



MAKING A MODEL SHOWING HOW VACCINES CREATE ANTIBODIES

In this activity, you will build a simple model to show how a vaccine helps your body recognize germs and make antibodies to protect you.

WHAT YOU WILL LEARN

Vaccines introduce a harmless piece of a germ (antigen) to your body. Your immune system recognizes it and makes antibodies. Later, if the real germ enters, the antibodies help protect you by stopping it.

MATERIALS

- 5 small pom-poms (1 "germ" + 4 "antigens")
- 4 clothespins (antibodies)
- 1 small bowl or cup (white blood cell)
- Paper labels or sticky notes
- Marker
- Tray or plate (your "body")

MODEL KEY



Germ (invader)

The harmful germ that can make you sick.



Antigen (vaccine piece)

A harmless piece of the germ used in a vaccine.



Antibody

Proteins made by your body that lock onto germs.



White blood cell

Helps your body learn about germs and make antibodies.

PROCEDURE

- 1 Set up your "body".** Place the bowl (white blood cell) in the tray (your body).
- 2 Vaccine enters.** Place 4 green pom-poms (antigens) in the bowl.
- 3 Body learns.** The white blood cell "sees" the antigens and makes antibodies.
- 4 Real germ enters.** Place the red pom-pom (germ) in the tray, outside the bowl.
- 5 Antibodies protect.** Use the clothespins to pick up the red germ. The antibodies lock on and stop the germ.



White Blood Cell



Antigens
(Vaccine Pieces)



Antibodies Made



Germ
(Invader)



Germ Stopped!

WHAT HAPPENED?

The vaccine (antigens) helped your body learn what the germ looks like. Your body made antibodies. When the real germ came in, the antibodies recognized it and stopped it.

THINK & ANSWER

1. What did the green pom-poms (antigens) represent? _____
2. What did the clothespins (antibodies) do? _____
3. How did the vaccine help your body? _____
4. Why are vaccines important? _____



REMEMBER: Vaccines do not give you the disease. They help your body get ready to fight germs.



Vaccine
(Antigen)



Antibody



Germ



Protected!