

Our immune system

Keeping ourselves healthy

Our amazing bodies

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Our bodies are amazing at defending themselves against germs and they do it all the time!

Our skin and the hairs in our nose stop germs entering our body. A sticky substance called mucus also builds up in our nose to trap any germs!

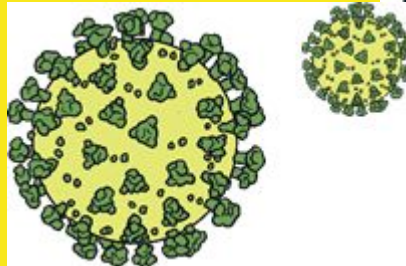
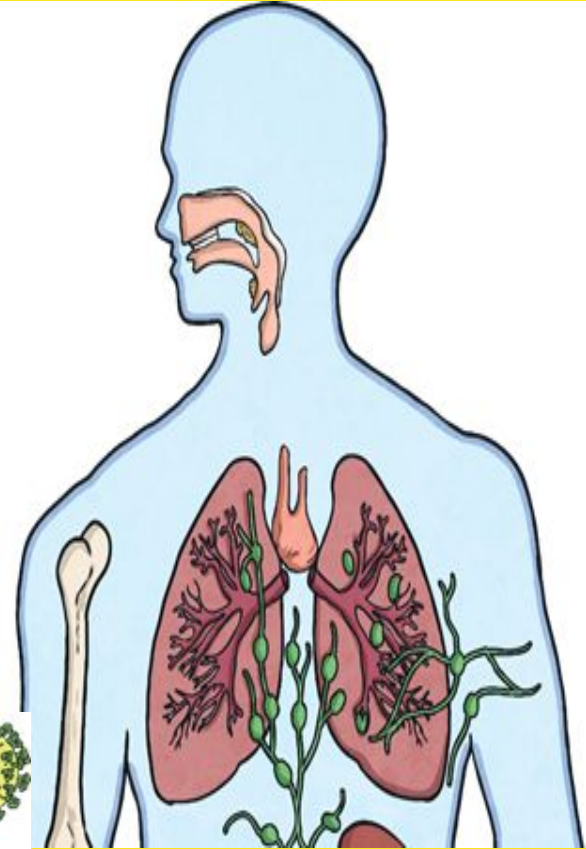


How our body fights germs

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Sometimes, germs will manage to enter our body, causing an infection and making us feel ill. However, our bodies have a second line of defence to fight back against the germs. This is called the 'immune system'.

Our immune system uses white blood cells inside our body to fight off the germ invaders and make us feel better.



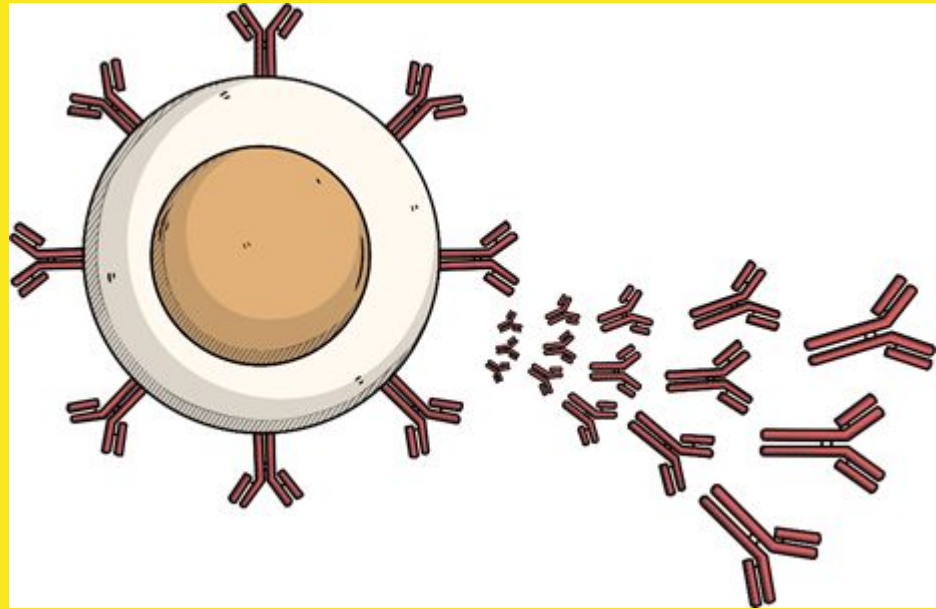
How our body fights germs

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One type of white blood cell produces antibodies, which latch on to the surface of a germ to destroy it.

Another type of white blood cell releases messengers that send signals to other cells about the germ invaders, a bit like a police officer calling for backup!

Soon, our body has a whole army to defeat the germs and remove the infection that is making us feel ill.



How our body fights germs

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Our body is exposed to germs every day and our immune system prevents most of these unfriendly germs from making us ill.

When we do sometimes get sick, our body learns and remembers how to fight off the illness.

Then, the next time the germ enters our body, our immune system can quickly defeat it before it can make us ill. This is called 'immunity'.



How vaccines help us

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We can also gain immunity through what is called a 'vaccine'.

Scientists developed vaccines to help our bodies fight off particularly nasty germs which can make people very ill.

Some vaccines insert a dead or modified version of a germ into our body, and some make our bodies create part of a germ. Our immune system detects the germ then attacks it as if it were a real invasion.



How Vaccines Help us

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When the immune system detects the vaccine, our white blood cells learn how to destroy the real germ.

After responding to the vaccine, our body then remembers which antibodies it used. This means if the real germ does enter our body, our immune system will recognise it and will know how to defeat it quickly and stop us from being ill.

Think of it a bit like our body practising for a real-life infection, like when we might practise sport or a musical instrument.



How Vaccines Help Us

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Vaccines are great because they help stop nasty germs from making us very ill.

Did you know the flu nasal spray is a vaccine too? It helps protect our body from germs which cause the flu virus.

Vaccines for new diseases can take a long time for scientists to develop. This is because they need to be sure they are safe and work properly.' to 'Vaccines for new diseases can take some time for scientists to develop. However, if lots of scientists are working hard to find a vaccine, it can take much less time. Vaccines are always tested to make sure they are safe before being given to people.

