

# Antimicrobial resistance (AMR)

Antimicrobial resistance and the steps to take to prevent the spread of this kind of resistant bacteria.

Antimicrobial resistance (AMR) is when antimicrobial drugs, such as antibiotics, stop working effectively on the bacteria they are designed to kill. They also stop them from growing and multiplying.

Antibiotics are used to treat infections caused by bacteria. It is possible for bacteria to change and adapt. The bacteria can find new ways to survive the effects of an antibiotic, making it and related antibiotics less effective. Resistant bacteria make bacterial infections harder to treat.

## How AMR spreads

The use and misuse of antimicrobials in humans and animals contributes to the development and spread of AMR bacteria through many routes. Resistant bacteria can be spread to humans in the food chain through:

- animal slaughtering processes – meat can be contaminated by resistant bacteria present in the animal's digestive tract
- manure – resistant bacteria in animal faeces used to fertilise land can transfer to the environment
- water – vegetables, fruit and shellfish can become contaminated if the water used to grow them contains AMR bacteria
- cross-contamination– food handled without the right hygiene practices can spread resistant bacteria from one type of food to another or from the environment to food

## How you can avoid spreading AMR

AMR bacteria can make antibiotics, including those used for treating humans, less effective. The risk to public health from AMR microbes in food can be reduced in similar ways to that of non-AMR microbes in food. It's important to follow the '4Cs' when transporting, storing and preparing food.

The 4Cs are:

- cleaning well
- cooking thoroughly
- chilling correctly
- avoiding cross-contamination

Thorough cooking is crucial as it can destroy bacteria that may be present in foods including those that are AMR. Good hygiene practices at all stages of the food chain are also important. This will help to reduce the risk of contamination and spreading AMR bacteria to other foods.

If you are planning to eat raw fruit or vegetables, make sure you wash them thoroughly first.

Peeling can also help remove contamination. You should also make sure you only take antibiotics when necessary, and complete your prescribed course.

## FSA EXPLAINS

Antibiotics are drugs used to treat bacterial infections in both humans and animals. They have no effect on viruses or fungal infections. Examples of antibiotics include:

- penicillin
- tetracycline
- erythromycin
- streptomycin

Improper use of antibiotics can increase the chance that bacteria will adapt and become resistant to them. Resistant bacteria can thrive when non-resistant bacteria are killed off by antibiotics because there's less competition for food and resources.

## What we are doing about AMR

We are funding research to find out more about antimicrobial resistant bacteria in the food chain to help fill knowledge gaps in this area. We're also working with the food industry to reduce the levels of resistant bacteria in food.