What Is This Module About?

Breathing is very important and natural to man. Every breath means life. Do you know what system of the human body helps us breathe? What elements in air does man need to live? What diseases result from breathing harmful substances in the air?

In this module, you will learn about the respiratory system—the system of the body that enables us to breathe. You will learn about the different parts that compose it. You will also learn about the diseases that affect the normal function of this very important system of the body.

This module is divided into two lessons:

Lesson 1 – How We Breathe

Lesson 2 – Common Diseases of the Respiratory System

What Will You Learn From This Module?

After studying this module, you should be able to:

♦ identify the parts of the respiratory system;
♦ describe how the respiratory system works;
♦ identify the common diseases that affect the normal function of the respiratory system;
♦ give the symptoms and causes of respiratory diseases;
♦ tell how to treat common respiratory diseases; and
♦ discuss how to take care of the respiratory system.
Let’s See What You Already Know

Before you start studying this module, take the following test to see what you already know about the topics that will be discussed in it.

Read the following. Write the letter of the answer on the blank before each number.

1. What system of the body enables us to breathe?
   - a. circulatory system
   - b. digestive system
   - c. respiratory system
   - d. muscular system

2. What element in the air is needed primarily by the human body for it to live?
   - a. oxygen
   - b. dust
   - c. carbon dioxide
   - d. smoke

3. When you have a cold, the best thing to do is to __________.
   - a. drink lots of water and have plenty of rest
   - b. go to work, never mind the cold
   - c. take a cold bath
   - d. play in the open field

4. What are the symptoms of *tonsillitis*?
   - a. clogged nose, sneezing, runny nose and muscle pains
   - b. difficulty in breathing, painful swallowing, heavy colds and sore throat
   - c. wheezing, coughing, choking and shortness of breath
   - d. itchy or sore throat and painful chest muscles
5. Which of the following is NOT a proper way of taking care of the respiratory system?

a. Smoke as often as you can.
b. Always breathe fresh air.
c. Exercise regularly.
d. Eat healthy foods.

Well, how was it? Do you think you fared well? Compare your answers with those in the Answer Key on page 33 to find out.

If all your answers are correct, very good! This shows that you already know much about the topic. You may still study the module to review what you already know. Who knows? You might learn a few more new things as well.

If you got a low score, don’t feel bad. This means that this module is for you. It will help you understand important concepts that you can apply in your daily life. If you study this module carefully, you will learn the answers to all the items in the test and a lot more! Are you ready?

You may now go to the next page to begin Lesson 1.
How We Breathe

Breathing or respiration is the process of inhaling and exhaling air. Why is it important in maintaining life? Which system of the body makes breathing or respiration possible? What are its parts? What is the function of each part?

In this lesson, you will learn about the respiratory system and its parts. You will also learn how important this system is in maintaining life.

After studying this lesson, you should be able to:

♦ identify the parts of the respiratory system;
♦ give the function of each part of the respiratory system; and
♦ describe how the respiratory system works.
Breathing or respiration involves inhaling and exhaling air. Inhaling involves taking in air usually through the nose. Exhaling involves releasing air. To understand this better, let’s study the way you breathe. Do the following exercise.

Find a quiet place. Sit in a relaxed position, with your back straight and your eyes closed. Put your right hand on your chest. Take three long, slow, deep breaths. Inhale through your nose and exhale through your mouth. Exhale twice as slow as you inhale.
Did you notice the movements of certain parts of your body? Did you notice your chest rise and fall? Did you notice how air went into your nose? Did you notice how air left your body through your mouth?

The nose and mouth are some of the parts of the respiratory system. Your respiratory system is composed of organs that are involved in the exchange of gases between you and your environment.

Read on and learn more about the respiratory system.

**Let’s Learn**

Study the following comic strip and learn more about how the respiratory system works.

One day, Mia felt sick. She had a terrible headache and her eyes were watery. Her mom took her to the doctor.

