

# ANTIBIOTIC RESISTANCE IN NUMBERS


**25K** The number of people who die each year across Europe from infections resistant to antibiotics

**11%** decrease in antibiotic prescriptions dispensed in General Practice between 2012 and 2016

**33 YEARS** The period of time since a new class of antibiotics for human treatment was last introduced, despite the fact that growing numbers of bacterial and viral infections are resistant to antibiotics

10% of sore throats and 20% of acute sinusitis benefit from antibiotic treatment but the prescription rates are much higher than this

**10%**



**3 IN 10** People in Scotland take at least one course of antibiotics each year

**10 million** Estimated number of yearly deaths globally by 2050 if we do not act now

The estimated lost productivity to the global economy (\$100 trillion) **£66 trillion**

The Scottish Antimicrobial Prescribing Group (SAPG) was established in 2008 to improve the way that antibiotics are used in hospital and the community across Scotland. SAPG, which is part of Healthcare Improvement Scotland, is continuing to lead activities for the European Antibiotic Awareness Day (EAAD) campaign, held on 18 November every year, and we are supporting the Public Health England (PHE) Antibiotic guardian pledge campaign to help to educate healthcare staff, patients and the public about antibiotic resistance and encourage everyone to make a pledge.

PHE established the Antibiotic Guardian campaign to help protect antibiotics and improve knowledge about antibiotic resistance.

**You are invited to become an Antibiotic Guardian**

As an Antibiotic Guardian, you can encourage others to join you in protecting antibiotics against the growing threat of antibiotic resistance at [antibioticguardian.com](http://antibioticguardian.com)

Please share on social media using [#AntibioticGuardian](https://twitter.com/AntibioticGuardian)

Resources and promotional materials for Antibiotic Guardian and EAAD are available via <https://www.sapg.scot/antibiotic-awareness/european-antibiotic-awareness-day/>



## BECOME AN ANTIBIOTIC GUARDIAN

Protect yourself, your family, friends and colleagues against the spread of antibiotic resistance.

Join us at [antibioticguardian.com](http://antibioticguardian.com)

Keep  Working

# WHAT IS ANTIBIOTIC RESISTANCE?

## The problem

Antibiotics, antifungals, antimalarial, antiretrovirals (collectively termed antimicrobials) treat infections by killing bacteria, fungi, parasites and viruses (respectively), but now we have an increasing number of these microbes that are able to resist the effects of these antimicrobials. This is called Antimicrobial Resistance. Infections caused by such microbes are termed drug resistant infections.

Antimicrobials, especially antibiotics, are becoming less effective. This can lead to more deaths and more complications for people receiving treatment. We have to tackle this problem before it gets worse.

## How this happened

There are many reasons why antibiotics lose their effectiveness, but misuse is one of the key contributors:

Misuse of antibiotics can include any of the following<sup>1</sup>:

- When antibiotics are prescribed/taken unnecessarily
- When antibiotic administration is delayed in critically ill patients
- When broad-spectrum antibiotics are used unnecessarily or when narrow-spectrum antibiotics are used incorrectly
- When the dose of antibiotics is lower or higher than appropriate for the specific patient
- When the duration of antibiotic treatment is too short or too long
- When antibiotic treatment is not guided by microbiological culture data results

## What can we do?

Antibiotic resistance is one of the biggest threats facing us today but you can help. Please visit [www.antibioticguardian.com](http://www.antibioticguardian.com) and find out about the simple steps you can take to save our antibiotics.

# A WORLD WITHOUT ANTIBIOTICS

## Pre-antibiotic age

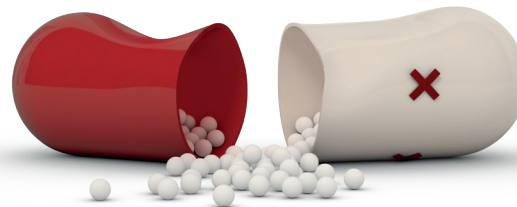
In a world before antibiotics, which was as recently as the 1930s, people often died from infections like pneumonia or meningitis. Simple medical procedures and operations were risky due to the chance of infection. Antibiotics changed that.

## Antibiotic age

Since the 1940s, our antibiotics have allowed us to fight infections and save millions of lives. However, they are becoming ineffective against many infections because we aren't using them properly.

## Post-antibiotic age

If bacteria become 'resistant' to our antibiotics, many routine treatments will again become increasingly dangerous. Setting broken bones, basic operations, even chemotherapy all rely on access to antibiotics that work. Antibiotic resistance is one of the biggest threats facing us today but we have a chance to fight back. Find out how at [www.antibioticguardian.com](http://www.antibioticguardian.com)



# ANTIBIOTIC RESISTANCE WHAT CAN I DO?

## Be an Antibiotic Guardian

Antibiotics are some of our most precious medicines used to treat both humans and animals.

The Antibiotic Guardian campaign was launched in 2014 to kick-start collective action from both health and social care professionals, students, educators in the human and animal health sector as well as members of the public to work together to slow the spread of antibiotic resistance.

By pledging to become an Antibiotic Guardian, you choose to perform a simple action which protects antibiotics against the threat of antibiotic resistance.

It is important that the public are made aware that taking antibiotics when they don't need them puts them and their family at risk of developing infections which cannot be easily treated with antibiotics.

## Advise patients and the public to take these simple actions to keep antibiotics working:

- Ask their pharmacist to recommend medicines to help treat cold or flu symptoms or pain
- Take antibiotics exactly as prescribed, never save them for later, never share them with others
- To spread the word, tell their friends and family about antibiotic resistance

## Sign up and learn more

Join the movement at [www.antibioticguardian.com](http://www.antibioticguardian.com) and choose a pledge that feels right for you to become an Antibiotic Guardian. Remember that your actions protect antibiotics.

<sup>1</sup>Gyssens IC, van den Broek PJ, Kullberg BJ, Hekster Y, van der Meer JW. Optimizing antimicrobial therapy. A method for antimicrobial drug use evaluation. J Antimicrob Chemother. 1992 Nov;30(5):724-7.