SEROUS OTITIS MEDIA (THE GLUE EAR)/MYRINGOTOMY

1. Why does the fluid collect?
The middle ear is connected with the back of the nose by a passage known as the **EUSTACHIAN TUBE**. It plays an important role in maintaining equal air pressure inside and outside the middle ear, or on both sides of the eardrum. When this tube is not functioning, a partial or total obstruction occurs. As a result, the mucous lining of the middle ear gradually absorbs the air in the middle ear. The negative pressure and vacuum in the middle ear draw tissue fluid into the cavity from the mucosa. Initially, the fluid is thin and watery and gradually becomes thicker or glue-like. This fluid is known as serous otitis media or glue ear.

2. How common is it?
Glue ear is the most common cause of deafness in children, and approximately 10% of all children will have this problem at one time or another.

3. Why does it occur?
In infants and children, the eustachian tube is more horizontal, smaller and wider than an adult's. Repeated upper respiratory infections, enlarged adenoids, allergy and weakness of the palate muscles can all contribute to obstruction of the tubes, resulting in the development of fluid in the middle ear.

4. What are the symptoms and effects?
Often the only finding in children is partial deafness. The degree of hearing loss varies, and it may remain undetected for a long time. Small children do not complain, and a surprising number of parents fail to notice that the children are hard of hearing. Often children are accused of not paying attention, being naughty and stubborn or just not wanting to hear. An older child may complain of fullness in the ear, earache, popping or deafness. The hearing may fluctuate and usually gets worse during and after a common cold. During the routine screening of hearing at school, some children who are not suspected of having a hearing loss are found to be suffering from this condition.

5. Problems at school.
Depending on the degree of hearing loss, the child may have difficulty hearing the teacher. The difficulty can worsen if the child sits in the back of a noisy classroom and the teacher speaks in a quiet voice. Hearing loss can affect school progress. Other children may become withdrawn or even have temper tantrums.

6. Practical help.
Once the condition has been recognized, and before it clears up, the child should be helped in a practical way to overcome their handicap. You should inform the teacher about the hearing loss so that the child may be seated in a favorable position in the classroom.

7. What happens to the fluid?
In the vast majority of cases, as the infection clears, the tube will return to its normal function within a few weeks. Once the fluid has cleared, the hearing will return to normal.

8. Medical treatment.
Usually, treatment consists of antibiotics to clear the infection and decongestants to help drain and dry the secretions during the acute state. Eardrops are of no value. If the condition does not clear up on these medications, in some cases, you can try cortisone-type medications. If the condition persists after several weeks despite medical treatment, surgical treatment may be necessary.

THE MYRINGOTOMY OPERATION

The surgical treatment for serous otitis media, or glue ear, aims to remove the fluid from the middle ear and prevent its recurrence. Children usually undergo this operation as an outpatient procedure in the hospital. We use general anesthesia and are fortunate to have a staff of anesthesiologists from Children's Hospital with vast experience in pediatric anesthesia. During the myringotomy operation, the physician makes incisions in the eardrums with a very fine instrument. They use suction to aspirate the fluid. They insert a plastic tube through the opening of the eardrum. This tube allows ventilation of the middle ear space, bypassing the function of the eustachian tube, and helps prevent the reformation of fluid. Sometimes the physician removes the adenoids or tonsils at the same time.

1. What happens to the plastic tube?
The healing of the eardrum is so great that it pushes the plastic tube out. This usually occurs in about a year or so. The hole in the eardrum heals by itself. In extremely rare instances, a hole may persist. These tubes cause no discomfort while in the eardrum. In rare instances, if the tubes stay in too long, they have to be removed.

2. Will it happen again?
About 80% of children respond to the initial surgical treatment. If the fluid reaccumulates, it may be necessary to reinsert the tubes.

3. What can happen if it is not treated?
Over many months, the middle ear fluid gradually becomes very thick, increasing negative pressure results. This may produce permanent changes in the eardrum and middle ear, resulting in permanent conductive deafness. Occasional cholesteatoma (skin cysts inside the ear) and other serious complications may arise.

POSTOPERATIVE INSTRUCTIONS

After the myringotomy operation, your child should begin by only drinking clear liquids. If these are well tolerated, they may resume a full diet. They may resume full activities the day after the operation. Following the myringotomy, yellowish mucous or even bloody fluid may drain from the ear. As long as this occurs, keep clean cotton in the ear. When the drainage ceases, it is unnecessary to keep anything in the ear. To avoid the possibility of bacteria entering the middle ear through the ventilation tube, physicians may recommend keeping ears dry by using earplugs or other watertight devices during bathing, swimming and water activities. However, recent research suggests that protecting the ear may not be necessary. Parents should consult with the treating physician about ear protection after surgery.