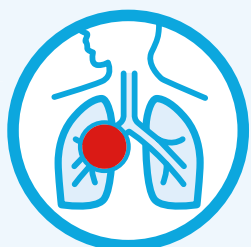


Chronic obstructive pulmonary disease exacerbation (flare-up): Should I take antibiotics?

What is this decision aid for?

- This decision aid is to help you and your doctor decide whether to use antibiotics when you have a flare-up (exacerbation) of your chronic obstructive pulmonary disease (COPD).
- This can help you to talk and make a **shared decision** with your doctor about what is best for you.
- This decision aid is for people whose flare-up is being managed **without being admitted to hospital**.
- People with a severe flare-up may need hospital care. If you are in hospital for a flare-up of COPD, do not use this decision aid.



What causes a flare-up of COPD?

- A flare-up of COPD usually means worse symptoms – for example, being more short of breath, more sputum or a worse cough.
- It can be caused by a viral or bacterial infection, or something in the environment such as air pollution.

How long does a flare-up of COPD last?

- Mild to moderate flare-ups usually last for about **1–2 weeks**.
- A small number of flare-ups can last for longer – such as up to **8–10 weeks**.
- The flare-up length is related to how severe the COPD is.

What are the treatment options?

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

1. Not taking antibiotics.

2. Taking antibiotics.

Discussing the option of adding antibiotics to your treatment should only happen if your doctor thinks you have a bacterial infection.¹

- With either option, medications to help you breathe easier can be used as treatment.
- Inhaled bronchodilators are usually used, sometimes with oral corticosteroids.
- These are medications that you probably already use for your COPD. Your doctor will talk with you about how and when to use them during your flare-up.

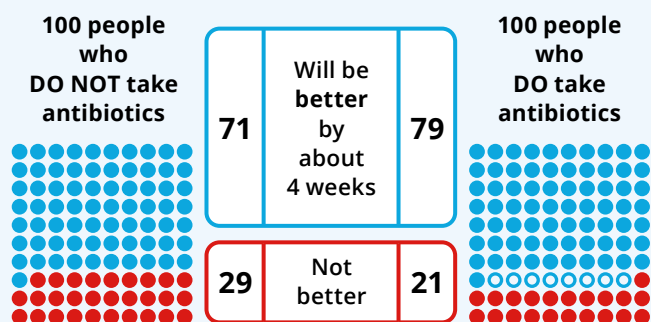
What are the likely benefits and harms of each option?

Even if your flare-up is caused by a bacterial infection, antibiotics may not help much. You should discuss the possible benefits and harms of taking antibiotics with your doctor.

The figures below show what happens to people after about 4 weeks, in those who **do** take antibiotics and those who **do not**. Each circle is one person. It is not possible to predict whether you will be one of those who is helped or harmed.

Possible benefits

- Gets better by about 4 weeks
- Gets better by about 4 weeks due to antibiotics
- Not better by 4 weeks



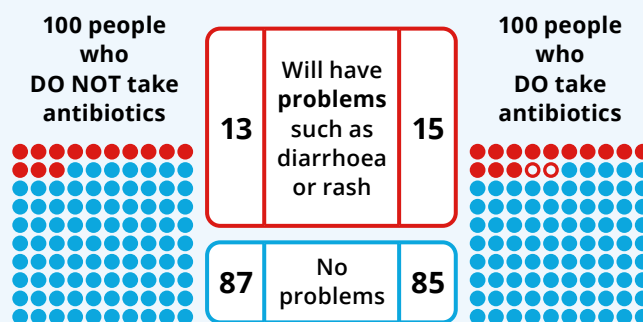
With antibiotics, about **8 more people** will be better by about 4 weeks.

Most people will be better by then anyway – with or without antibiotics.

Taking antibiotics will not keep you well for longer between flare-ups.

Possible harms

- Has problems (such as diarrhea or rash)
- Has problems, possibly due to antibiotics
- No problems



With antibiotics, about **2 more people** will have problems such as diarrhoea or rash.

Other **antibiotic downsides** are:

- The **cost** of buying them
- **Remembering** to take them
- The risk of **antibiotic resistance** (see below).

Where do these estimates of benefits and harms come from?

- They are from a review of the medical evidence of the benefits and harms of antibiotics for COPD exacerbations.² The review included seven trials of 1,191 people who were not admitted to hospital.³
- The quality of this research evidence about benefits is ranked as low. This means that further research might change these estimates.

Why might antibiotics be used?

There might be a special reason why your doctor may suggest antibiotics – for example, symptoms of a COPD flare-up can overlap with other lung conditions such as bacterial pneumonia which may require treatment with antibiotics.

What is antibiotic resistance?



- Using antibiotics means the bacteria can develop resistance to the antibiotic.
- This means that **antibiotics may not work if you need 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 flare-ups of COPD?

- Talk with your doctor about medicines that can be used to help ease the flare-up symptoms (reliever medicines).
- Other medicines (maintenance medicines) can be taken every day to help manage COPD.
- Talk to your doctor about developing a **COPD Action Plan** or updating your existing action plan after a flare-up.

When should you see a doctor and get further help?

If you think you are getting worse or develop any of these signs:⁴

- Unusual level of drowsiness or fatigue
- Worsening shortness of breath
- Worsening cough
- Pale or blue around the lips
- A high fever (over 38.5 °C)
- Increased amount of sputum or change in sputum colour.



Questions to consider when talking with your doctor



- Do I need antibiotics?
- What happens if I do not 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

1. Antibiotic [version 16, published 2019]. In: Therapeutic Guidelines. Melbourne: Therapeutic Guidelines Limited. www.tg.org.au
2. van Velzen P, et al. Doxycycline for outpatient-treated acute exacerbations of COPD: a randomised double-blind placebo-controlled trial. The Lancet Respiratory Medicine. 2017;5:492-9
3. Vollenweider D, et al. Antibiotics for exacerbations of chronic obstructive pulmonary disease. Cochrane Database Syst Rev. 2018. CD010257
4. Global Initiative for Chronic Obstructive Lung Disease. Global strategy for the diagnosis, management and prevention of chronic obstructive pulmonary disease. 2024. www.goldcopd.org/2024-gold-report

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 your individual medical needs.

Updated December 2023. Update due: December 2027. Developed by Professor Tammy Hoffmann and Professor Chris Del Mar (Institute for Evidence-Based Healthcare, Bond University).