

Function of the Tonsils and Adenoids

are located on either side of the throat. They are composed mainly of special cells that produce antibodies to fight infection. Each tonsil has pits on its surface, and extending from these pits are tubes (called crypts) that go into the tonsil. During swallowing, the tonsils are pushed together by the throat muscles, and small amounts of food, bacteria and viruses are squeezed into the pits and tubes. This process triggers an immune response against bacteria and viruses.

ADENOIDS

The adenoids are above the soft palate and behind the nasal passageway. This clump of tissue has slits in line with the nose's airflow so that foreign particles breathed inward will be deposited in the clefts. The adenoids and tonsils process foreign particles in a similar way. Adenoids are more likely to be infected first with respiratory viruses because of their position. Even when the tonsils and adenoids are removed, the immune system remains healthy. This is because tonsils and adenoids are only a small part of the body's total immune system. In fact, the immune system may improve after diseased tonsils and adenoids are removed.

TONSILLITIS

Tonsillitis is an inflammation of the tonsils usually caused by infection. The adenoids are often infected at the same time. Viruses are the commonest cause of tonsillitis. It is usually impossible to tell the difference between bacterial infection and viral infection by looking. Symptoms include sore throat, difficulty swallowing, bad breath, fever, swollen neck glands (lymph nodes), loss of appetite, plummy voice, and feeling ill and tired. During infection, tonsils are swollen and red, and usually white or yellow pus comes from the pits on the surface of the tonsils. Almost everybody gets tonsillitis at some time. It usually affects young children the most as their immune system is immature and is not yet able to fight off the viruses and bacteria that cause infection. It is common for some children to get repeated bouts of tonsillitis. It may take up to three years for a child to develop sufficient immunity. Most children develop the necessary immunity before scarring within the tonsil occurs. Surgeons prefer to wait for this immunity rather than remove tonsils and adenoids prematurely. However, some children are persistently sick with tonsillitis or may have other problems related to chronic tonsillitis. In these cases, a decision may be made to have surgical treatment earlier.

Glandular fever tonsillitis:

This occurs more often in the older child, teenager and young adult. It can be severe, with huge tonsil and adenoid swelling, huge neck node swelling and partial blockage of breathing and swallowing.

Chronic tonsillitis:

This develops in patients who have had repeated acute infections or low-grade bacterial infection for a long time. The tonsil becomes scarred, and a build up of old food, dead cells and bacteria occurs within the tonsil's crypts.

Quinsy:

This is an abscess (infection and collection of pus) between the shell (capsule) of the tonsil and the muscle of the throat.

resistance syndrome and obstructive sleep apnoea) in the tonsils and adenoids. The child sleeps with the mouth open and breathes loudly. The child's breathing usually has stops or pauses between 10 and 20 seconds for the next gasping breath. Other symptoms include bedwetting, slow growth, headache, poor concentration, misbehaviours and ill temper. Big tonsils can also cause difficulty swallowing food or choking on some food. Treatment recommendations will depend on the severity. Sleep disordered breathing caused by gross enlargement of tonsils and adenoids is an indication for surgery even without a history of repeated infection.

PRINCIPLES OF TREATMENT

Treatment decisions will depend on:

- Whether the infections have been tonsillitis alone or part of an upper respiratory infection.
- Severity of symptoms and the illness
- Patients history of antibiotic use and its effectiveness
- How many episodes of tonsillitis the patient has had an response to treatment
- Scarring of tonsils
- Other complicating illnesses
- The effect of chronic tonsillitis on schooling or work.

The decision to prescribe an antibiotic will depend on the likelihood of bacterial infection because antibiotics are not effective against viruses. Penicillin or an antibiotic closely related to penicillin is usually the first drug of choice. Surgery may be considered when the patient has suffered many bouts of infection that have probably scarred the tonsils. This scarring is likely to cause more bouts of infection.

Surgery is often an option if the patient has had approximately:

- Seven bouts of tonsillitis over the past two years and is at least four years of age (although younger patients may have the surgery in some cases)
- Eight or more bouts of tonsillitis in any one year.

Related factors that favour surgery include:

- Antibiotic allergy or a poor response to antibiotics
- Sleep disorder breathing (choking)
- Difficulty swallowing
- Poor weight gain or growth
- Associated middle ear infections
- Episode of quinsy, rheumatic fever, nephritis with blood in the urine, febrile convulsions
- Too much lost time from school or work
- Presence of smelly cheesy material within the tonsils.

