

3.1.8 Antibiotics and painkillers

AQA GCSE Biology (Higher) Question and answer notes

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How to use these notes

These notes cover everything you need to know for this part of the specification. They have been written in question-answer format to make them easier for you to study from.

In order to study successfully, I recommend you do the following for each question and answer:

- Read it carefully and make sure you **understand** it.
- **Memorise** the answer.
- **Practice** applying your understanding to past exam questions.

A good way to memorise information is to use **retrieval practice**. This is when you practise retrieving information from your memory. You could do this by making a flashcard for each question with the question on one side and the answer on the other. Or you could use a flashcard app. Alternatively, use a sheet of paper to cover up the answer so you can only see the question. Try to answer the question and then check how you did.

You should practise retrieving each answer from your memory until you can do it perfectly. Even once you can retrieve the answer perfectly, your ability to retrieve it will probably fade as time passes without practising. Therefore you will need to keep going back to the questions that you have previously mastered and practising them again. However, each time you re-learn the answer, the memory will be stronger and will last longer than the time before.

What are antibiotics?

Antibiotics are drugs that kill bacteria. They are used to treat bacterial infections.

Give an example of an antibiotic.

Penicillin is an example of an antibiotic.

How has the use of antibiotics benefited society?

The use of antibiotics has greatly reduced deaths from bacterial infections.

What is the problem with widespread use of antibiotics?

The problem with the widespread use of antibiotics is that it causes the evolution of bacterial strains that are resistant to the antibiotics. These antibiotic-resistant bacteria can be very difficult to kill.

Why should antibiotics not be used for viral infections?

Antibiotics should not be used for viral infections because they only kill bacteria, not viruses.

What is difficult about developing drugs that kill viruses?

It is difficult to develop drugs that kill viruses without also damaging the body's tissues.

What are painkillers?

Painkillers are drugs that relieve pain. They do not kill pathogens.