

Ear Cysts (Cholesteatoma and Preauricular Cyst)

Skin in the wrong place grows and traps debris, silently eating away bone and putting hearing and balance at risk.

THE ONE-LINE TRUTH

An abnormal skin growth or fluid pocket in or near the ear that can erode nearby bone.

The chain — how it unfolds

1. Skin grows in the middle ear (cholesteatoma) or a preauricular tunnel traps dead skin cells (preauricular cyst). — why: Whether from a retracted eardrum pocket, congenital skin island, or incomplete facial fusion, skin is now in a space where it cannot shed outward, so debris accumulates.
2. Dead skin and earwax pile up inside the pocket, creating a warm, moist environment perfect for bacteria to grow. — why: Bacteria from the nose, throat, or skin surface colonize the debris, leading to chronic infection and a foul-smelling discharge.
3. Bacterial infection triggers the immune system to release enzymes and inflammatory chemicals that dissolve surrounding bone. — why: The body's attempt to fight infection backfires—enzymes meant to break down bacteria also eat away at the delicate bones of the middle ear, the mastoid, and the skull base.
4. The cholesteatoma expands, eroding the tiny hearing bones (hammer, anvil, stirrup), causing conductive hearing loss. — why: Without intact bones to pass vibrations from the eardrum to the cochlea, sound cannot reach the inner ear effectively, and hearing fades in that ear.
5. The cyst or cholesteatoma may break into the inner ear, the facial nerve canal, or even through the bone covering the brain. — why: Unchecked growth and bone erosion eventually reach critical structures—fluid leaks from the inner ear (causing severe dizziness), the facial nerve is exposed (risking facial paralysis), or infection spreads to the brain lining (meningitis) or brain itself (abscess).

6. A preauricular cyst that gets infected forms a red, swollen, painful lump in front of the ear that may drain pus through the skin opening. — why: Bacteria multiply inside the cyst, pressure builds, and the body tries to expel the infection; the cyst may rupture outward or require surgical drainage.
7. Even after drainage or antibiotics, the cyst or cholesteatoma comes back unless the entire skin lining is surgically removed. — why: As long as the abnormal skin remains, it will keep growing, shedding, and trapping debris—so the cycle of infection and expansion repeats.
8. Surgery removes the cholesteatoma or cyst lining, stops bone erosion, and may require reconstruction of the eardrum or hearing bones to restore hearing. — why: Only by taking out the skin and cleaning the space can the disease be stopped; damaged structures may need grafts or prosthetic bones to work again, and close follow-up ensures no residual or recurrent disease.

Spot it — what you see, and why

- Foul-smelling ear drainage: The cyst (cholesteatoma) is a pocket of old skin cells that traps dead tissue and debris. As this debris builds up and breaks down, bacteria grow in it, creating a strong, bad-smelling discharge that leaks from the ear.
- Hearing loss in one ear: The growing cyst pushes against and can damage the tiny ear bones (ossicles) that vibrate to send sound to the brain. When these bones can't move freely or are partially destroyed, sound doesn't travel well, so hearing becomes muffled or quiet.
- Feeling of fullness or pressure in the ear: The cyst takes up space in the middle ear (the air-filled chamber behind the eardrum), and as it grows it presses on the eardrum and surrounding structures, creating a sensation like something is plugging the ear.
- Ear pain or aching: The expanding cyst stretches and presses on the delicate lining of the middle ear and mastoid (the honeycomb bone behind the ear), irritating nerve endings and triggering pain, especially if infection is also present.
- Small pit or opening in front of the ear (preauricular cyst): During development in the womb, the ear forms from several pieces of tissue folding together. If these pieces don't seal perfectly, a tiny tunnel (sinus tract) is left behind, appearing as a small dimple or hole in the skin just in front of the ear cartilage. This tunnel can fill with skin cells and become a cyst.
- Swelling or lump in front of or behind the ear: Skin cells and debris collect inside the cyst, forming a soft or firm lump under the skin. If the cyst gets infected, white blood cells flood the area to fight bacteria, causing even more swelling, redness, and warmth.

Red flags — act now

- Facial droop or weakness on one side of the face

- Severe headache, stiff neck, or confusion (signs that infection may have spread to the brain or its coverings)
- Sudden severe dizziness or spinning sensation that doesn't go away
- High fever with ear pain or drainage (suggests infection is spreading beyond the ear)

Treat it — in this order

1. Surgical removal of cholesteatoma (mastoidectomy and tympanoplasty) — the surgeon opens the mastoid bone, removes all the abnormal skin and infected tissue, and rebuilds the eardrum and hearing bones if they are damaged → Removes the destructive growth before it erodes more bone, prevents life-threatening complications (meningitis, brain abscess, facial paralysis), stops the foul-smelling drainage, and may improve hearing if the ossicles can be rebuilt. This is the only way to truly get rid of cholesteatoma; it will not go away on its own or with medicines.
2. Topical antibiotic ear drops (ciprofloxacin or ofloxacin drops) for infected cholesteatoma with drainage → Reduces the number of bacteria in the ear canal and middle ear, decreases the amount of smelly drainage, and lowers inflammation before surgery. This makes the surgery safer by reducing the infection load, but the drops do NOT shrink or remove the cholesteatoma itself.
3. Oral antibiotics (amoxicillin-clavulanate, cephalexin, or clindamycin) for infected preauricular cyst with redness and swelling → Kills the bacteria causing the infection (usually *Staphylococcus aureus* or *Streptococcus* species), shrinks the swelling, stops the pain, and drains the pus. The infection clears in 7-10 days, but the cyst tract remains under the skin.
4. Incision and drainage of an abscess (if the preauricular cyst has formed a large pocket of pus) — the doctor cuts open the swollen area, drains the pus, and packs the wound → Immediately relieves the pressure and pain, removes the pus so antibiotics can work better, and prevents the infection from spreading to the surrounding face and neck tissues. The wound heals over a few weeks.
5. Surgical excision of the preauricular sinus tract (the surgeon removes the entire tube of skin from the surface down to where it ends, often near the cartilage of the ear) — done electively when there is no active infection → Permanently removes the abnormal tract so it cannot fill with debris and get infected again. Cures the problem and prevents repeated cycles of infection, antibiotics, and drainage. Success rate is high (over 90%) when done by an experienced surgeon during a quiet period (no infection).

Your top priorities at the bedside

1. Keep the ear dry and teach the patient not to get water in it (no swimming, use a cotton ball with petroleum jelly when showering) — why: Water can carry bacteria into the cyst or infected area, making the infection worse. Keeping it dry helps the body fight the infection and prevents new bacteria from getting in.
2. Watch closely for signs of spreading infection: fever, severe headache, stiff neck, confusion, or increasing face weakness, and report these immediately — why: Ear cysts sit close to the brain and the facial nerve. If infection spreads to the bone (mastoiditis) or the covering of the brain (meningitis), it becomes life-threatening. Early detection saves lives and prevents permanent damage.
3. Give prescribed antibiotics on time and teach the patient to finish the entire course, even if they feel better — why: Antibiotics kill the bacteria causing infection. Stopping early lets some bacteria survive and grow back stronger, leading to a worse infection that is harder to treat.