" THE IMMUNE SYSTEM, A GRACEFUL GUARDIAN OF OUR BODY, VALIANTLY DEFENDS AGAINST THE ONSLAUGHT OF INFECTIONS"

"UNLOCKING IMMUNE MEMORIES: LYMPHOCYTE B - THE MEMORY KEEPERS OF DEFENSE!"

What happended when we get sick

1

When we get sick or receive a vaccine, some cells called B cells help our body fight the infection by producing antibodies.

what's happened next? ?

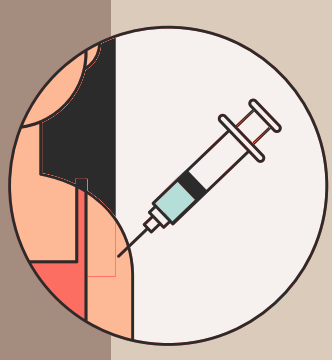
2

After the infection is gone , some B cells turn into memory B cells that remember the specific germ that made us sick. Some gene referencing

3

How do long-lived memory B cells help us stay healthy?

Memory B cells are like "immune superheroes." If the same germ tries to attack us again, these memory B cells recognize it quickly. They produce more antibodies faster than before, helping our body fight off the germ much faster and keep us from getting sick again.



4

Why are memory B cells important for vaccines?

When we get vaccines is like training exercises for our immune system. We introduce a weakened version of a germ to help our body build protection without getting sick. When we receive a vaccine, our B cells turn into memory B cells, just like when we get sick. So, if the real germ tries to infect another time , our memory B cells know how to stop it before it can make us sick.

How does this knowledge help make better vaccines?

5

Understanding long-lived memory B cells helps scientists design more effective vaccines. They can create vaccines that make our memory B cells super strong, so we have long-lasting protection. This way, we don't have to worry as much about getting sick from dangerous diseases because our immune system is already prepared to fight them off quickly and effectively.

WHY VACCINE IS IMPORTANT SPECIALLY NOWADAYS ?

Protection against dangerous sickness

Global Health

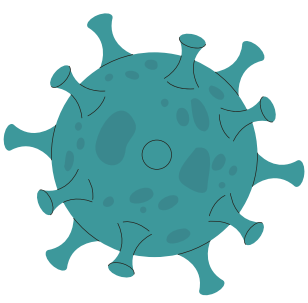
Globalization = exchanged of virus and bacteries

Pandemic Control

Global worming
new health problems

Herd Immunity

Protecting Vulnerable Populations



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