Take this medicine. You have to rest for a while. Drink plenty of water and fruit juices, Mia. Breathe through your nose as much as you can, not through your mouth.

Why is it better to breathe through my nose, Doctor?
Mia was amazed at what the doctor said. She asked more questions about what happens when people breathe.

The air that you breathe through your nose is cleaner than the air you breathe through your mouth.

I don’t understand! Can you explain it to me more?

There is a set of tiny hair in our nose called cilia. They clean the air that enters our nose. The nose warms and moistens the air that passes through it, too.

What really happens when we breathe, Doctor? Which parts of the body are involved in breathing? Why do we need to breathe?

Well, all the parts that are involved in breathing compose the respiratory system. Breathing is important to maintain life. Let me give you a tour of the respiratory system.
We inhale air (oxygen) through our nostrils. Air reaches the lungs through the bronchial tubes. The exchange of gases occurs in the lungs. Oxygen is supplied to the blood through the blood vessels. Carbon dioxide is removed from it when we exhale.

The respiratory system consists of the nose, the trachea (windpipe) and a pair of lungs. The respiratory system has two main functions. First, it provides the body with oxygen. It is important that the body is supplied with oxygen. The body cells need oxygen, so that they can release energy from the food we eat. Second, it removes carbon dioxide from the body. The body must also get rid of carbon dioxide because this is waste product of the body.
Ah, Doctor, what is carbon dioxide?

Breathing is a two-way process. When you inhale, you take in air with oxygen into your lungs. This is called **inhalation**.

When you exhale, carbon dioxide is given off through your nose or mouth. This is **exhalation**.

Carbon dioxide is a waste material of the human body. It is produced when food combines with oxygen in the body’s cells.
How do I remove carbon dioxide from my body?

Carbon dioxide is carried by the blood to the lungs. Carbon dioxide in the blood passes through the lungs. When you exhale, carbon dioxide is given off through your nose or mouth.
Let’s Review

Fill in the blanks with the word/s that best complete each statement. Choose your answer from the list of words in the box.

| oxygen | inhale | cillum | exhale | carbon dioxide |

1. When we ____________, we take in air through our nostrils.
2. Carbon dioxide is removed from our body when we _____________.
3. The tiny hair that protects our nose from dust and dirt is called _____________.
4. The respiratory system provides the body with _____________.
5. The waste material produced when food combines with oxygen in the body’s cells is _____________.

Compare your answers with those in the Answer Key on page 34.
Let’s Remember

In this lesson, you learned that:

♦ The **respiratory system** consists of the nose, the trachea (windpipe) and a pair of lungs. It makes the exchange exchange of gases between a living thing and its environment possible.

♦ **Breathing** is a two-way process:
  – You **inhale** or take in air, ideally, through your nose.
  – You **exhalate** or release air through your mouth.
  – Breathing involves **inhalation** and **exhalation**

♦ Exchange of gases occurs in the lungs.
  – Through inhalation, **oxygen** is supplied to the blood through the blood vessels. It is needed to release energy from the food you eat.
  – Through exhalation, **carbon dioxide** is removed from the blood. It is a waste material of the body that is produced when food combines with oxygen.
Let’s See What You Have Learned

A. Match each statement in Column A with what it describes in Column B. Write the letter of the answer on the blank before the number.

_____ 1. It is the system of the body that sustains human life. It is responsible for the exchange of gases in the body.  
   a. carbon dioxide
   b. cilium

_____ 2. It is a two-way process that involves inhalation and exhalation. 
   c. respiratory system
   d. breathing

_____ 3. It is the element in the air that is needed by the body’s cells to release energy from food we have eaten. 
   e. oxygen

_____ 4. It is the waste produced when food combines with oxygen in the body’s cells.

_____ 5. It is the tiny hair that protects the nose from dirt and dust from the air.

B. Label the parts of the respiratory system in the illustration on the next page. Choose your answer from the list below.

