

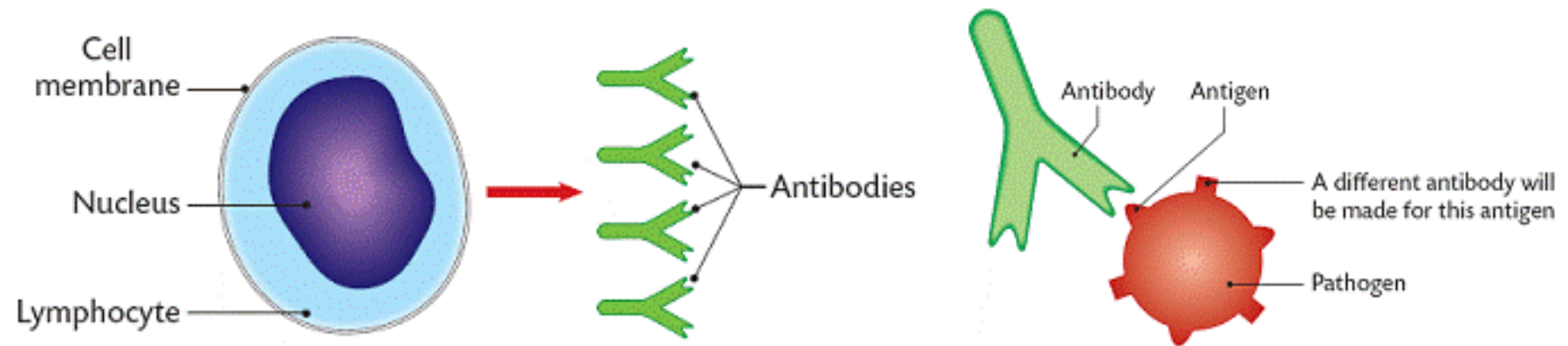
Aim: How do vaccines give us immunity?

Antibodies are created by white blood cells (B Cells) in response to antigen. They match the shape of the antigen and mark the pathogen to be destroyed.

UNIT#5 MINI LESSON#3
VACCINE

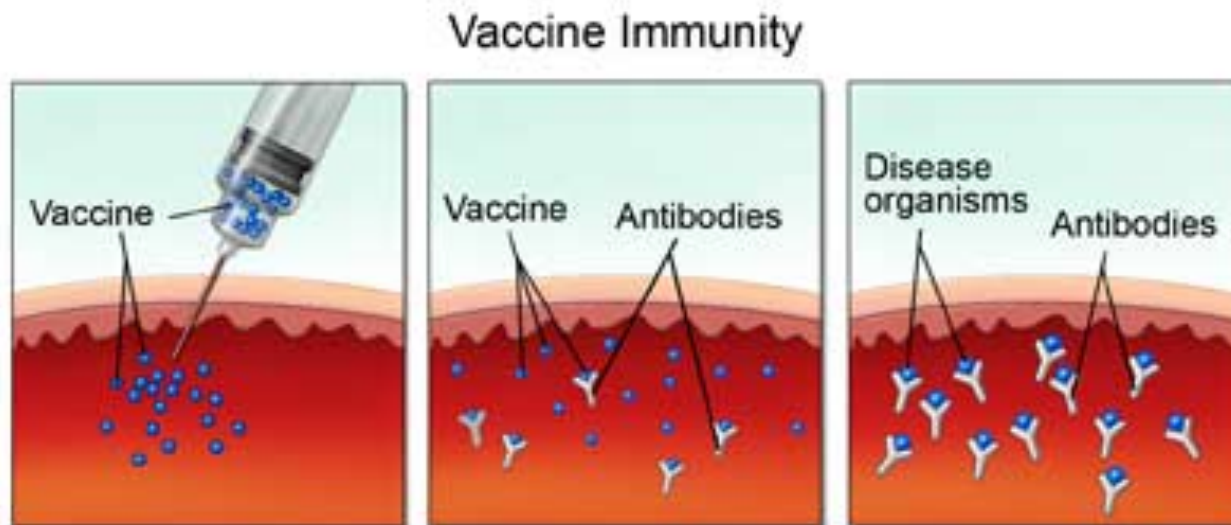
How do we develop immunity?

