

3.1.7 Vaccination

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 is vaccination?

Vaccination is when a small amount of a dead or inactive form of pathogen is introduced into the body of a human or other animal (usually by injection). It stimulates the white blood cells to produce antibodies against the pathogen. This means that if the pathogen infects the body later, the white blood cells will respond quickly by producing large quantities of antibodies, which will protect the body against the infection.

How are vaccines used to prevent the spread of pathogens?

Vaccinating a large proportion of the population against a pathogen makes it harder for that pathogen to spread. This is because when a person is infected many of the people around them will have a high level of immunity to the pathogen due to being vaccinated. This makes it much less likely that the infected person will pass the pathogen on to another person.