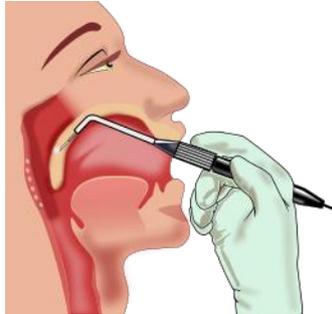


Tonsillectomy



What is Tonsillectomy?

Tonsillectomy is surgery to remove the tonsils. The tonsils are glands at the back of your throat. The tonsils are usually removed along with your adenoid glands. That surgery is called adenoidectomy.

Description

The surgery is done while the child is under general anesthesia. Your child will be asleep and pain free.

- The surgeon will place a small tool into your child's mouth to hold it open.
- The surgeon then cuts or burns away the tonsils. The doctor will control bleeding. The wounds heal naturally without stitches.

After surgery, your child will stay in the recovery room until he or she is awake and can breathe easily, cough, and swallow. Most children go home several hours after this surgery.

Symptoms

The tonsils help protect against infections. But children with large tonsils may have many sore throats and ear infections.

You and your child's doctor may consider a tonsillectomy if:

- Your child has infections often (seven or more times in 1 year, or five or more times over 2 years).
- Your child misses a lot of school.
- Your child has trouble breathing.
- Your child has abscess or growth on their tonsils.

Complications

The risks for any anesthesia are:

- Reactions to medications
- Breathing problems

The risks for any surgery are:

- Bleeding
- Infection

Rarely, bleeding after surgery can go unnoticed and cause very bad problems. Swallowing a lot may be a sign of bleeding from the tonsils. Another risk includes injury to the uvula (soft palate).

Causes

The tonsils and adenoids are masses of immune cells commonly found in lymph glands (lymphoid tissue). These tissues are located in the mouth and behind the nasal passages, respectively. Infected or enlarged tonsils may cause chronic or recurrent sore throat, bad breath, dental malocclusion, abscess, upper airway obstruction causing difficulty with swallowing, snoring or sleep apnea. Infected adenoids may become enlarged, obstruct breathing, cause ear infections or other problems. Tonsillectomy and adenoidectomy are surgical procedures performed to remove the tonsils and adenoids.

Statistics on Tonsillectomy

More than 530,000 procedures are performed annually in children younger than 15 years in the United States. The current tonsillectomy "rate" is 0.53 per thousand children and 1.46 per thousand children for combined tonsillectomy and adenoidectomy.

Surgical procedure

For the past 50 years at least, tonsillectomy has been performed by dissecting the tonsil from its surrounding fascia, a so-called 'total', or extra-capsular tonsillectomy. Problems include pain and bleeding leading to a recent resurgence in interest in sub-total tonsillectomy or 'tonsillotomy' which was popular 60–100 years ago, in an effort to reduce these complications. The generally accepted procedure for 'total' tonsillectomy uses a scalpel and blunt dissection or electrocautery, although harmonic scalpels or lasers have also been used. Bleeding is stopped with electrocautery, ligation by sutures, and the topical use of thrombin, a protein that induces blood clotting.

Methods

- **Dissection and snare method**

Removal of the tonsils by use of a forceps and scissors with a wire loop called a 'snare' was formerly the most common method practiced by otolaryngologists, but has been largely replaced in favor of other techniques. The procedure requires the patient to undergo general anesthesia; the tonsils are completely removed and the remaining tissue surface is cauterized. The patient will leave with minimal post-operative bleeding.

- **Electrocautery**

Electrocautery uses electrical energy to separate the tonsillar tissue and assists in reducing blood loss through cauterization. Research has shown that the heat of electrocautery (400°C) may result in thermal injury to surrounding tissue. This may result in more discomfort during the postoperative period.

- **Radiofrequency Ablation (see Coblation tonsillectomy)**

This procedure produces an ionized saline layer that disrupts molecular bonds without using heat. As the energy is transferred to the tissue, ionic dissociation occurs. This mechanism can be used to remove all or only part of the tonsil. It is done under general anesthesia in the operating room and can be used for enlarged tonsils and chronic or recurrent infections. This causes removal of tissue with a thermal effect of 45-85 °C. It has been claimed that this technique results in less pain, faster healing, and less post operative care. However, review of 21 studies gives conflicting results about levels of pain, and its comparative safety has yet to be confirmed. This technique has been criticized for a higher than expected rate of bleeding presumably due to the low temperature which may be insufficient to seal the divided blood vessels but several papers offer conflicting (some positive, some negative) results. Long term studies seem to show that surgeons experienced with the technique have very few complications.