- Once a pathogen enters, the immune response is activated and white blood cells produce the **matching shaped antibody**
- This specific **shaped antibody** remains and give you immunity against this pathogen



Vaccines

Weakened microbes used to stimulate immune response



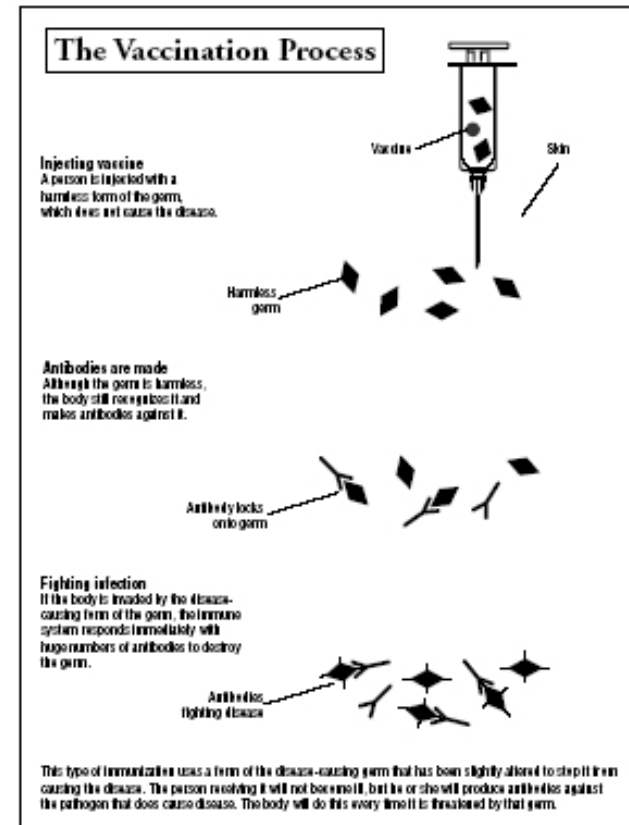
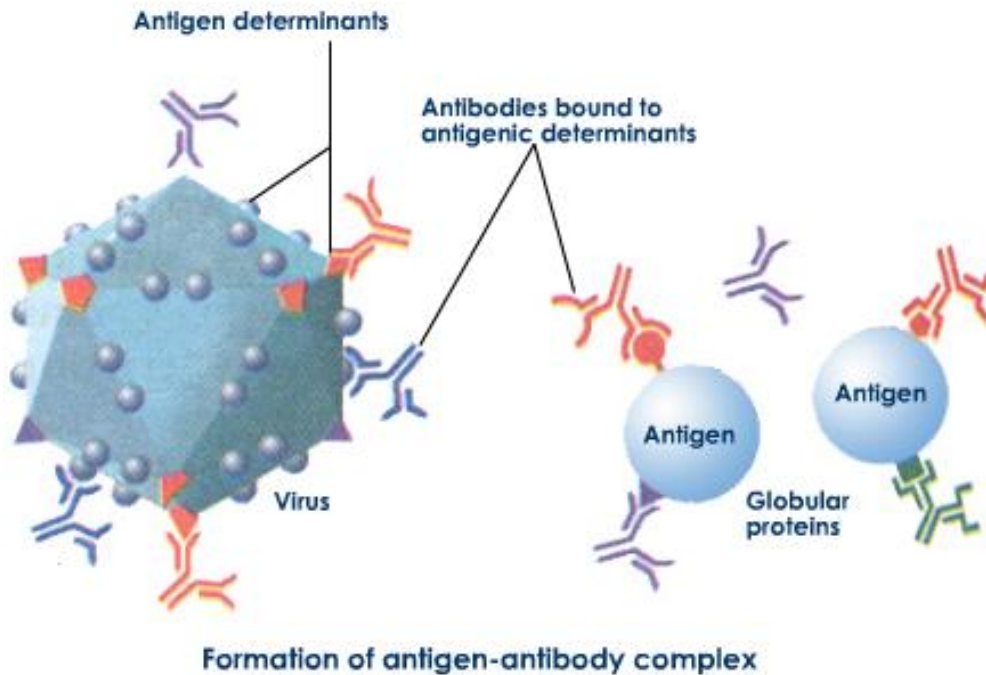
Vaccines

- Used to trigger immune response and develop **antibodies**
- Contain **antigens** from pathogen, enough to stimulate antibody production



What happens after vaccination?

Our body starts an immune response to the antigen and **makes antibodies** for this particular antigen.



