Introduction to Disease Resistance

To complete this worksheet, select:

Module: Disease Resistance
Activity: Animations
Title: Introduction to Disease Resistance

Introduction

1. Contrast the two types of defense mechanisms. Name examples of each.

   **Non-Specific Mechanisms** -
   
   ______________________________________________________________
   ______________________________________________________________
   ______________________________________________________________
   
   **Specific Mechanisms** -
   
   ______________________________________________________________
   ______________________________________________________________
   ______________________________________________________________

Role of Complement Proteins

2. Once an injury has happened, what is the role of phagocytic macrophage cells?

   ______________________________________________________________
   ______________________________________________________________
   
3. How does the body increase the exposure of antigens to immune cells?

   ______________________________________________________________
   ______________________________________________________________
   
4. a. Describe what happens after the antigen-antibody complex is formed.

   ______________________________________________________________
   ______________________________________________________________
   ______________________________________________________________

   b. What are the functions of the complement group?

   ______________________________________________________________
   ______________________________________________________________
Primary Response to Infection

5. Once pathogens have penetrated the non-specific barriers, they are confronted by macrophages and natural killer cells. How do these cells contribute to maintaining homeostasis?

6. What causes fever and inflammation?

7. Summarize primary response events. Emphasize what causes the proliferation of immune cells (antibodies).

Secondary Response to Infection

8. Define immunological memory.

9. a. What are memory B and T cells?

   b. What advantage do these memory cells offer in case of repeated infection by a specific pathogen?

   c. Explain the correlation between immunological memory and vaccinations for a specific disease.