

# Basic knowledge on immunity

Name \_\_\_\_\_

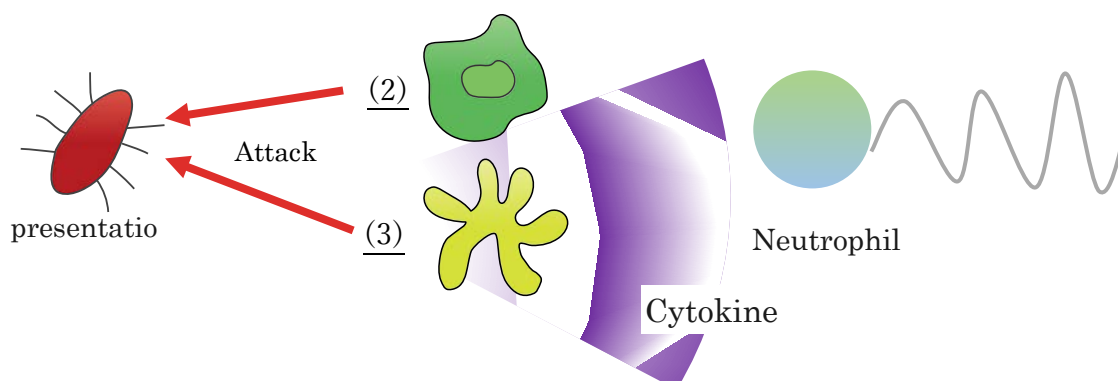
Put words that fit the following blanks. A number is a symbol for distinguishing words.

In this chapter you learned about immunity.

Simply put, Immunity is a reaction to keep health of the body by killing the (1) \_\_\_\_\_ if it invades the body.

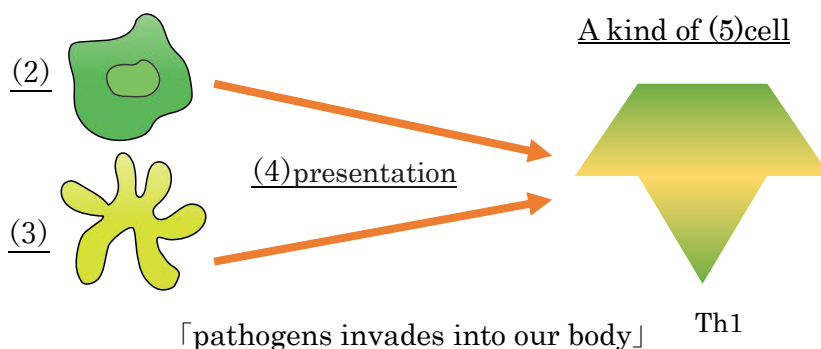
Let's look at the specific mechanism of immunity.

1. When pathogens such as virus or bacteria invades the body, the first moving function are (2) \_\_\_\_\_ and (3) \_\_\_\_\_. While attacking pathogens, they activate themselves by secreting a substance called "cytokine" or call up cells that attack pathogens such as "neutrophils". My throat hurts when I have a cold because macrophages are activated. In addition, a \_\_\_\_\_ comes out because the neutrophil discharges the remains of the attacked pathogens



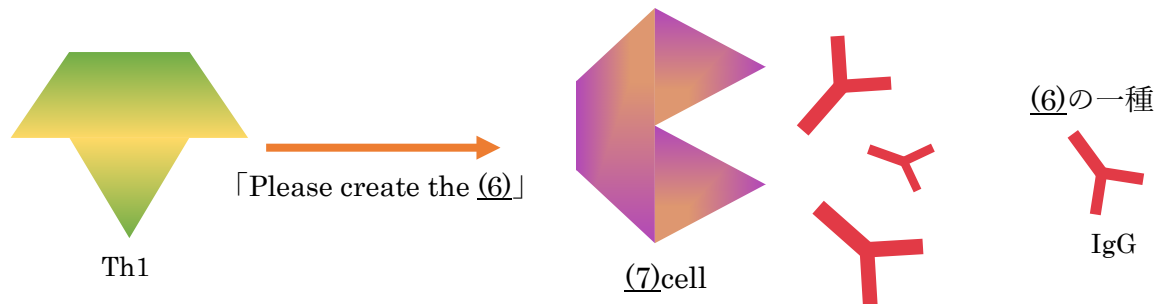
2. (4) \_\_\_\_\_ presentation

When pathogens invades the body many times, macrophages and dendritic cells communicate information about the pathogens to (5) \_\_\_\_\_. This is called "antigen presentation". Helper T cell is the cell that issues orders to remove foreign bodies. There are several types of helper T cells. Whether antigen presentation is made depends on the \_\_\_\_\_. For pathogens, antigen presentation is mainly made to Th1.

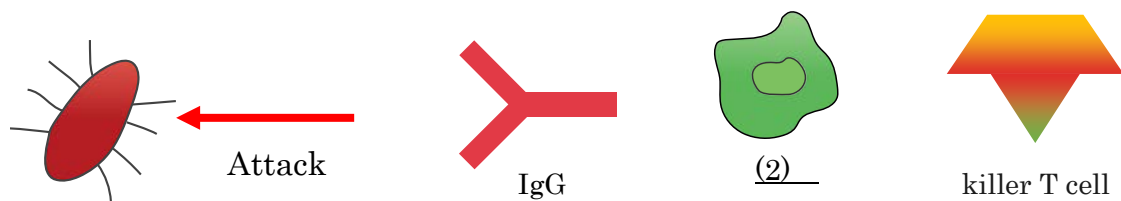


3. Make (6)\_\_\_\_\_ and attack again on pathogens (second and subsequent invasions)

When antigen presentation is done, Th1 orders (7)\_\_\_\_\_ "please make antibody". Antigen is a substance that binds to specific antibodies and attacks them, there are 4 types. "IgG" deals with this pathogen.



When the same pathogen enters next time, this "IgG" combines with the pathogen and attacks. At the same time (2) and other cells also fight.



The killer T cell also attacks the pathogen, but it did some other work. What kind of work did it do? Explain.

Answer