

## PATIENT INFORMATION SHEET

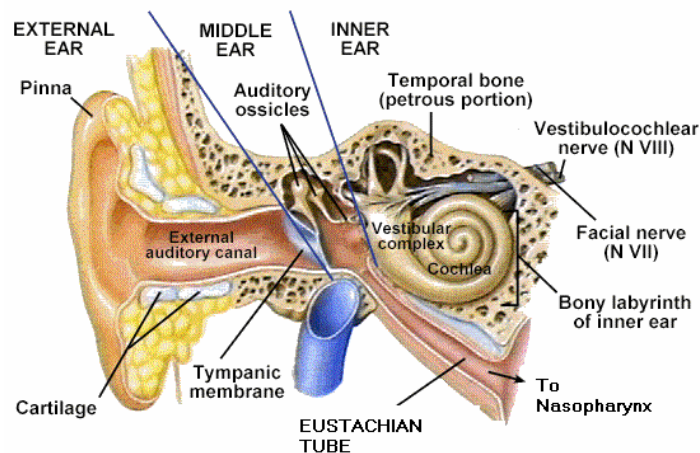
# GLUE EARS

(MEDICAL NAME: *OTITIS MEDIA WITH EFFUSION*)

Welcome to the practice of Dr Zoran Becvarovski, specialising in ear, balance, facial nerve, nose and throat disorders. Dr Becvarovski is committed to providing you with the highest quality diagnostic and surgical treatment possible. It is our privilege to provide care for your medical problems.

## NORMAL STRUCTURE AND FUNCTION

The middle ear is an air-filled cavity which lies between the external and inner ear. It contains the three bones of hearing: malleus (hammer), incus (anvil), and stapes (stirrup). The eardrum and these bones transmit sound vibrations to the inner ear. The middle ear cavity is connected to the back of the nose (near the adenoids) via the eustachian tube which acts as a pressure equalising valve. The air in the middle ear is continually being absorbed into the bloodstream, thus if normal pressure is to be maintained, this air must be replaced. Consequently a normal eustachian tube will open momentarily every time we swallow to allow a small amount of air into the middle ear.



## GLUE EAR

*Glue ear* is a common condition that affects the middle ear of children with the highest incidence occurring in children between three and six years of age. Glue ear (or fluid) is an accumulation of thick, "gluey" fluid in the middle ear (ie behind the eardrum) usually causing earache and partial deafness. Commonly it is the result eustachian tube blockage from an upper respiratory infection, large adenoids, nasal allergy, poor nasal function, cleft palate, an immature eustachian tube and a number of other factors. In the presence of bacteria, this fluid may be come infected leading to an infected or abscessed middle ear. When infection does not develop, the fluid remains until the eustachian tube again begins to function normally, at which time the fluid is absorbed or drains down the eustachian tube into the throat. Most resolve spontaneously over two to three months but the remainder may persist for many months or indefinitely, unless the fluid is cleared and the middle ear artificially ventilated by a small tube. Scientific studies have shown that recurrent middle ear infections in early life (the first year) can predispose children to increased risk of middle ear infections and persistent "glue ear" later on. Further glue ear in the first three years of life may have long-term effects on reading ability, and possibly the ability to hear in background noise which may interfere with schooling. This suggests that, if antibiotics are not adequate, insertion of tubes may be required.

## MEDICAL TREATMENT

Medical treatment is directed towards treatment of the upper respiratory infection or allergy attacks. This may include antibiotics, antihistamines (anti-allergy drugs), decongestants (drugs to decrease mucous membrane swelling) and nasal sprays. Eustachian tube inflation using the Valsalva manoeuvre may be recommended. This aims to blow air through the nose into the obstructed eustachian tube and middle ear to help relieve the congestion and re-establish middle ear ventilation. The Valsalva manoeuvre is accomplished by gently blowing air into the middle ear while holding the nose, often called "popping the ear". This should not be done, however, if there is a cold and nasal congestion.

## **SURGICAL TREATMENT**

To overcome this problem the middle ear is artificially aerated by performing a myringotomy (an incision in the eardrum membrane) and inserting a hollow plastic tube (ventilation tube or "grommet") in the ear drum. An adenoidectomy may also be needed in some cases. This improves hearing and prevents recurrent infections that may damage the eardrum membrane and middle ear bones.

The insertion of the ventilation tubes requires a short general anaesthetic with return home a few hours afterwards. There should be ***nothing at all*** to eat or drink for at least 6 hours before the time of operation. If the stomach is not kept empty prior to anaesthesia the operation may have to be postponed. The procedure is performed using an operating microscope. A small incision is made through the eardrum and the fluid in the middle ear is removed with a fine suction tube. A plastic ventilation tube ("grommet") is inserted.

The tube is eventually pushed out of the drum by flaking of the skin of the ear drum which gets under it and lifts it out and into the ear canal. This occasionally happens very soon but it usually remains in place for 3 to 18 months, although it may not happen for over two years. During this time the eustachian tube obstruction should subside. When ventilation the tube dislodges, the eardrum heals in most cases and the eustachian tube resumes its normal pressure equalising function.

When the ventilation tube dislodges, usually there is no further middle ear ventilation problem. In 80% of patients the glue ear recurs, and reinsertion of a tube may be necessary. At times a permanent eardrum membrane perforation (hole in the eardrum) may develop when the tube is dislodged or removed. If this perforation persists, it can be repaired at a later date when the eustachian tube blockage has subsided.

**WATER PRECAUTIONS:** It is ***extremely important*** that water does not enter the ear when a ventilation tube is in place, as this may lead to infection. This is prevented by placing a cotton wool ball mixed with Vaseline, into the hollow of the ear, before washing or showering. Ear plugs should be used during swimming. The patient may otherwise carry on with normal activities.

## **FOLLOW-UP**

Follow-up review is required at approximately 6 weeks after insertion and then every 4 months until the tube comes out, to see that it is still in position, or that there has not been a recurrence if it has been displaced (which is often not apparent). Apart from a small amount of blood or mucus in the first couple of days after surgery, there should be no discharge. If the ear does discharge after these initial days, the ear should be reviewed.

## **DISADVANTAGES AND COMPLICATIONS OF VENTILATION TUBES**

- 1) Recurrence of the "glue ear" – 20% of "glue ears" may require further grommets.
- 2) Infection of the grommet and ears-usually responds to medical treatment but may need grommet removal.
- 3) Blockage of the hole in the grommet leading to it being non-functioning and possibly requiring replacement.
- 4) Early displacement of the grommet which may require reinsertion.
- 5) Failure of the hole in the ear drum to heal after the grommet has come out.
- 6) Thinning or weakening of the ear drum (not usually a significant problem and can occur because of middle ear problems themselves without grommet insertion).
- 7) Scarring of the ear drum - not often a problem.
- 8) Other complications (including those of general anaesthesia are possible but uncommon).