deafness research uk

Ear Infections – Your Questions Answered

This fact sheet covers the basic information about ear infections. It is aimed at parents who are concerned about ear infections and what to do about them. The factsheet covers the following topics:

- What is an ear infection?
- How common are they?
- What causes them?
- How should ear infections be treated?
- What can I do at home?
- What if the ear drum bursts?
- Is hearing affected?
- How can we avoid further ear infections?
- What if the infections persist?

WHAT IS AN EAR INFECTION

An ear infection occurs when the ear-drum and the cavity behind it become inflamed or sore, because of germs (bacteria or viruses). The medical name is “acute otitis media.”

Ear infections begin suddenly and painfully, often with irritability or crying and a temperature, usually starting in the evening or at night. Most last about 4 days, but they can last up to 10.

HOW COMMON ARE THEY?

- 8 out of 10 children will have had an ear infection by the time they are three.
- If your child gets an ear infection there is about a 50:50 chance of another one in the following 12 months.
- A few children get them repeatedly.

WHAT CAUSES THEM?

Bacteria or viruses are caught from other people, particularly children in playgroups, nurseries and schools, by sneezing, coughing and physical contact.

The germs spread up the back of the child's throat then along the connecting tube (Eustachian tube) to the middle-ear cavity. The soft tissues become inflamed and produce fluid in the process of fighting the infection. This causes pressure behind the ear drum, leading to pain.

HOW SHOULD EAR INFECTIONS BE TREATED?

Antibiotics may be helpful to some children, but are of little benefit to many of those taken to the doctor with an ear infection. According to recent research, if 100 affected children were to take antibiotics, only 5 would benefit, because the other 95 would get better anyway. However, 3 would get skin rashes and 10 would get diarrhoea from the antibiotics, so when antibiotics are very widely prescribed about as much harm as good is done.

Over-use of antibiotics is leading to resistance in the bacteria; unless it is reduced, future generations of children will not have effective antibiotics available when they really need them. In the UK only about 1 in every 20 ear infections is caused by a bacterium that is resistant to the main antibiotics. But research in the countries with a very high use shows that these resistant strains get a boost from over-use. Avoiding use of antibiotics also means that "good" bacteria, which help protect against infections of many types, will stay in the system, so retaining one extra line of defence. In most children the immune system matures and becomes more able to fight off infections without relying on antibiotics. For all these reasons, your doctor may not prescribe an antibiotic immediately, or even at all. As well as trying to develop totally new types of antibiotic, current research is trying to find out whether there are ways of using antibiotics that don't encourage resistance, and whether such use reduce the chances of complications.

WHAT CAN I DO AT HOME?

Simple treatment measures

- The most important thing is to lessen your child's pain by giving regular paracetamol at the full recommended dose for the child's age. Many parents do not give the full recommended dose, but that dose is safe and better than stress for you and your child.
- If your child does not improve, then you can add a junior Ibuprofen in the recommended dose to further help with the pain (provided that your child is not asthmatic or allergic to Ibuprofen). The two medicines (paracetamol and Ibuprofen) work differently so may be safely taken together.

- Sitting your child up with a warm towel pressed gently against the painful ear in a well-aired room may help. If s(he) has a temperature, avoid overheating (from a radiator or excessive covering).

You <u>should</u> ask for an appointment with the doctor:

- If there is a high fever (above 39^{o}C)
- If there is a new rash, or extreme floppiness/drowsiness without any periods where your child perks up slightly, or if your child shows an extreme avoidance of bright light.
- If your child is under 2, and symptoms are not improving by 48 hours.
- Of your child is aged over 2, and symptoms are not improving by 4 days.

At the doctor's:

Your doctor may agree to give you a prescription to take away, and to exchange for an antibiotic to use if the ear infection is not improving after a few days. In particular circumstances (for example, when your child is very unwell, or has complications) the doctor may advise use of antibiotics <u>immediately</u>. It is important to be clear about the advice given and to follow it. Whatever the circumstances, you should give the entire course of any antibiotic prescribed.

WHAT IF THE EAR DRUM BURSTS?

You should be on the look out for this. If an ear drum bursts (1 in 20 chance) the pain will suddenly get better, and you will notice a smelly discharge in the ear canal. This is one of nature's cures, and is rather like a spot or boil bursting. You do not need to do anything, but if you want to clear the outside of the ear, mop out only the part of the ear that you can see, gently with a cotton bud. <u>Do not ever poke anything into the dark portion of the ear canal, as this is near the eardrum</u>. Avoid getting water in the ear until after the ear drum has healed up; this normally happens within 3 weeks. This means no swimming, and special care at bath time for this period. If there has been a discharge, it is worth seeing the doctor after 1 month to check that the drum has healed.

IS HEARING AFFECTED?

This is the second thing to look out for. After an ear infection, it is common for the hearing to be a little dull for several days or even a month. Hearing loss can occur because the fluid created by the inflammation has not drained. If after a month, it still seems that your child is not hearing properly, a visit to the doctor or child health clinic is recommended, for this to be properly assessed. If the fluid in the ear and the dullness of hearing do last more than a month, the child is said to have developed 'glue ear'. Children with glue ear may appear hard to communicate with, or show speech or behaviour problems. Below are a series of questions relevant to ear infections or other causes of hearing problems.

HEARING PROBLEMS AFTER AN INFECTION?

Over the last 3 months…

1. How often has s(he) misheard words when not looking at you? (Almost Never/Occasionally-to-Often)

2. How often has s(he) asked for things to be repeated? (Almost Never/Occasionally-to-Often)

3. How often has s(he) had difficulty hearing when with a group of people? (Almost Never/Occasionally-to-Often)

4. Overall, how would you describe your child's hearing? (Good/Poor)

If, on 2 or more of the 4 questions you give the response in bold type (which indicates some problem) then your child may need a further visit to the doctor and a hearing check.

HOW CAN WE AVOID FURTHER EAR INFECTIONS?

- It is important not to let people smoke in the rooms where the child spends most time. Ear problems are more common and last longer in smoking households
- Planning to breast-feed any future children may protect against ear problems, until the immune system develops.
- If your child has repeated ear problems, you may want to reconsider any nursery or day care arrangements. If there are more than 2-3 other children there, the problems may carry on. Would having to find a satisfactory alternative arrangement end up more stressful that a further year of the ear problems or less stressful?
- Try to avoid antibiotics and allow your child's immune system to develop on its own; a balanced diet may help.
- A vaccine against pneumococcal disease is now offered as part of the UK national childhood immunisation programme and a vaccine against a bigger range of bacteria may become more widely available. Vaccination can help reduce the number of children getting middle ear infections.

WHAT IF THE INFECTIONS PERSIST?

If your child gets 3 infections over a winter or 4 over a year, your doctor can consider referral to an Ear, Nose and Throat specialist at a hospital. As well as checking to rule out progressive ear disease, the hospital staff can do a bacteria test on fluid taken from the throat. This can show whether a specific antibiotic might give better results than any tried so far. Surgical treatment with replacement of ventilation tubes ('grommets'), and adenoidectomy in suitable cases, may be suggested; both these make it more difficult for the bacteria to lodge or survive in the middle ear, thus tackling the disease directly.

FURTHER INFORMATION

If any of your questions concerning ear infections have not been answered by reading this factsheet, contact the Deafness Research UK Information Service for further assistance. Our Information team will either answer your enquiry directly or refer it to one of our scientific or medical advisers.

Open: 9.00 a.m. to 5.00 p.m., Monday to Friday (a message can be left at other times).

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or click the 'ask question' option from our website homepage:
www.deafnessresearch.org.uk

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