

# Middle ear infection: should my child take antibiotics?

- This decision aid can help you decide whether to use antibiotics when **your child** has a middle ear infection.
- It is designed to be used with your doctor to help you make a **shared decision** about what is best for you or 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:

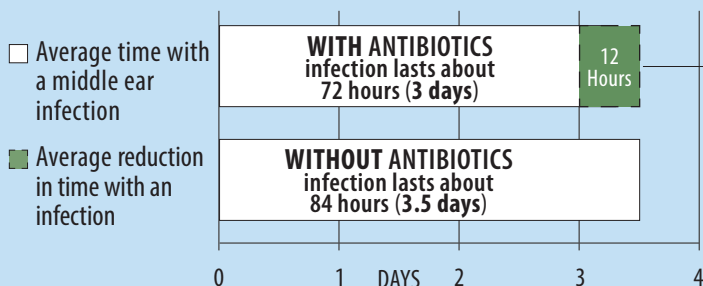
### 1. Not taking antibiotics

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 risks of each option?



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

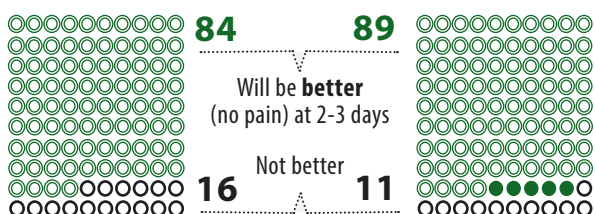
These figures show what is likely to happen to children with middle ear infection who **do not** take antibiotics and those who **do**. Each circle is one child. We can't predict who will get better sooner or who will have problems.

### Possible benefits

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

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.

### Possible risks

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

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 downsides** 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 risks come from?

- They come from the most up-to-date medical evidence of benefits and risks 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?

Your doctor may suggest antibiotics if you are more likely to get complications, such as for Aboriginal and Torres Strait Islander 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 may 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 to manage a middle ear infection?

- 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 your child with a middle ear infection has any of these signs:



- Very drowsy
- Fast or difficult 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 risks of:
  - taking antibiotics?
  - not taking antibiotics?
- Am I clear about which benefits and risks 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.

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