

# Answer key, Antibiotics and resistance (quiz)

## Q1. Antibiotics fight infections caused by viruses and bacteria.

**False.** Although bacteria and viruses often cause infections with similar symptoms, antibiotics can only fight infections caused by bacteria. Important to note is that many bacterial infections are also taken care of by our immune system and do not require antibiotics.

## Q2. Antibiotics are effective against colds and flu.

**False.** Antibiotics do not work against colds and flu (influenza), because these infections are caused by viruses. Antibiotics will neither help you to get better more quickly nor reduce symptoms of viral infections but are associated with risks of side effects and emergence of resistance.

## Q3. Antibiotics can distinguish between beneficial and harmful bacteria.

**False.** Unfortunately, antibiotics are not able to distinguish between beneficial and harmful bacteria. Consequently, taking antibiotics for any illness can cause a disturbance of the normal bacterial flora, e.g. leaving the gut (intestine) vulnerable for the growth of potentially disease-causing bacteria such as *Clostridium difficile*.

## Q4. Use of antibiotics make them become ineffective.

**True.** All antibiotic use promotes the emergence and spread of resistant bacteria, resulting in antibiotics becoming less effective in treating various types of infections. By only using antibiotics when needed and as prescribed, we reduce the unnecessary and inappropriate use and protect the effectiveness of these drugs.

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**Q5. Taking antibiotics often has side effects, such as diarrhoea.**

**True.** Taking antibiotics can often cause unwanted side effects, such as diarrhoea or fungal infections. After one single course of antibiotics, you can become carrier of resistant bacteria in you normal bacterial flora for a long time. If these resistant bacteria cause an infection later on it may be difficult to treat.

**Q6. Overusing antibiotics can make humans resistant.**

**False.** “I must be immune to the antibiotic” is probably one of the most common misconceptions about antibiotics resistance. It is not the infected host, but the bacteria, which become resistant to antibiotics. People may suffer from allergic reactions or other side effects when taking antibiotics, but they are not resistant.