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← ANTIBIOTIC RESISTANCE

# The global threat of antibiotic resistance

Antibiotics have started to fail. Resistant bacteria already cause more than 1,27 million deaths every year. This number is predicted to rise dramatically if radical actions are not taken. Antibiotic resistance has become one of the greatest threats to global health.

### Antibiotic resistance...

...threatens our ability to cure common infectious diseases such as pneumonia, tuberculosis and gonorrhea.

...threatens to undermine major medical advances such as surgeries, treatment of cancer patients and care of preterm babies.

...threatens our ability to reach global health goals such as reduction of child mortality and improvement of maternal health.

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A short movie about the history and the current status of antibiotics from the four week online course: Antibiotic Resistance: the silent tsunami, produced by ReAct and Uppsala University, Sweden. Production: www.visuallab.no

# What is the difference between antibiotics and antimicrobials?

- Antimicrobials include all agents that act against microorganisms, namely fungi, bacteria, protozoa and viruses.
- Antibacterials encompasses all compounds that act only on bacteria, including antibiotics.
- Antibiotics are produced naturally by microorganisms and kill or inhibit the growth of other microorganisms, mainly bacteria.

Read more about the differences between antibiotics and antimicrobials in the ReAct Toolbox: <u>UNDERSTAND: Antibiotics.</u>

WE NEED TO TAKE ACTION NOW!

## Not a future threat

Antibiotic resistance is not only a fuand now.

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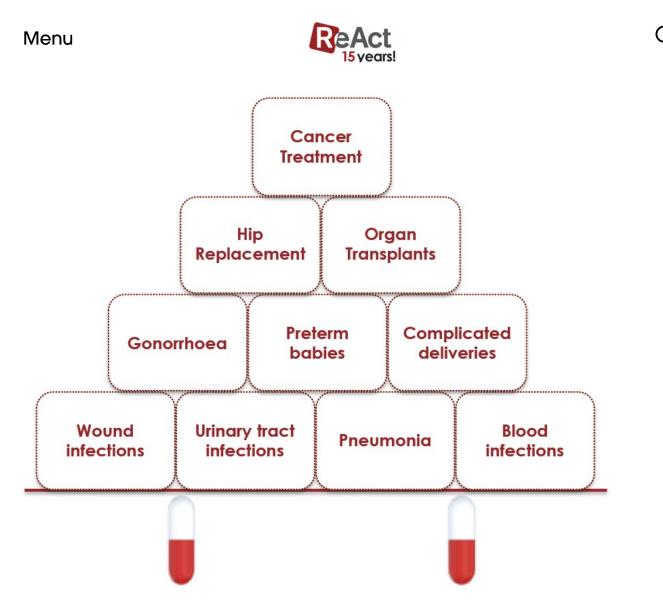


Bacterium Pseudomonas aeruginosa isolated on black background, antibioticresistant nosocomial bacterium. Illustration shows polar location of flagella and presence of pili on the bacterial surface. Photo: Shutterstock

- Antibiotic resistance kills. 214,000 newborns are estimated to die every year from blood infections (sepsis) caused by resistant bacteria – representing at least 30% of all sepsis deaths in newborns.
- Antibiotic resistance spreads silently across the world. More than 60% of the populations in some areas carry multidrug-resistant bacteria in their normal bacterial flora.
- Antibiotic resistance is costly. It is estimated that the median overall increased cost to treat a resistant bacterial infection is around 700 USD, equal to over one year's wages of a rural worker in India. Novel treatments for multidrug-resistant infections can cost up to tens of thousands of dollars, making them unaffordable for many.
- Antibiotic resistance is here now. Resistance has already developed to the last-line antibiotics for gonorrhea, which in some cases is nearly untreatable. With 106 million new cases/year, the consequences of total resistance would be devastating.

## The cornerstones of

Bacterial infections have plagued h past 70 years antibiotics have chan We have placed cookies on your computer and saved your IP number to give you a better experience. ReAct's privacy policy and about cookies used on the site.



The antibiotic pyramid shows how many types of diseases and surgical procedures often relies on effective antibiotics.

From basic healthcare to advanced technology supported medicine, antibiotics have become indispensable. However, antibiotic resistance erodes antibiotic efficiency and the cornerstones have started to crumble.

Although serious adverse events are rare overall, common risks linked to use of antibiotics exist. For more information, see the ReAct Toolbox: <u>UNDERSTAND.</u>



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Photo: Pixabay

## What will happen if bacteria become resistant to all antibiotics?

Antibiotics are medicines that kill or stop bacteria from growing. Resistant bacteria are able to withstand attacks by antibiotics – they have developed defenses that protect against the effects of antibiotics that could previously kill them. When bacteria that can cause diseases become resistant, standard treatments stops working, infections persist and may spread to others. For more information, see the ReAct Toolbox: <u>UNDERSTAND – Why</u> <u>should I care?</u>

## A priority health issue

Over the last decade the message of the impending crisis has started to reach the attention of world leaders and global health institutions. The World Health Organization (WHO) has declared antimicrobial resistance, including antibiotic resistance, a priority health issue and has prompted its Member States to take action. Warnings from the former WHO Director General Margaret Chan describe a world near to a 'post-antibiotic era'.

## More from "Antibiotic resistance"

- The threat
- A complex global challenge
- What do we need?
- <u>Take action</u>
- Course: Antibiotic Resistance -

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