Surgery may be delayed if other medical conditions increase the risks of tonsillectomy. This would include patients with heart disease, a tendency to bleed excessively, cleft palate, and a variety of other conditions. Most patients are admitted to hospital for one or two days. Some children will be well enough to go home on the same day.

be made after discussion with your surgeon. The decision
Make the decision only when you are satisfied with the
you have been well informed. Your surgeon will be

pleased to discuss the benefits and risks of the treatment. Keep in mind that your surgeon cannot guarantee that the surgery will meet all of your expectations or that the surgery has no risks. We encourage you to seek the opinion of another surgeon if you are uncertain about your surgeon's advice.

Consent form:

If you decide to have treatment, your surgeon will ask you to sign a consent form. Read it carefully. If you have any questions, ask your surgeon.

BEFORE SURGERY

The surgeon needs to know the patient's medical history to plan the best treatment. Fully disclose any health problems as some may interfere with surgery, anaesthesia or aftercare. Before surgery, tell the surgeon if the patient has had:

- Allergy or bad reaction to antibiotics, anaesthetic drugs or other medicines
- Prolonged bleeding, or excessive bruising when injured
- A family history of bleeding
- Recent or long-term illness
- A heart murmur

Give the surgeon a list of ALL medicines the patient is taking or has recently taken. Include medicines prescribed by the family doctor and those brought over the counter, without prescription. Include medicines (such as insulin, Warfarin and contraceptive pills) that are taken for long-term treatments. Do not take aspirin, medicines containing aspirin (such as cough syrups), large amounts of vitamins (particularly vitamin E), or anti-inflammatory medicines for at least 21 days before surgery. These may increase the risk of excessive bleeding during and after surgery.

Smoking:

The patient should stop smoking at least two weeks before surgery. Smoking increases surgical and anaesthetic risk and impairs healing.

TONSILLECTOMY

With the mouth held open by a special instrument, the tonsils are grasped by forceps and pulled away from the side wall of the throat so that the attaching fibres in the capsule are stretched. After cutting the overlying lining, the joining fibres are cut and the tonsil is peeled away from the adjacent muscles. The removal is performed by a variety of tools. The surgeon can use a scalpel, scissors, scraping instruments, laser or diathermy. (Diathermy is the use of an electrical spark to cut tissue and cauterise small blood vessels, reducing bleeding. In many cases, tonsils can be removed with very little bleeding). Self-dissolving sutures may be used to tie off bleeding vessels. After surgery, these sutures may be seen lying in the whitish-grey area of the healing tonsil bed on either side.

ADENOIDECTOMY

Adenoidectomy is usually performed with a scraping knife called a curette. The operation is performed through the mouth by placing the curette behind the soft palate and scraping away the adenoid tissue. Some bleeding occurs but usually stops within a few minutes. After the tonsils and

checks that bleeding has stopped. The patient is then
ed carefully until fully awake.

ISILLECTOMY AND ADENOIDECTOMY

throat. Children are often confused due to effect of the
general anaesthetic, and some may be very distressed. Children usually cry but fall asleep within the
hour. A patient may be invited to the recovery ward to comfort the child. Vomiting is common and
the vomit may contain blood that has been swallowed. Nursing staff monitor the patient's blood
pressure, pulse rate, general well-being, and check for bleeding. Within hours, patients can resume
drinking and eating soft foods. A slight fever may develop within the first 24 hours, but usually it does
not delay discharge from hospital the next day. Before discharge from hospital, the patient must be
able to drink freely and preferably eat soft foods. Most people are away from school or work for up to
two weeks. Refrain from vigorous sporting activity for three weeks to reduce the risk of bleeding.

Antibiotics:

To guard against infection, some surgeons prescribe a course of antibiotics after surgery. If infection
develops before the throat has healed, a course of antibiotics (or a change of antibiotic type) may be
recommended.

Pain Relief:

Most patients experience pain for up to two weeks. A painkiller is best given before pain gets bad,
not after it has reached a peak. Paracetamol given an hour before breakfast, lunch, dinner and
bedtime is advisable. A stronger painkiller may be needed; the surgeon can prescribe combination
preparations. Pain usually lessens within the first few days, but often it may return and be worse.
Throat pain can cause earache, which can awaken and badly distress a child. It can be managed by
giving a stronger painkiller that may contain a sedative. During the healing period, unless your doctor
advises otherwise, avoid aspirin, ibuprofen and similar inflammatories as they can impair clotting.
Aspirin should **NEVER** be given to children younger than 12 years of age.