- **Harmonic scalpel**

This medical device uses ultrasonic energy to vibrate its blade at 55kHz. Invisible to the naked eye, the vibration transfers energy to the tissue, providing simultaneous cutting and coagulation. The temperature of the surrounding tissue reaches 80°C. Proponents of this procedure assert that the end result is precise cutting with minimal thermal damage.

- **Radiofrequency ablation**

Monopolar radiofrequency thermal ablation transfers radiofrequency energy to the tonsil tissue through probes inserted in the tonsil. The procedure can be performed in an office (outpatient) setting under light sedation or local anesthesia. After the treatment is performed, scarring occurs within the tonsil causing it to decrease in size over a period of several weeks. The treatment can be

performed several times. The advantages of this technique are minimal discomfort, ease of operations, and immediate return to work or school. Tonsillar tissue remains after the procedure but is less prominent. This procedure is recommended for treating enlarged tonsils and not chronic or recurrent tonsillitis.

- **Thermal Welding**

A new technology which uses pure thermal energy to seal and divide the tissue. The absence of thermal spread means that the temperature of surrounding tissue is only 2-3 °C higher than normal body temperature. Clinical papers show patients with minimal post-operative pain (no requirement for narcotic pain-killers), zero edema (swelling) plus almost no incidence of bleeding. Hospitals in the US are advertising this procedure as "Painless Tonsillectomy". Also known as Tissue Welding.

- **Carbon dioxide laser**

When a laser is used to perform tonsillectomy, this is called laser-assisted serial tonsillectomy (LAST). This is different from procedures where a laser is used to reduce or resurface the tonsils (e.g. laser cryptolysis). Providing the absence of certain contra-indications such as sensitive gag-reflex, LAST can be performed under local anesthetic as an outpatient procedure. A carbon dioxide laser is commonly used, and is swept over each tonsil 8-10 times. The smoke is aspirated out of the mouth to prevent smoke inhalation. Often, more than one procedure is required, each lasting about 20 minutes. The pain following LAST may be greater than other tonsillectomy methods. Due to the frequent requirement for multiple sessions, this treatment may work out more expensive than a single session tonsillectomy. A degree of patient compliance is required, making it unsuitable for young children and anxious persons, who risk harm if they move during the procedure.

- **Microdebrider:** The microdebrider is a powered rotary shaving device with continuous suction often used during sinus surgery. It is made up of a cannula or tube, connected to a hand piece, which in turn is connected to a motor with foot control and a suction device. The endoscopic microdebrider is used in performing a partial tonsillectomy, by partially shaving the tonsils. This procedure entails eliminating the obstructive portion of the tonsil while preserving the tonsillar capsule. A natural biologic dressing is left in place over the pharyngeal muscles, preventing injury, inflammation, and infection. The procedure results in less post-operative pain, a more rapid recovery, and perhaps fewer delayed complications. However, the partial tonsillectomy is suggested for enlarged tonsils – not those that incur repeated infections.

Before the Procedure

Your child's doctor may ask your child to have:

- Blood tests (complete blood count, electrolytes, clotting factors)
- A physical exam and medical history

Always tell your child's doctor or nurse:

- What drugs your child is taking
- Include any drugs, herbs, or vitamins you bought without a prescription

During the days before the surgery:

- Ten days before the surgery, your child may be asked to stop taking aspirin, ibuprofen (Advil, Motrin), naproxen (Aleve, Naprosyn), warfarin (Coumadin), and other drugs like these.
- Ask your child's doctor which drugs your child should still take on the day of the surgery.

On the day of the surgery:

- Your child will usually be asked not to drink or eat anything for several hours before the surgery.
- Give your child any drugs your doctor told you to give your child with a small sip of water.
- Your child's doctor or nurse will tell you when to arrive at the hospital.

After the Procedure

A tonsillectomy is usually done in a hospital or surgery center. Your child will go home the same day as the surgery. Children rarely need to stay overnight in the hospital for observation.

Complete recovery takes about 1 to 2 weeks. During the first week, your child should avoid people who are sick. It will be easier for your child to become infected during this time.