

PATIENT BROCHURE

ENT |

Ear ventilation tubes

Preface

Placing ear ventilation tubes is one of the most common surgical procedures in the Netherlands, especially in children. Before going into more detail about the “how” and “why”, it is useful to briefly discuss the functioning of the human hearing organ.

The ear can be roughly divided into:

- The external auditory canal;
- The ear drum with the middle ear behind it. It contains the three ossicles.
- The middle ear is connected to the nasal pharynx via the Eustachian tube;
- The actual hearing organ, also called the cochlea.

Sound consists of air vibrations. These vibrations reach the ear drum through the ear canal. The ear drum and the auditory ossicles amplify the vibrations and conduct the vibrations to the cochlea, also called the inner ear. In the cochlea, where the sensory (nerve) cells can be found, convert the vibrations into nerve impulses. These nerve impulses are carried to the brain via the auditory nerve, where they are translated into “hearing”.

The middle ear is normally filled with air, which has the same pressure and composition as the outside air. Pressure is maintained through the Eustachian tube. Often the Eustachian tube, especially at young age, is not working properly. The reasons behind this are not fully clarified.

When is an ear ventilation tube placed?

The ENT (Ear, Nose & Throat) doctor will discuss and determine the cause of the condition, the consequences, the considerations, the solution and any additional problems, in order to give a well-founded judgment as to whether ear ventilation tubes are sensible and advised to insert.

Cause Eustachian tube dysfunction

Because Eustachian tube dysfunction, negative pressure is created in the middle ear, which pulls the ear drum inwards. The negative pressure can irritate the mucous membrane in the middle ear and secrete moisture, causing the middle ear to fill with moisture instead of air. This is called “OME” (Otitis Media with Effusion), but also called “glue ear”, because of the straw-like composition of the moisture.

Effects

This can cause complaints of a full pressure in the ear and sometimes pain. Severe pain can be caused by inflammation of this fluid (inflammation of the middle ear). Hearing loss also occurs, because the sound vibrations are damped by the liquid present. Your child's behavior can also change: your child can scream and become withdrawn.

Considerations

This condition is common in children between the ages of two and six; the condition has almost always been double-sided. Often, healing occurs spontaneously within weeks to months without permanent damage. However, if the abnormality persists for a longer period of time or frequently gives rise to ear infections, hearing loss and / or long-term complaints of abnormal behavior. A temporary aeration of the middle ear via an ear ventilation tube may be useful.

Solution

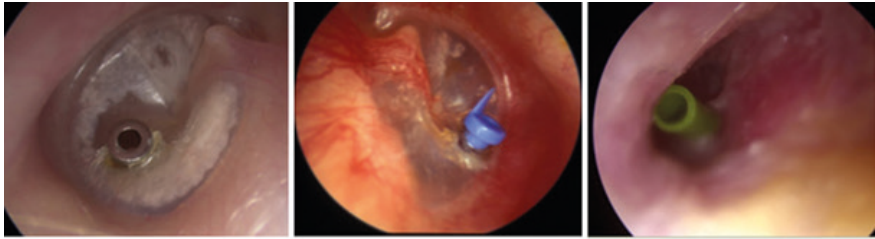
The purpose of an ear ventilation tube is to establish an open connection between the middle ear and the outer ear canal, so that air enters the middle ear through the ear ventilation tube. There is no alternative to improve the function of the Eustachian tube.

Additional problems

There is a close link between upper respiratory tract infections, such as a nasal cold, and a malfunctioning Eustachian tube. Before inserting an ear ventilation tube, other causes for recurrent upper respiratory tract infections, such as an enlarged tonsil and/or inflammation of the nasal cavity and paranasal sinuses, should be excluded or treated.

What is an ear ventilation tube?

An ear ventilation tube is a small tube, usually made of plastic, the size of a "half canopy head". The diameter is about 1.5 mm and the length varies from 3 mm to 12 mm. There are different types, which can vary in shape, size and color. A common type is shown below.



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How is an ear ventilation tube placed?

A small cut (3mm) is made in the ear drum under general anesthesia for young children or local anesthesia for adults. This is done with the aid of microsurgical techniques. If general anesthesia is used, the patient must not eat beforehand. The procedure is short-term and generally takes place on an outpatient basis or in day treatment. After the fluid has been sucked out of the middle ear, if necessary, the ear ventilation tube is placed like a collar button in the incision of the ear ventilation tube; one end is in the middle ear, while the other end is in the ear canal.

Ear pain after surgery is not common, so pain relief is rarely necessary. Most complaints have disappeared immediately after the treatment. In the first days after the procedure, some moisture may still come out of the auditory canal. It is better not to wear cotton wool or gauze in the ear. This hinders proper aeration of the ear canal and middle ear and can therefore delay healing.

How long should an ear ventilation tube remain in place?

An ear ventilation tube remains in place for a few months to several years. After that period, the ear ventilation tube is spontaneously expelled through the ear drum to the ear canal, after which the hole in the ear drum closes itself, with a few exceptions. A large number of children only need to insert an ear ventilation tube once. For the rest, the procedure must be repeated several times, because the function of the Eustachian tube has not yet been restored. In general, it appears that the function of the Eustachian tube improves after the 7th year of life, so that re-insertion of ear ventilation tubes is no longer necessary.

Answers to some frequently asked questions

1. Do adults sometimes need ear ventilation tubes?

The condition (OME), although clearly less frequent, can also occur in adulthood.

2. What should you do if an ear with an ear ventilation tube is “running”?

It is not uncommon for patients with an ear ventilation tube to develop a “running ear”. Usually this running ear heals spontaneously within a few days to a week. If the ear is not dry after three days, ear drops and / or antibiotics may be prescribed.

3. Can ear ventilation tubes cause damage later in life?

To date, there are no indications that children, even if it is necessary to insert an ear ventilation tube several times, suffer permanent damage to ear drums or hearing organs.

4. Can someone with ear ventilation tubes get water in their ears?

An ear ventilation tube has such a small diameter that only water under high pressure or water which surface tension has been lowered (soapy water) can penetrate. Swimming is allowed without protection by most doctors, but swimming under water is not recommended. Some doctors do recommend protective measures, such as using greasy cotton wool or wearing earplugs. During the first 10-14 days after inserting a ear ventilation tube, it is recommended not to go swimming yet, because the ear ventilation tube needs that time to become firmly attached.

5. Can someone fly with ear ventilation tubes?

Someone with ear ventilation tubes is allowed to fly. There will be considerably fewer complaints when descending and ascending than usual, because the ear ventilation tubes follow pressure changes in the middle ear.

6. What complications are to be expected?

The immediate risk of inserting an ear ventilation tube is hearing loss, but the chance of this is virtually none. Other complications include a running ear and a failure of the ear drum to close after the ear ventilation tube has been expelled (in 2% of cases). The complications of ear ventilation tube placement must be weighed against the consequences of not treating it.

7. What are the consequences of long-term untreated OME?
The consequences of long-term untreated OME are still a subject of study. These consequences can be: learning, speech, school and behavioral problems.

FINANCIAL ASPECTS

This information concerns the insurance and reimbursement of your treatment. Do you have a referral from your doctor? Then your health insurance will cover 60%-100% of your treatment. We reimburse the remaining 40%-0% for you. So you don't pay anything extra.

Questions or suggestions?

If you have any questions after reading this brochure, please contact us at telephone number: 020 238 8800.

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What I still want to know:

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