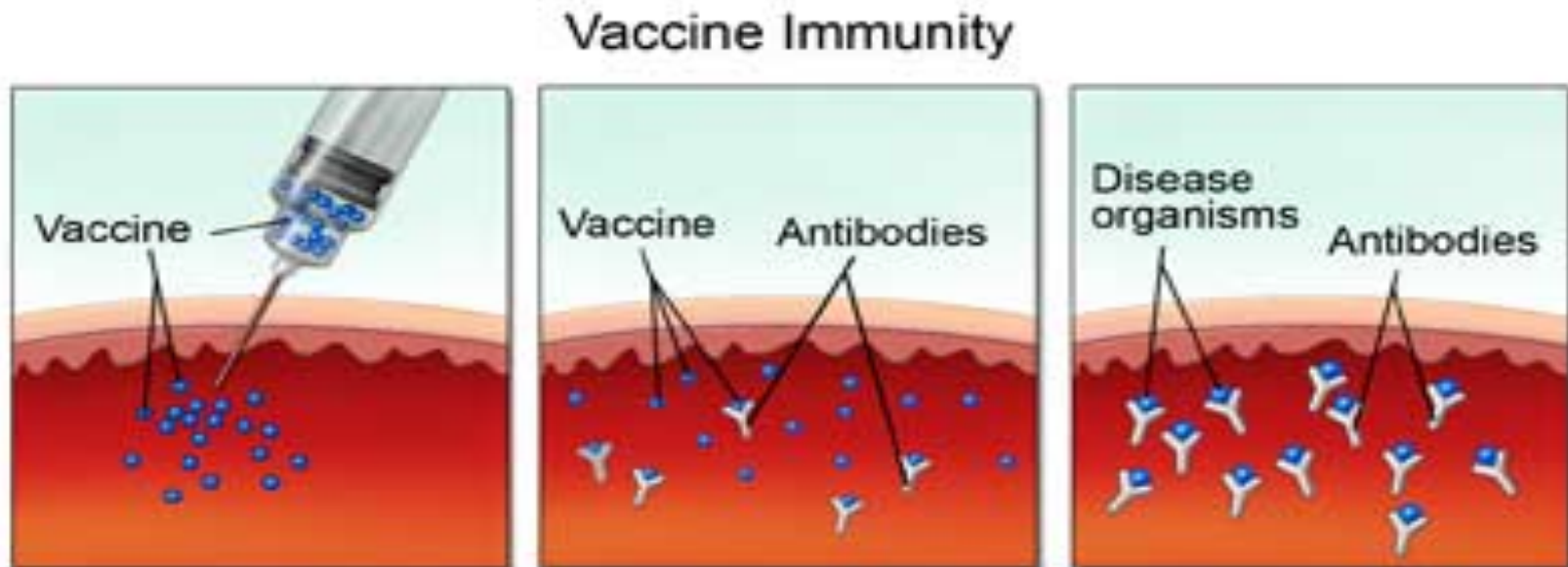
What is vaccination?

Vaccination stimulates the immune system with an antigen (pathogen.)



