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Tonsillectomy and adenoidectomy

Information for patients — please read before your consent appointment

Tonsillectomy, with or without removal of the adenoids, remains one of the most common operations performed by an ENT surgeon. It is also one of the most discussed. Parents are given a great deal of conflicting information about what these tissues do and about what the operation involves, and much of it is inaccurate. This leaflet sets out what is actually known, so that you can make the decision with confidence.

What are the tonsils and adenoids?

The tonsils sit at the back of the throat and the adenoids behind the nose. Both are lymphoid, or glandular, tissue. They are not isolated structures: they form part of a ring of similar tissue around the entrance to the airway, called Waldeyer's ring, described by the German anatomist Heinrich Wilhelm von Waldeyer-Hartz in 1884.

Will my child's immune system suffer?

This is the question parents ask most often, and the answer is reassuring. The role of the tonsils and adenoids is to sample viruses and bacteria entering through the nose and mouth and to help the body produce antibodies against them. That function is shared across the whole of Waldeyer's ring and continues to be performed by the remaining tissue after the tonsils and adenoids are removed. Studies looking at immune function after adenotonsillectomy have consistently found no meaningful impairment, and no increase in infections elsewhere in the body.

Why they become the problem

The surface of lymphoid tissue is folded into deep pits called crypts. In a healthy child these are harmless. In a child with repeated infections the crypts become a reservoir where bacteria and viruses persist, so the tissue that was meant to protect against infection becomes the source of it. Enlarged tonsils and adenoids can also physically block the airway. No child should snore night after night: persistent snoring is a sign of obstruction and deserves proper assessment.

When is surgery recommended?

There are two main reasons to operate, and they are considered separately.

Obstruction and sleep-disordered breathing

Enlarged tonsils and adenoids blocking the airway during sleep cause snoring, pauses in breathing, restless sleep and mouth-breathing. This can affect growth, daytime behaviour, concentration, school performance and bed-wetting, and these often improve after surgery. Obstruction is the commonest reason for surgery in young children.

Recurrent throat infection

Because most children improve on their own over time, international guidelines recommend a period of watchful waiting unless the infections are frequent enough to justify surgery. The usual threshold is:

- 7 or more episodes in the past year, or
- 5 or more per year for the past 2 years, or
- 3 or more per year for the past 3 years

Episodes should be properly documented, with fever, tonsillar exudate, gland swelling or a positive throat swab. Surgery may still be appropriate below these thresholds where there are additional factors, such as several antibiotic allergies or intolerances, more than one quinsy (peritonsillar abscess), or PFAPA syndrome.

> **An honest note on expectations**
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> Where the problem is obstruction, the improvement is usually dramatic and the family notices it within weeks. Where the problem is recurrent infection, the benefit is real but more modest: sore throats become less frequent rather than disappearing entirely, and the advantage over doing nothing narrows over a few years as children naturally improve. Sleep-disordered breathing can also persist or come back after surgery, particularly in children who are overweight or who have other airway problems, and may need further treatment.

Coblation: the technique used

Tonsillectomy has been performed since antiquity, with the first clear description given by the Roman writer Celsus around AD 30. Many techniques have followed, from cold steel dissection with ties, through diathermy, to laser. The two problems that have never gone away are post-operative pain and bleeding, and every technique trades one against the other.

Coblation works differently from cutting or burning. A sodium-rich solution fills the plane between the tonsil and its bed, and a radiofrequency current passing through it creates a field of charged particles that breaks the tissue bonds apart. Because the tissue is dissolved rather than burned, the working temperature stays around 40 to 70 °C, compared with 400 to 600 °C at the tissue with laser or diathermy. Far less heat spreads into the surrounding muscle.

What this reliably delivers, on consistent trial evidence:

- Less bleeding during the operation, and a clearer field, so bleeding points are identified and dealt with as they occur
- Less post-operative pain, and a faster return to normal eating and drinking, which matters because poor fluid intake is a leading cause of readmission
- Shorter operating time and less anaesthetic exposure

On bleeding after the operation, the evidence is more mixed than is often claimed. Some studies favour coblation, some show no difference against cold steel dissection, and one recent pooled analysis suggested a slightly higher rate. It is fair to say that coblation reduces bleeding during surgery and reduces pain afterwards, but you should not be told that it removes the risk of bleeding later. That risk is real for every technique and is discussed below.

Alternatives worth discussing

- **Watchful waiting.** Appropriate where infections fall below the thresholds above, since many children improve without surgery.
- **Medical treatment.** Treating allergy or nasal inflammation, and a nasal steroid spray, may relieve mild obstruction, particularly where the adenoids are the main problem.
- **Adenoidectomy alone.** Where the adenoids alone are causing the nasal blockage and the tonsils are healthy.
- **Tonsillotomy (intracapsular reduction).** The bulk of the tonsil is reduced but the capsule is left intact. For obstruction in young children this means less pain and a lower bleeding risk, but the tonsil remains and can regrow or become infected, so it is not suitable where the indication is recurrent infection.

Risks and complications

Adenotonsillectomy is a safe and well-established operation, but it is not a minor one and it deserves a proper conversation. The figures below are drawn from published series and pooled analyses.

COMPLICATION	APPROXIMATE RISK	WHAT IT MEANS
Bleeding in the first 24 hours	About 1 in 100	Usually detected before discharge. May require a return to theatre to stop it.
Bleeding from day 5 to 10	About 5 in 100	Occurs as the healing scab separates. Most settles on its own, but every episode must be assessed the same day. About 1 in 100 need a return to theatre.
Poor drinking and dehydration	Common	The main reason children come back to hospital. Almost always preventable with good pain control and steady fluids.
Nausea and vomiting	Common	Usually short-lived after the anaesthetic.
Infection of the tonsil bed	Uncommon	Antibiotics are not given routinely, because trials show they do not reduce infection, bleeding or pain.
Change in taste	Uncommon	Almost always temporary.
Damage to teeth, lips or gums	Uncommon	From the instrument holding the mouth open. Tell us about loose teeth, caps or crowns beforehand.
Nasal-sounding speech or fluid coming down the nose	Rare	After adenoidectomy. Usually settles within weeks; rarely persists and needs speech therapy assessment.
Regrowth of adenoid tissue	Rare	Mainly in very young children, and may require a second procedure.

Serious bleeding is rare, but it is why the instruction to go straight to hospital must be followed rather than waiting to see whether it settles. Anaesthetic risks are separate and the anaesthetist will discuss them.

Preparing for surgery

- Tell us about any bleeding tendency, easy bruising or family history of bleeding problems
- Tell us about all medicines and supplements. Aspirin is stopped beforehand; never stop a prescribed blood thinner without instruction
- Phone us rather than simply arriving if there is an active infection, fever or fresh cold in the week before surgery
- Follow the fasting instructions in your admission email exactly
- Buy the prescribed pain medication before the day of surgery
- Plan on 10 to 14 days at home, away from school or work
- Adults: arrange someone to drive you home and stay the first night

Questions worth asking

- Is my child's problem obstruction, infection, or both?
- Do the documented infections meet the threshold, or is watchful waiting reasonable?
- Would a tonsillotomy be an option in our case?
- What should we do if there is bleeding at home, and where do we go?

- What is the plan for pain control in the first ten days?

This sheet does not replace your consultation. Please bring your questions to your consent appointment.