

Perforated ear drum

This information sheet from Great Ormond Street Hospital explains the causes, symptoms and treatment of perforated ear drum and where to get help.

The ear drum is a thin piece of tissue that separates the middle and inner ear from the ear canal. The outer ear (the part you see) collects soundwaves which travel down the ear canal. These soundwaves make the eardrum vibrate. This vibration is transmitted first through the tiny bones (ossicles) in the middle ear, then into the inner ear, where it stimulates nerve endings and sends messages to the brain.

If a hole or tear (perforation) develops in the ear drum, it will not vibrate as usual so sounds are not transmitted to the brain. A hole or tear can also allow debris or fluid to pass through into the middle ear.

What causes a perforated ear drum?

A perforated ear drum can be caused by a variety of things. In children, an ear infection is the most common cause. The infection disturbs the pressure balance either side of the ear drum and fluid may build up in the middle ear. This can cause a hole or tear to form in the ear drum.

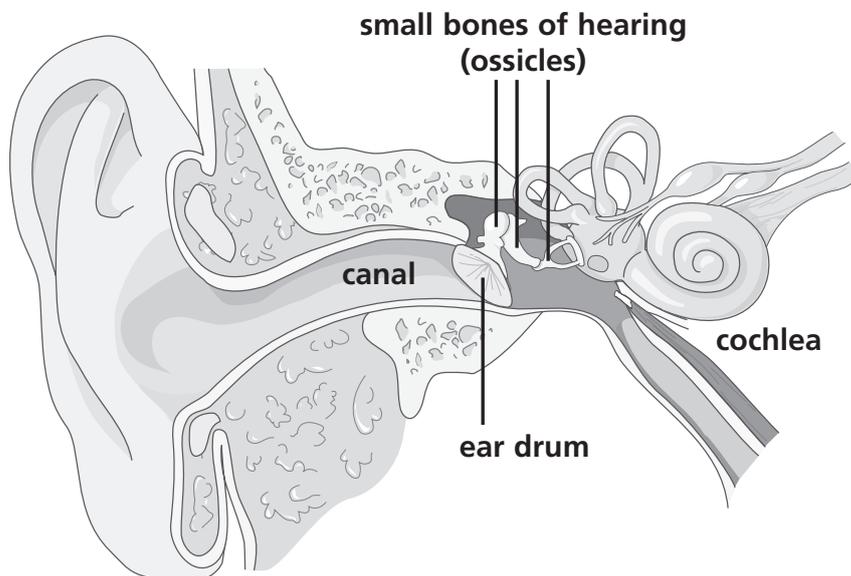
They can also be caused by trauma to the ear, such as a powerful hit or very loud noise, or by pushing something like a cotton bud into the ear canal. Perforations can also develop when the air pressure is greater than the pressure inside the middle ear, such as when scuba diving or flying at high altitude.

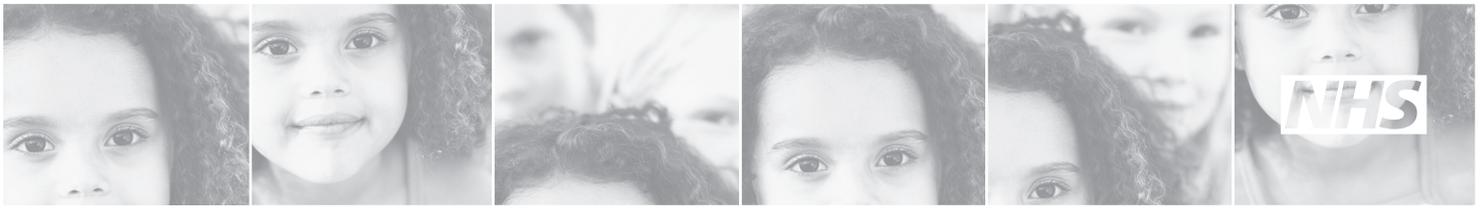
What are the signs and symptoms of a perforated ear drum?

The main symptom is often reduced hearing in one ear, which may be accompanied by tinnitus (ringing or buzzing sounds in the ear). There may be some oozing from the ear and it may be painful.

How is a perforated ear drum diagnosed?

A perforated ear drum can be diagnosed by looking closely into the ear using a small torch and magnifier, called an otoscope.





How is a perforated ear drum treated?

A perforated ear drum is treated in an operation (myringoplasty) under general anaesthetic. The surgeon will probably need to make an incision (a cut) behind or in front of the ear to get a good view of the eardrum. A piece of tissue from near the ear is used to repair any hole in the eardrum. After the operation, your child should keep their ear dry while it heals.

What happens next?

After repair, most children's hearing returns to normal. A perforated ear drum can happen again but can be repaired in an operation as before.