

## Doctor, Please Explain

### Swimmer's Ear

#### Insight into acute otitis externa

- What causes swimmer's ear?
- What are the signs and symptoms?
- How is swimmer's ear treated?
- and more...

Affecting the outer ear, swimmer's ear is a condition causing pain resulting from inflammation, irritation, or infection. These symptoms are experienced when water gets trapped in your ear allowing bacteria to spread, causing a painful sensation. Because this condition commonly affects swimmers it is known as swimmer's ear. Swimmer's ear affects mostly children and teenagers, but can also affect those with eczema (a condition that causes the skin to itch), or excess earwax. Your doctor will prescribe treatment to reduce your pain.

#### What causes swimmer's ear?

A common source of the infection is increased moisture trapped in the ear canal, bathing, or showering, increased humidity or living in warm moist climates may also contribute to this common infection. When water is trapped in the ear canal. Bacteria that normally inhabit the skin and ear canal multiply, causing infection and irritation of the ear canal. If the infection gets worse it may affect other areas of the ear. Swimmer's ear needs to be treated to reduce pain and eliminate any effect it may have on your hearing.

#### Other factors that may contribute to swimmer's ear include:

- contact with excessive bacteria that may be present in hot tubs or polluted water
- excessive cleaning of the ear canal with cotton swabs
- contact with certain chemicals such as hair spray or hair dye (Avoid this by placing cotton balls in your ears when using these products.)
- damage to the skin of the ear canal following water irrigation to remove wax
- a cut in the skin of the ear canal
- other skin conditions affecting the ear canal such as eczema or seborrhea

#### What are the signs and symptoms?

The most common symptoms of swimmer's ear are an itchy ear and mild to moderate pain that gets worse when you tug on the auricle (outer ear). Other signs and symptoms may include any of the following:

- sensation that the ear is blocked or full
- drainage

- fever
- decreased hearing
- intense pain that may radiate to the neck, face, or side of the head
- the auricle may appear to be pushed forward or away from the skull
- swollen lymph nodes (located in your neck)
- redness and swelling of the skin around the ear

If left untreated, complications resulting from swimmer's ear may include:

Hearing loss. When the infection clears up, hearing usually returns to its normal state.

Recurring ear infections (chronic otitis externa). Without treatment, infection can occur.

Bone and cartilage damage (malignant otitis externa). When ear infections spread to the base of your skull, brain, or cranial nerves they become painful and dangerous. Diabetics and older adults are more at risk.

To evaluate you for swimmer's ear, your doctor will look for redness and swelling in your ear. Your doctor also may take a sample of any abnormal fluid or discharge in your ear to test for the presence of bacteria or fungus (ear culture) if you have recurrent infections.

How is swimmer's ear treated?

Treatment for the early stages of swimmer's ear includes careful cleaning of the ear canal and eardrops that inhibit bacterial growth. Mild acid solutions such as boric or acetic acid are effective for early infections.

How should ear drops be applied?

- Drops are more easily administered if done by someone other than the patient.
- The patient should lie down with the affected ear facing upwards.
- Drops should be placed in the ear until the ear is full.
- After drops are administered, the patient should remain lying down for a few minutes so that the drops can be absorbed.
- Cotton balls should not be placed in the ear. The ear needs to absorb the drops and dry naturally.

If you do not have a perforated eardrum (an eardrum with a hole in it), you can make your own eardrops using rubbing alcohol or a mixture of half alcohol and half vinegar. These eardrops will evaporate excess water and keep your ears dry. Before using any drops in the ear, it is important to verify that you do not have a perforated eardrum. Check with your otolaryngologist if you have ever had a perforated, punctured, or injured eardrum, or if you have had ear surgery.

For more severe infections, your doctor may prescribe antibiotics to be applied directly to the ear. If the ear canal is swollen shut, a sponge or wick may be placed in the ear canal so that the antibiotic drops will be

effective. Pain medication may also be prescribed. If you have tubes in your eardrum, a non oto-toxic (will not affect your hearing) topical treatment should be used. Topical antibiotics are effective for infection limited to the ear canal. Oral antibiotics may also be prescribed if the infection goes beyond the skin of the ear canal.

Follow-up appointments are very important to monitor progress of the infection, to repeat ear cleaning, and to replace the ear wick as needed. Your otolaryngologist has specialized equipment and expertise to effectively clean the ear canal and treat swimmer's ear. With proper treatment, most infections should heal in 7-10 days.

Why do ears itch?

An itchy ear can be a maddening symptom. Sometimes it is caused by a fungus or allergy, but more often it is from chronic dermatitis (skin inflammation) of the ear canal. One type is seborrheic dermatitis, a condition similar to dandruff in the scalp; the skin is dry, flaky, thickened, and inflamed (irritated). This may be aggravated by certain food groups. Some patients with this problem will do well to decrease their intake of foods that aggravate it, such as greasy foods, carbohydrates (sugar and starches), and chocolate.

An otolaryngologist, a physician who specializes in the structures of the head and neck, also treats allergies. They often prescribe a steroid-containing eardrop, cream or ointment to treat the problem and to be used as needed when the ears itch. There is no long-term cure, but it can be kept controlled.

Tips for prevention

A dry ear is unlikely to become infected, so it is important to keep the ears free of moisture during swimming or bathing.

Do:

- use ear plugs when swimming
- use a dry towel or hair dryer (being mindful of moderate temperature and limitations of usage) to dry your ears
- have your ears cleaned periodically by an otolaryngologist if you have itchy, flaky or scaly ears, or extensive earwax

Don't:

- use cotton swabs. They may pack ear wax and dirt deeper into the ear canal, remove the layer of earwax that protects your ear, and irritate the thin skin of the ear canal creating the perfect environment for infection.