

# Middle ear infection: should my child take antibiotics?

- This decision aid is to help you decide whether to use antibiotics when **your child** has a middle ear infection.
- This can help you to talk and make a **shared decision** with your doctor about what is best for your child.



## What causes middle ear infection?

- It can be caused by a viral or bacterial infection. It is hard for your doctor to tell which it is.
- It is also called 'acute otitis media'. Acute means it is a short-term infection.

## How long does the earache last?

- Symptoms (such as earache) usually get better in 2 to 7 days, without antibiotics.

## What are the treatment options?

There are 2 options that you can discuss with your doctor:

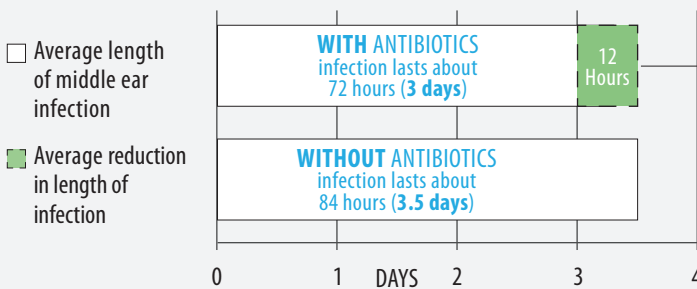
### 1. Not taking antibiotics

This means letting the infection get better by itself.

Symptoms, such as pain and fever, can be treated with over-the-counter medicines. They can be used with either option.

### 2. Taking antibiotics

## What are the likely benefits and harms of each option?



Children who take antibiotics have the earache for only about **12 hours less** than children who do not.

These figures show what happens to children with middle ear infection who **do not** take antibiotics and those who **do**. Each circle is one child. We can't predict whether your child will be one of the children who is helped or harmed.

- gets better by 2-3 days
- gets better by 2-3 days due to antibiotics
- not better by 2-3 days

- has problems
- has problems due to antibiotics
- no problems

100 children who **don't** take antibiotics

100 children who **do** take antibiotics



With antibiotics, **5 more children** will be better after 2-3 days.

After about **4 days** most children will be better anyway - without antibiotics.

100 children who **don't** take antibiotics

100 children who **do** take antibiotics



With antibiotics, **7 more children** will have problems like vomiting and diarrhoea. Other **antibiotic harms** are:

- the **cost** of buying them
- **remembering** to take them
- the risk of **antibiotic resistance** (see next page)

## Where do these estimates of benefits and harms come from?

- They come from the most up-to-date medical evidence of benefits and harms about what works best. This is a review of 13 studies, and over 3,400 children, that looked at antibiotic use in children with middle ear infection.
- The quality of this research evidence is ranked as high. This means that further research is very unlikely to change these estimates.

## Why might antibiotics be used?

There might be a special reason why your doctor may suggest antibiotics, such as in people who are more likely to get complications. This can be Indigenous children and children who are under 2 years of age.

## What is antibiotic resistance?

- Using antibiotics means the bacteria can develop resistance to the antibiotic.
- This means that **antibiotics will not work if your child needs them in the future** to treat a bacterial infection.
- A person who has recently used antibiotics is more likely to have resistant bacteria in their body.



## Are there other things I can do?

- Pain and fever are best treated with over-the-counter **paracetamol and/or ibuprofen**. Do not give more than the maximum recommended dose. Read the dose information on the packet.
- Aspirin should NOT be used with children who are younger than 16 years.

## When should you see a doctor and get further help?

If the child with the middle ear infection has any of these signs:



- Very drowsy
- Fast or difficulty breathing, wheezing, or shortness of breath
- Cold or discoloured hands and/or feet with a warm body
- A high fever (over 38.5°C)
- Pain in the arms and/or legs
- Unusual skin colour (pale or blue) around the lips
- A rash that does not fade when the skin is pressed
- Pain and tenderness of the bone behind the ear
- Blood or discharge from the ear

## Questions to consider when talking with your doctor



- Does my child need antibiotics?
- What happens if my child doesn't take antibiotics?
- Do I know enough about the benefits and harms of:
  - taking antibiotics?
  - not taking antibiotics?
- Am I clear about which benefits and harms matter most to me?
- Do I have enough information and support to decide?

### References

Venekamp RP, Sanders S, Glasziou PP, Del Mar CB, Rovers MM. Antibiotics for acute otitis media in children. Cochrane Database Syst Rev 2015;1:CD000219. [www.cochranelibrary.com](http://www.cochranelibrary.com)

The information in this decision aid is provided for general information only. It is not intended as medical advice and should not be relied upon as a substitute for consultations with a qualified health professional who can determine you or your child's individual medical needs.

Last reviewed: November 2015. Update due: November 2017. Developed by Peter Coxeter, Professor Chris Del Mar and Professor Tammy Hoffmann - Centre for Research in Evidence-Based Practice, Bond University. Decision Aid development funded by the National Health and Medical Research Council (APP1044904)