Fluid Intake:

An adequate amount of fluids must be drunk during healing to keep saliva flowing. This makes
swallowing easier and helps to wash the throat, keeping it cleaner and helping to prevent infection.

Dehydration:

If pain during swallowing prevents adequate fluid intake and dehydration has occurred, the patient
may need to be readmitted to hospital for rehydration using an intravenous drop (fluid administered
through a vein). This may require an overnight stay or may be a day procedure. Contact the surgeon
or the hospital at once if you suspect your child is not getting enough fluid. Signs of dehydration
include dizziness, dry mouth, decreased urine output, increased tiredness, and looking increasingly
unwell.

Eating:

Normal food can be eaten during the healing period. Avoid food that is rough (such as toast or corn
chips), acidic, hot or spicy. The coldness of ice cream may provide some pain relief. It is reasonably
nutritious and is a good source of calories. During eating, the passage of food helps to gently rub
excess, debris away from the healing tissues, and this may also help to prevent infection.

may occur. Pain initially restricts palate movement, and after huge tonsils and adenoids have been removed. This develop a squeaky voice. The voice usually returns to normal once the pain subsides and throat movements become normal.

Anaesthesia:

Tonsillectomy and adenoidectomy are performed under a general anaesthetic. DO not eat or drink anything for at least six hours before surgery so the stomach is empty and vomiting is less likely. Even a sip of water is not advisable for four hours before surgery. Your anaesthetist or surgeon may provide further instructions. Some anaesthetists prefer a parent to be in the operating theatre when the child is put to sleep because this eases the child's stress as well as the parents. Once the child is asleep, the parent leaves the theatre, and the operation starts.

POSSIBLE COMPLICATIONS OF SURGERY

Modern surgery is safe but does have risks. Despite the highest standards of surgical practice, complications are possible. It is not usual for a surgeon to outline every possible or rare complication of an operation. However, it is important that you have enough information to fully weigh up the benefits and risks of surgery. Most people having surgery will not have complications, but if you have concerns about possible side effects, discuss them with your surgeon. The following possible complications are listed to inform and not to alarm. There may be others that are not listed.

General risks of surgery:

Possible complications of any surgery include:

- Wound infection (treatment with antibiotics may be needed)
- Pain and discomfort which may persist
- Nausea (typically from the anaesthetic; this usually settled down quickly)
- Slow healing (most likely to occur in smokers and people with diabetes)
- Allergies to anaesthetic agents or antiseptic solutions

Specific Risks of Tonsillectomy and Adenoidectomy

Bleeding:

The major risk is heavy bleeding from the tonsil or adenoid site on the day of surgery. This may require a second anaesthetic in theatre and further surgery to stop the bleeding. Delayed bleeding may occur up to three weeks after surgery. About one patient in five has blood spotting at some stage after the surgery. Usually there is only a little blood. However, if the quantity of blood appears to be excessive or if you are concerned about the occurrence of bleeding, contact your surgeon or go immediately to the nearest hospital. As bleeding can be a problem, it is best to be within one hour of a hospital during the first three weeks after surgery. Such bleeding usually stops spontaneously, and when in hospital, the patient will only need an intravenous drip, antibiotics and observation overnight.

Blood Transfusion:

- Due to excessive bleeding, a blood transfusion may be needed. This occurs in about one patient in every 1,000 who have a tonsillectomy. As transfusion is rare, there is no need to collect the patient's blood before the surgery or to collect parent's blood for the child.
- Problems with breathing after surgery can occur in patients (especially children) with a history of sleep apnoea.

in children given morphine or methadone or monopod for

is quite short, there is a risk after surgery of air escaping
ch and resolved, but speech therapy may be needed in
y may be recommended to correct this situation.

Report to your Surgeon:

Tell your surgeon at once if you develop any of the following:

- Any bleeding from the surgical area
- Temperature higher than 38⁰C or chills
- Nausea and vomiting
- Poor fluid intake
- Poor pain control
- Any concerns you have regarding the surgery

Costs of Treatment

Ask us to provide an estimate of the surgical, anaesthetic and hospital fees that may apply. This can only be an estimate because the actual treatment may differ from the proposed treatment. If further treatment is needed due to complications or you choose other options, extra costs are likely to apply. You should discuss costs before treatment rather than afterwards. If complications occur, more surgery may be needed. This may lead to more costs and inconvenience.

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