several new studies have shown that treatment with zinc lozenges does significantly decrease cold duration.

***See cold and flu module for further lifestyle advice*

