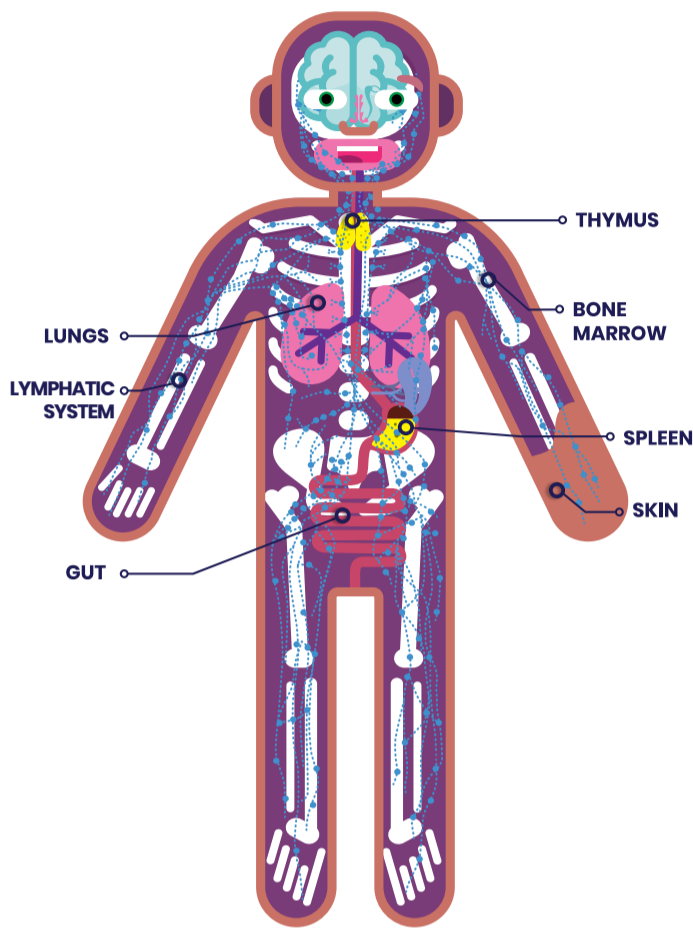


THE IMMUNE SYSTEM

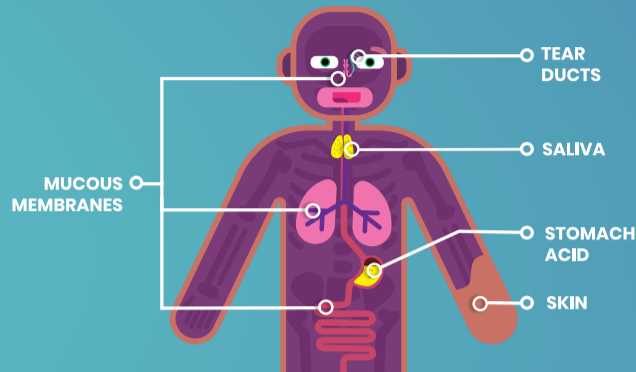
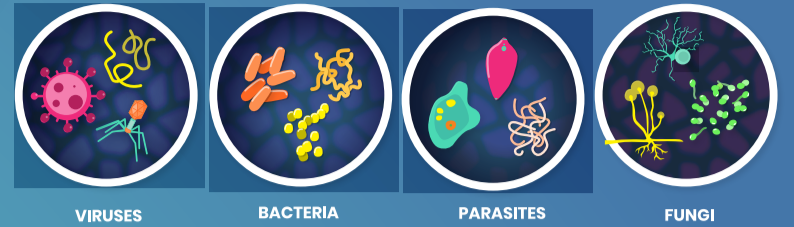
The human immune system is a complex network of cells, tissues and organs spread throughout your body.

These communicate, coordinate, and collaborate, providing natural defences that keep you healthy and safe.



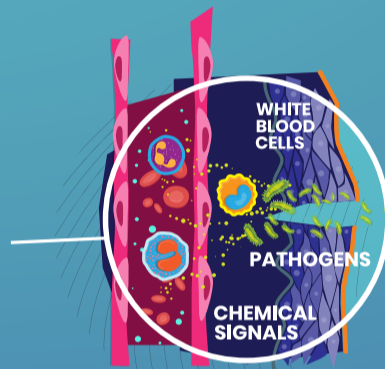
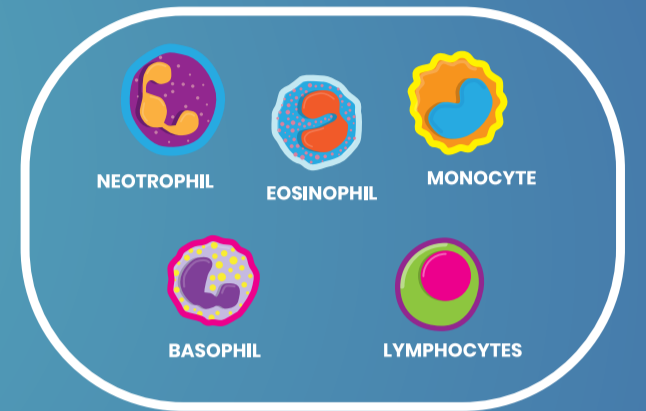
INNATE IMMUNE SYSTEM

We are all born with innate immunity that acts fast to stop the spread of organisms that may cause harm, like viruses, bacteria, or parasites.



