



# Immunity

- Human beings and other animals, such as your pets, can easily become ill because they get infections from **microbes** such as **bacteria** or **viruses**.
- We rely on cells within our body to help us to fight these infections and although we may become ill, we usually recover and become well again.
- The cells which do most of this infection-fighting for you are in your blood and they are called **white blood cells**.
- One type of white blood cell produce special little Y-shaped proteins called **antibodies**. These antibodies find the microbes which are causing the infection, lock onto them, and destroy them.
- If you get certain type of infections, such as chicken pox, your white blood cells fight the infection by producing antibodies exactly the right shape to join with the chicken pox virus. Your white blood cells also produce special memory cells which stay in your blood and are ready to fight any further infections with chicken pox. We would then say you have **immunity** to chicken pox.
- Another way in which you can get immunity to an infection is through **vaccination**.

  
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# Cervical Cancer & HPV

The **Human Papilloma Viruses (HPV)** is the name for a group of viruses that affect your skin and the moist linings of your body, e.g. your mouth. Some types of HPV cause minor infections and problems, such as warts and verrucas.

## Key facts:

- Some types of HPV affect the cervix (the narrow opening to the womb). They can cause abnormal tissue growth and other changes to cells, which can lead to cervical cancer, or genital warts.
- Most people catch HPV from close contact with other people, including by having sex.
- About 2,700 women are diagnosed with cervical cancer in the UK each year. It is the second most common cancer in women under 35 years old.
- Vaccines are now available to prevent infection with some types of HPV. Vaccination will reduce the numbers of people getting cervical cancer.
- The Department of Health has agreed to introduce HPV vaccination for girls aged 12-13.



# Vaccines and Vaccination

- In many countries children are vaccinated when they are young to prevent them from getting certain diseases. Vaccines make our white blood cells produce antibodies without us having to become infected with the actual disease.
- If the person who has been vaccinated then comes into contact with the disease itself, their body will recognise it and immediately produce the antibodies needed to fight it.
- If enough people in a community are vaccinated against certain diseases, then it is more difficult for that disease to get passed between those who aren't vaccinated. Some diseases have been eradicated (got rid of completely) in this way so that they no longer exist anywhere. An example is smallpox, which is why you no longer need to be vaccinated against it.
- You are likely to have been vaccinated against diseases such as measles, rubella, mumps, tuberculosis, polio, tetanus and diphtheria.
- It's not just people who get vaccinated against disease; our farm animals and pets are also vaccinated to prevent them from getting diseases such as rabies and tetanus.



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