The Ear Canal

Overview

**Congenital aural atresia** is when there is no ear canal. It is a common condition, and happens when the ear canal, eardrum, and sometimes the middle ear bones do not develop normally. It is often found with microtia, when the outside of the ear does not form correctly. Atresia can be unilateral (one side) or bilateral (both sides).

**Ear canal exostoses** are bony growths in the ear canal. Swimming in cold water often causes them. Ear canal stenosis can be caused by repeated ear canal infections that cause scarring. Some children are born with stenosis. Children with exostoses and stenosis often have many ear canal infections.

Evaluation

Patients with unilateral atresia should have a hearing test soon after birth to be sure hearing is normal in the other ear. If so, surgery is elective. Surgery is usually done for bilateral atresia. In either case, surgery is not done until the child is at least 5 years old.

Before age 5, patients with unilateral atresia should be watched closely for ear infections. If their good ear does not work well because of fluid in the middle ear, the child’s speech and language skills may be delayed. Patients with bilateral atresia need to use a bone-conduction hearing aid.

Patients with atresia, either unilateral or bilateral, should have a screening speech and language evaluation by 2 years of age. This can be done either by their audiologist or a speech and language pathologist. This is to be sure they are reaching normal milestones. If not, they may need speech therapy.

When surgery is performed, the microtia should be repaired first by somebody skilled in reconstruction of the external ear. Once this has healed, the otologist (ear surgeon) can create an ear canal and eardrum to improve hearing.

A CT scan is performed to make sure that surgery can be performed.

Patients with exostoses and stenosis need a careful exam of the ear canal and eardrum with the office microscope. If surgery is considered, a CT scan helps to see how severe the stenosis is and to track the facial nerve. If patients have many ear canal infections, they may need surgery.

**Risks of surgery**

- The ear canal can close up again because of scarring.
- If the eardrum does not heal properly, it may get a hole in it.
- The child may have many infections.
- More hearing loss happens less than 10 percent of the time. Total deafness is uncommon.
• Injury to the facial nerve that runs through the ear can cause facial paralysis. This is extremely uncommon.
• Loss of sense of taste may occur. This goes away in a few weeks.
• Dizziness or ringing in the ear are uncommon.

Postoperative Instructions
• If you have a head bandage on, make sure it is not squeezing your head too tight. You should be able to slide a finger underneath it. The bandage should be removed 24 hours after surgery. You may then begin to bathe and wash your hair gently with shampoo.
• Bloody, watery, or oily discharge from the ear is normal for several weeks after surgery. You should leave a dry cotton ball in your ear to soak up the drainage.
• Do not get water in your ear until your doctor has told you that your ear is healed. This usually takes 2-3 months. You should put a cotton ball moistened with Vaseline in your ear when you bathe.
• Do not blow your nose. The pressure may blow open the repair. It is OK to perform light work the day after surgery, but do not do any straining or heavy lifting until your ear has healed.
• Sex is ok after surgery, but for the first month, your partner should take the active role.
• You may expect to have mild dizziness when you turn your head for a few days after surgery.
• Everybody takes at least 1-2 days off of work or school after surgery. Many people need one week off.
• If a skin graft is taken, most of the dressing over the donor site can be removed 24 hours after surgery. This is usually a white gauze with a piece of tape. The oily yellow gauze should remain stuck to the skin for protection. Please keep it dry. It will slowly peel off the skin as new skin grows in from underneath. You can trim it as needed. It will typically fall off within 1-2 weeks.

Expected outcomes of surgery
Hearing results for patients with atresia are good. Normal hearing almost never occurs. But many patients can hear on the telephone and notice an improvement in sound localization. Since the ear canal is surgically built, dead skin does not shed in a normal way. An otologist must clean it every six to 12 months. Water that gets into the ear canal may cause an ear canal infection. Patients may need to use earplugs when bathing and swimming.

Patients with repair of exostoses usually do well. They can go back to normal activities after a month or two. They too should use earplugs during bathing and swimming.

Contact information

<table>
<thead>
<tr>
<th>Adult patients</th>
<th>Pediatric patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stanford Ear Institute</td>
<td>Stanford Children’s Hearing Center</td>
</tr>
<tr>
<td>2452 Watson Court, Suite 1700</td>
<td>2452 Watson Court, Suite 1500</td>
</tr>
<tr>
<td>Palo Alto, CA 94303</td>
<td>Palo Alto, CA 94303</td>
</tr>
<tr>
<td>Phone: (650) 723-5281</td>
<td>Phone: (650) 724-4800</td>
</tr>
<tr>
<td>Fax: (650) 497-7849</td>
<td>Fax: (650) 497-7821</td>
</tr>
</tbody>
</table>