Your skin is a barrier that stops organisms from entering your body, while mucous membranes, stomach acid, saliva and tears contain substances to kill or prevent their growth.

If a harmful organism or pathogen enters your body, immune cells detect the invader and trigger an alarm. Many of these cells are non-specific, so they can recognise and attack a wide variety of pathogens.

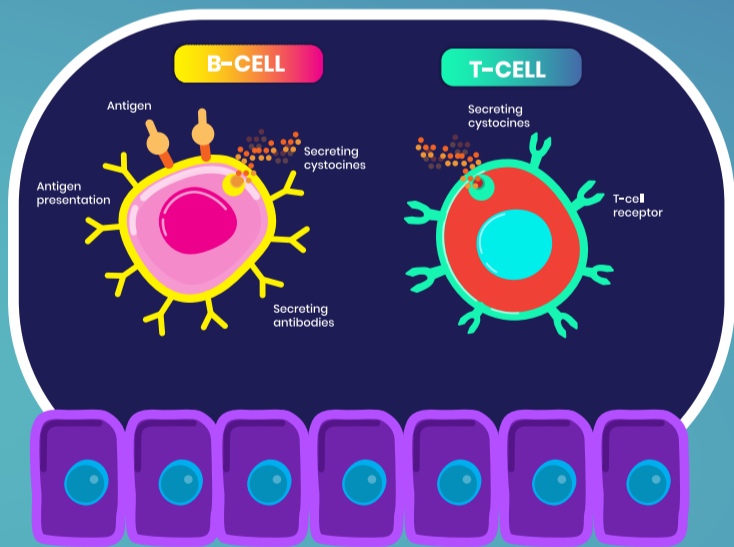


Chemical signals produced by innate immune cells attract other immune cells to fight the infection and repair any damage.

You may feel a response such as inflammation at the site of the infection and a mild fever.

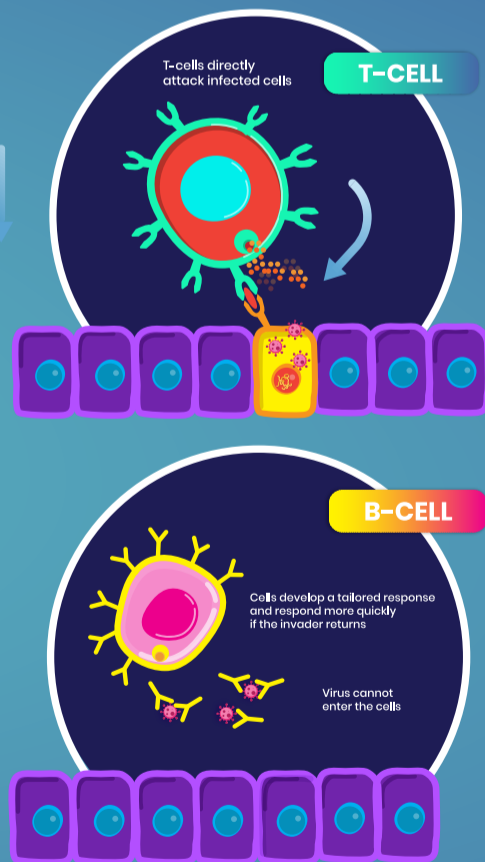
This shows that your immune system is hard at work fighting the invader.

ADAPTIVE IMMUNE SYSTEM



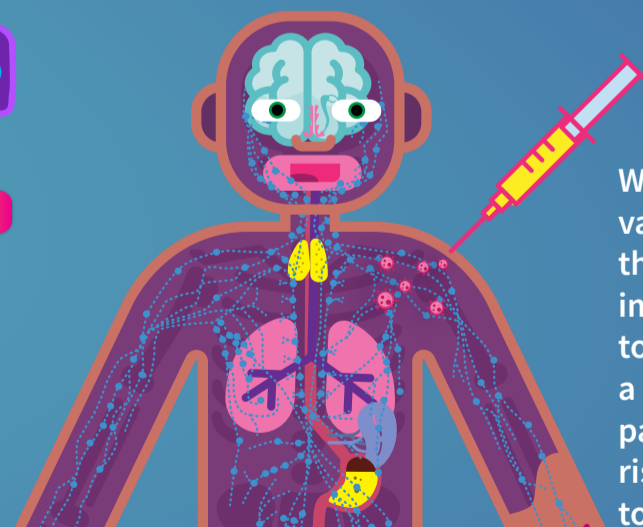
If a pathogen can't be stopped by your innate immune system, then your adaptive immune system kicks into gear.

Adaptive immune cells, including T-cells and B-cells, are trained to recognise and attack specific invaders.

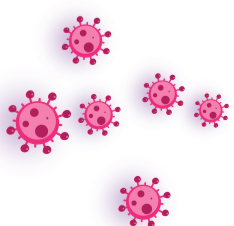


T-cells can directly attack infected cells, while B-cells produce antibodies that help to identify and neutralise specific pathogens.

These cells take time to develop a tailored response but can 'remember' and respond more quickly if the invader returns.



We can also use vaccines to train the adaptive immune system to protect against a specific pathogen without risking exposure to the disease.



The immune system is your own personal, natural defence mechanism made up of physical and chemical barriers, immune cells and immune responses working together to protect your body from foreign invaders.

It develops throughout your life to repair and heal your body when it is injured or damaged, with a memory to provide immunity acquired from previous infections.