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# What causes tonsillitis?

Tonsillitis is a very common condition, especially in children. Tonsillitis means inflammation (pain, swelling, and redness) of the tonsils - they are found at the back of the mouth and form part of your immune system which fights off infection.

### What causes tonsillitis?

Tonsillitis is usually caused by a virus, such as a cold, but it can also be due to a bacterial infection such as strep throat - there are also a few other infections that can very rarely cause tonsillitis

If you think you or your child has tonsillitis find out what to do next by clicking here. This will tell you if you need to see a doctor and how to treat it.

The rest of this feature will take a in-depth look at the causes of tonsillitis as, at Patient, we know our readers sometimes want to have a deep dive into certain topics.

In this series of articles centred around tonsillitis, you can read about the causes of tonsillitis, symptoms of tonsillitis and treatments for tonsillitis – all written by one of our GP experts.

#### Tonsillitis caused by a virus

Most people get tonsillitis due to a viral infection. Usually there are other symptoms such as a cough and muscle aches, not just a sore throat.

Most of the different viruses which cause tonsillitis do not require testing to diagnose, because there is no specific treatment for them. They usually get better with time as the body fights off the infection.

Some examples of common viruses that cause tonsillitis are:

• The common cold (rhinovirus).

- Flu (influenza virus).
- Glandular fever/infectious mononucleosis (Epstein-Barr virus).

Glandular fever can cause a severe tonsillitis which sometimes looks similar to bacterial tonsillitis. It can last longer and have worse symptoms than other types of bacterial and viral tonsillitis, but it does get better with time.

- COVID-19 (SARS-CoV-2).
- Other types of coronavirus which can also cause the common cold.
- Respiratory syncytial virus.
- Adenoviruses.
- Rubella can cause serious birth defects in unborn babies if pregnant women become infected. Children in most countries are vaccinated against rubella, and vaccines have been very effective at preventing this infection. It is now very rare in the UK as a result.

#### **Bacterial tonsillitis**

Sometimes tonsillitis is caused by a bacterial infection. Common bacteria that cause tonsillitis are:

- Group A streptococci (or the bacterium Streptococcus pyogenes):
  - This is a very common cause of bacterial tonsillitis, sometimes called strep throat.
  - Some types of this bacterium can also cause scarlet fever and other illnesses, including rheumatic fever, although rheumatic fever is extremely rare in the UK.
  - This can be tested for with a throat swab. However, testing may not often be helpful:
  - As many as one in five healthy children carry group A strep in their throats for a short time, without it causing any problems. They can also get viral throat infections at the same time, and so a positive swab for Group A strep in someone with typical signs and symptoms of a viral throat infection might only mean that bacteria are present, but not causing the infection.
  - In people who are likely to have a bacterial throat infection, based on typical signs and symptoms, a throat swab isn't needed to start treatment.
- Haemophilus influenzae:
  - Children in most countries are vaccinated against , which protects against serious infections from this condition such as meningitis.
- Corynebacterium diphtheriae:
  - Children in most countries are vaccinated against this bacterium, which causes diphtheria. Diphtheria can cause a very serious throat infection which is lethal, but vaccines have been very effective at preventing this infection.
- Fusobacterium necrophorum:
  - This is a type of bacterium that can cause a very rare complication of tonsillitis called Lemierre's syndrome, where bacteria enter the bloodstream via the veins in the neck. Whilst this bacterium is quite common, Lemierre's syndrome has become very rare since penicillin antibiotics were developed.

#### Sexually transmitted infections that cause tonsillitis

Some types of sexually transmitted infections (STIs) can cause tonsillitis. They are still very uncommon as causes of tonsillitis overall, but might be considered in people who are at higher risk of contracting STIs. These include:

- Chlamydia and gonorrhoea infection. Receiving, or giving, oral sex without a condom can transmit these infections to the throat. Occasionally, this can cause tonsillitis and pharyngitis, but most people with these infections don't get any symptoms. These infections can be tested for with a throat swab, if it's felt to be a possibility.
- HIV infection some people develop a seroconversion illness where they become unwell shortly after becoming infected with HIV for the first time - usually between 1-3 weeks after contracting the infection. As part of this illness, people with HIV seroconversion illness might have tonsillitis, but usually have other symptoms such as a fever, a rash, and swollen lymph nodes. HIV tests are widely available and should be done for anyone who thinks they might be at risk, or is concerned about HIV.
- Syphilis can be spread to the mouth and throat by a person receiving or giving oral sex without a condom. Sometimes, people can develop painless ulcers in the mouth from the first stage of syphilis infection. Rarely, some people develop ulcers and tonsillitis as part of the second stage of syphilis infection. Syphilis can be tested for with swabs of ulcers and with blood tests, and is usually diagnosed by sexual health clinics.

### How does tonsillitis spread?

#### **Close contact**

Most of the viruses and bacteria that cause tonsillitis are spread when people with those infections talk, cough, or sneeze near others. These release tiny liquid droplets that contain the virus or bacteria into the air, and can spread to another person who inhales them. The droplets can also contaminate surfaces, which might be touched by another person; if that person then touches their mouth or nose, they can contract the infection. Generally, being in close contact with people with the infections that cause tonsillitis can spread them - for example, sharing food and drinking, or being together in the same room.

#### STIs

See above.

# **Risk factors for tonsillitis**

#### Children

Tonsillitis is most common in children because they haven't had as much exposure to viruses and bacteria as adults have, so their immune system is not so developed. Children are also in close contact with lots of other children - at school or nursery - who carry and spread these infections.

Most people's tonsils also shrink with age, and so adults tend not to experience as much pain and swelling from the tonsils if they do get an infection affecting the throat.

#### Genetics

Some people get repeated bouts of tonsillitis (recurrent tonsillitis) or tonsil infections that don't clear (chronic tonsillitis). The reasons aren't fully clear, but there is probably a genetic component, as it tends to run in families. Some recent research suggests that these people might also have immune systems that don't work as well at killing the bacteria that cause tonsillitis.

## How to prevent tonsillitis

It's difficult to prevent tonsillitis completely, as most people will be exposed to viruses and bacteria as part of their normal lives. Some things that might help reduce the spread of these infections include:

- Wash your hands before eating or touching your mouth, nose, or face.
- Wash your hands after coughing or sneezing.
- Avoid sharing food or drink with someone who has tonsillitis.
- Get plenty of rest and avoid mixing with other people if you have tonsillitis, until you have recovered.

### **Further reading**

- Georgalas CC, Tolley NS, Narula PA; Tonsillitis. BMJ Clin Evid. 2014 Jul 22;2014:0503.
- Sore throat acute, NICE CKS, December 2022 (UK access only).

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