Immune System



ABO Mast cell

Adaptive immunity Memory cell

Allergy Natural killer (NK) cells

Antibody Naturally acquired active immunity

Antibody-mediated (humoral) immunity

Naturally acquired passive immunity

Antigen Pathogen

Artery Phagocyte

Artificially acquired active immunity Plasma

Artificially acquired passive Red blood cell

B cell Rh

Blood Serum

Capillary T cell

Cell-mediated immunity $T_{\rm C}$

 $Complement T_H$

Dendritic cell T_{reg}

Inflammation Transplantation

Innate immunity Vaccine

Interferons, α , β , γ Vein

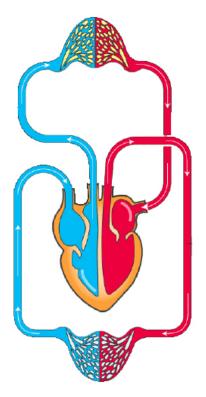
Lymph system White blood cell

Questions

- 1. Why is dietary protein deficiency associated with increased susceptibility to infections?
- 2. A positive tuberculin skin test shows cellular immunity to *Mycobacterium tuberculosis*. How could a person acquire this immunity?
- 3. On her vacation to Australia, Janet was bitten by a poisonous sea snake. She survived because the emergency department physician injected her with antivenin to neutralize the toxin. What is antivenin? How is it obtained?

Match the following choices to questions 4–7:

- a. innate resistance
- b. naturally acquired active immunity
- c. naturally acquired passive immunity
- d. artificially acquired active immunity
- e. artificially acquired passive immunity
- 4. The type of protection provided by the injection of tetanus toxoid.
- 5. The type of protection provided by the injection of antirabies serum.
- 6. The type of protection resulting from recovery from an infection.
- 7. A newborn's immunity to yellow fever.



Identify

Aorta
Capillaries
Pulmonary artery
Pulmonary circulation
Pulmonary vein
Systemic circulation
Vena cava

Place these terms in the concept map below:

Antimicrobial chemicals Monocyte

B cell Natural killer cell
Basophil Neutrophil

Cytotoxic T-cell Plasma
Dendritic cell Platelets

Eosinophil Red blood cells
Fibrinogen Regulatory T-cell

Helper T-cell Serun

Lymphocyte T cells (Helper, Cytotoxic, Regulatory)

Macrophage White blood cells

