

Operation Antibody

Case Studies Activity Sheet



Glue the following cases on index cards:

Case 1

Before the start of the flu season, you have a flu shot. A month later you come down with the flu. What happened?

Case 2

Dangling your legs in the ocean over the side of your raft, you feel a sharp sting on your foot. You look down and discover a jellyfish. Soon your foot feels painful. It is swollen and red to touch. What is happening?

Case 3

You are an immunologist and have a patient who has just received a kidney transplant. How do you explain to him that he must be given immunosuppressant drugs?

Case 4

As a child you received an emergency shot of antivenin to treat snakebite. The drug was horse serum with antibodies. The doctor told you that this procedure could never be repeated or boosted. Why?

Case 5

Five cases of measles suddenly appear at your high school. The school nurse is rechecking immunization records. What could be a possible explanation for this outbreak? (Hint: There are three possible scenarios!)

Case 6

You are hurrying to finish that science fair project and . . . oops, a splinter from your display ends up in your hand. You pull it out, but later that night your finger becomes swollen and red. A few days later the entire hand is swollen, the pain is intense, and you develop a fever. What's going on?

Case 7

You go out for dinner to a new Chinese restaurant. While eating, you find that your throat becomes scratchy, and your eyes begin to water. Your friend stops eating her food, and tells you that your eyes look swollen. This has never happened to you before. What is happening?

- Students should now proceed with writing a script that dramatizes the basic interaction occurring between antigen and the immune response based on their case study. They need to specifically identify the antigen and consider transmission, entrance into the body, and the immune response to that antigen.
- Have students choose a narrator and a cast of characters from their group who will perform the scene.
- Students should use simple staging and nametags to identify the characters in their scene. They should conclude each skit with a summary of the immune response and anything unique to their case, such as inflammatory response or allergic reaction.