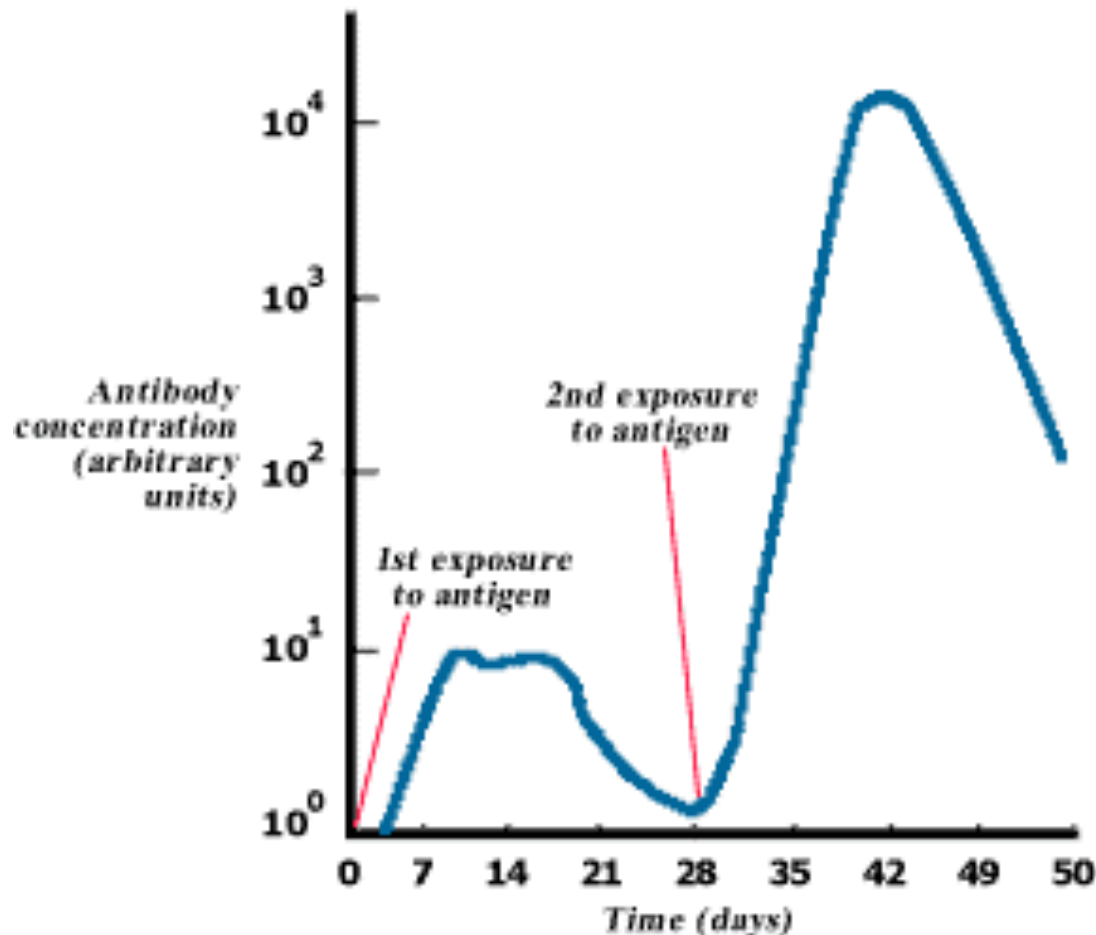
What is in a Vaccine?

A small amount of a weakened or dead form of the pathogen.



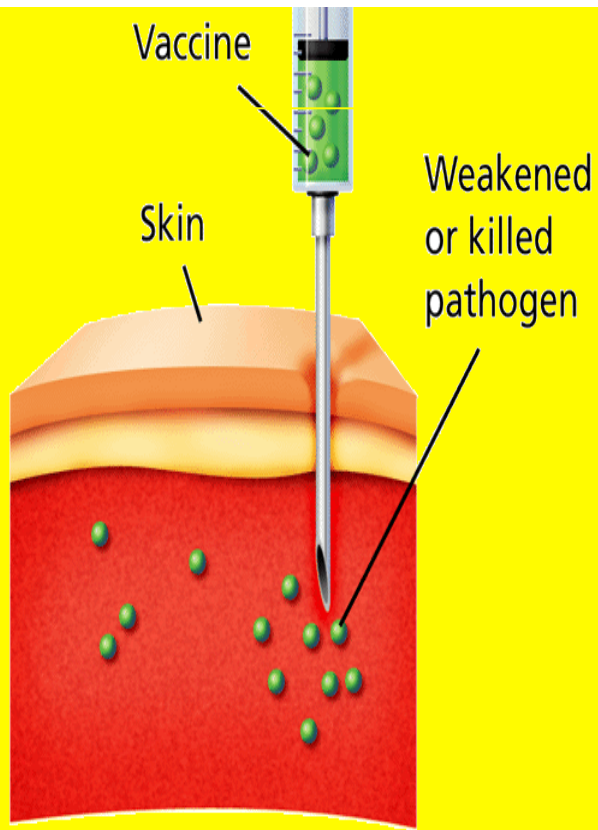
Then what?

Memory WBC **remember** the pathogen and react quickly next time.

