

NONINFECTIOUS DISEASES

Noninfectious diseases are diseases not caused by pathogens in the body. Cardiovascular disease, allergies, diabetes, and cancer are examples of noninfectious diseases.

An **allergy** is a disorder in which the immune system is overly sensitive to a foreign substance. An allergy develops in response to various foreign substances that set off a series of reactions in the body. An **allergen** is any substance that causes an allergy. People may be allergic to pollen, dust, molds, some foods, or even some medicines.

Allergens may get into your body when you inhale, eat, or touch them. When lymphocytes encounter an allergen, they produce antibodies that signal body cells to release histamine. **Histamine** is a chemical that is responsible for the symptoms of allergies, such as sneezing and watery eyes. Antihistamine drugs interfere with the action of histamine. Some allergic reactions can create a condition called asthma. **Asthma** is a disorder in which the respiratory passages narrow, causing the person to wheeze and become short of breath.

Your pancreas produces **insulin**, a chemical that enables body cells to take in glucose from the blood and use it for energy. If you have **diabetes**, your pancreas fails to produce enough insulin or the body's cells fail to properly use insulin. As a result, a person with diabetes has high levels of glucose in their blood and may even excrete glucose in their urine. The person's body cells, however, do not have enough glucose. People with diabetes may lose weight, feel weak, and will always be hungry.

In **Type I diabetes**, the pancreas produces little or no insulin. Type I diabetes usually begins in children. People with Type I diabetes must get regular insulin injections. In **Type II diabetes**, the pancreas doesn't make enough insulin or body cells don't respond normally to insulin, and it usually begins in adults. People with Type II diabetes may be able to control their symptoms through proper diet, weight control, and exercise.

Cancer is a disease in which cells multiply, uncontrollably, destroying healthy tissue in the process. As cancerous cells divide over and over, they often form abnormal masses of tissue called **tumors**. A **carcinogen** is a substance or factor in the environment that can cause cancer. Surgery, drugs, and radiation are all used to treat cancer. People can reduce their risk of cancer by avoiding carcinogens, eating a healthy diet, and exercising regularly.

REVIEW QUESTIONS - NONINFECTIOUS DISEASES

1. What is an allergy?

2. Any substance that triggers an allergy is called a(n) _____.

3. Antibodies produced during an allergic response signal the body to release _____, a chemical that causes sneezing and watery eyes.

4. What is asthma?

5. The chemical that enables body cells to take in and use glucose is called _____.

6. Compare Type I diabetes and Type II diabetes by filling in the table below.

Questions	Type I Diabetes	Type II Diabetes
When does it usually begin?		
What is wrong?		
How can it be treated?		

7. What is cancer and what are tumors?

8. What are two causes of cancer?

a.
b.