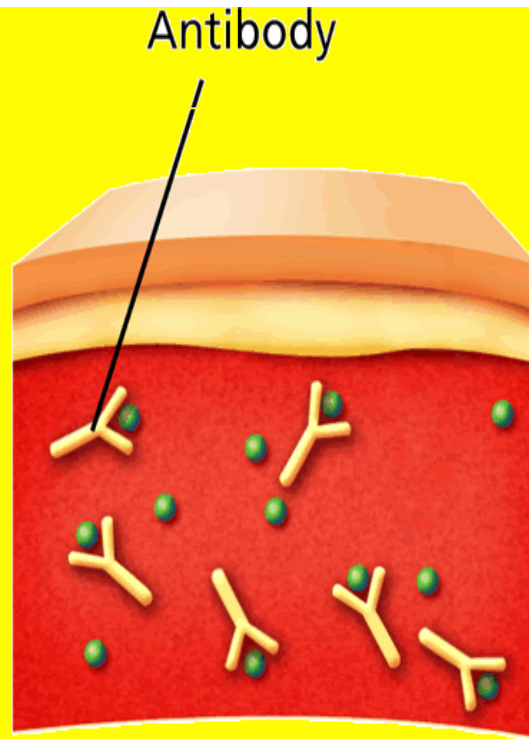


Immunity

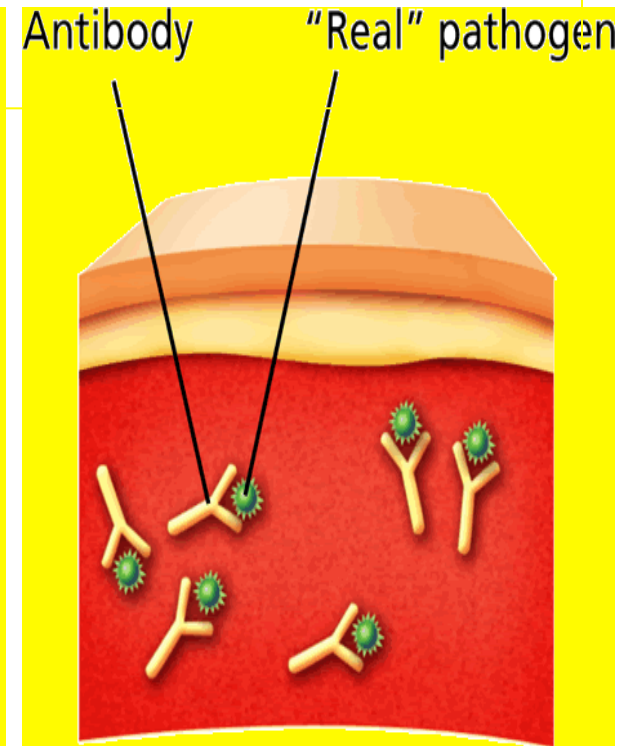
How does a person become immunized?



1 A person receives an injection with weakened or killed pathogens.



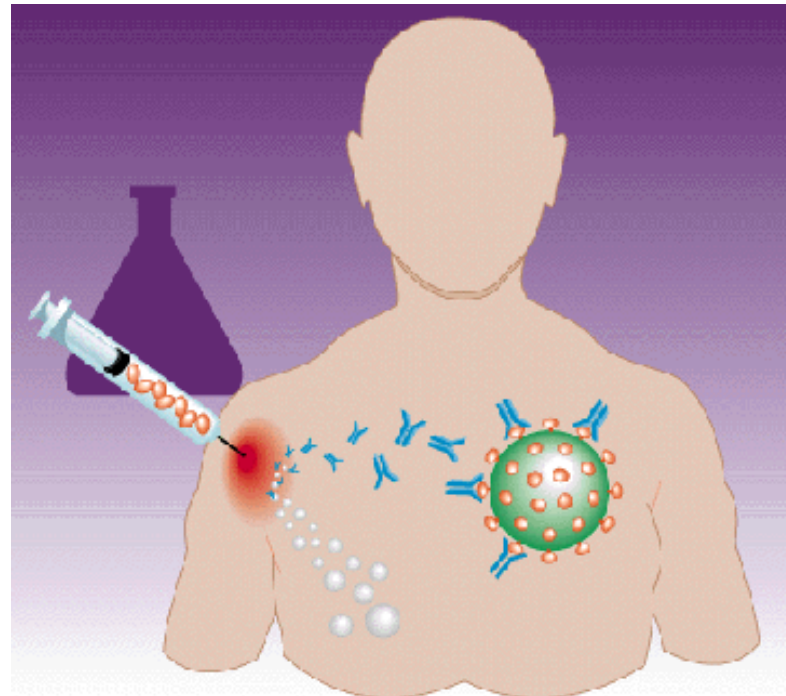
2 The immune system produces antibodies against the disease. It also produces memory cells.



3 If the "real" pathogen invades later, memory cells help to produce antibodies that disable the pathogen.

Active Immunity

- Your own body makes antibodies
- LONG-TERM!
- Ex: Recovery from sickness, **Vaccinations**



Passive Immunity

- You get antibodies from somewhere else
- **SHORT TERM!**
- Ex: Mother to Baby, taking antibiotics