<table>
<thead>
<tr>
<th>nose</th>
<th>lung</th>
<th>trachea</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

mouth bronchial tube
C. The following are the different processes that occur in the respiratory system. Arrange them in the proper order. Write 1 for the process that occurs first, 2 for the second one, and so on. Write your answer in the blank before the statement.

______ Air reaches the lungs through the bronchial tubes.
______ Carbon dioxide is exhaled through the mouth.
______ Air passes through the throat to the trachea or windpipe.
______ Air enters the nose and is cleaned by the cilia.
______ Exchange of gases occurs.

Compare your answers with those in the Answer Key on pages 34–35.

Well, how was it? Did you get all the right answers? If you did, very good! If not, you may read the lesson again and try to understand it better.
Common Diseases of the Respiratory System

Have you ever had a cough or a cold? How did you feel? Which parts of your respiratory system were severely affected? How were you treated?

In this lesson, you will learn about the common diseases that affect the respiratory system. You will learn about their symptoms and the ways they can be treated.

After studying this lesson, you should be able to:

♦ identify the common diseases that affect the respiratory system;
♦ give the symptoms and causes of respiratory diseases;
♦ tell how to treat common respiratory diseases; and
♦ discuss ways of taking care of the respiratory system.
Let’s Talk About This

You have learned about the respiratory system and its importance to the body. Now, let’s find out what common diseases affect the normal function of the respiratory system. Before we start, answer the following questions.

1. Have you had a cough or a cold? How did you feel?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

2. How were you treated?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

Continue reading and in the course of the discussion, you will learn more about coughs, colds and other respiratory diseases.
Coughs

_Coughing_ is the body’s way of removing mucus and dust from the lungs. _Mucus_ is a substance produced to protect and moisten the inner walls of the body.

Coughing occurs when the trachea or windpipe is irritated by something. Its symptoms are an itchy or sore throat and painful chest muscles. Mucus and phlegm may be coughed out.

Coughing is usually caused by an infection of the airway and the chest. Viruses or bacteria may cause such infection.

Inhaling steam is one way of easing coughs. You may take lozenges that are available in drugstores. Take warm drinks. Try a teaspoon each of honey and lemon dissolved in warm water to soothe your throat. Consult your doctor. He/She will give you a cough medicine that will suit you. Drink plenty of water and take a long rest.
Common Colds

The common cold is the most widespread infectious disease among humans. This means that this disease is the easiest to spread.

Colds are almost always caused by viruses. The viruses are spread through sneezing. You can catch a cold by using the personal things of a person who has a cold. Colds occur most frequently during rainy days.

The symptoms of colds are mild fever, clogged nose, sneezing, watery eyes, runny nose, cough, sore throat and muscle pains.

There is no proven treatment or antibiotic for colds. An antibiotic is a substance that can destroy or stop the growth of viruses and bacteria. It is used to prevent and treat infectious diseases like colds.

The best treatment for colds is to stay at home and have plenty of rest. Drink plenty of fluids like water and fruit juices. Make sure the people in your home are protected from the spread of the virus.

Tonsillitis

Tonsils are small lumps of flesh located on each side of the throat. They become infected when viruses are inhaled through the nose or mouth. This happens when we have colds. The tonsils become swollen. This condition is known as tonsillitis.

The symptoms of tonsillitis are difficulty in breathing, painful swallowing, a serious cold and a sore throat.
There are antibiotics that help prevent further swelling of the tonsils and making them worse.

_Tuberculosis (TB)_ is a contagious or infectious disease. It is a deadly disease when not properly and immediately treated. You can be infected with tuberculosis by breathing in bacteria called _tubercle bacilli_. These bacteria are spread through the cough of a person suffering from the disease. Other causes of tuberculosis are crowded living conditions, poor diet and unclean habits.

The symptoms of TB are cough, slight fever and chest pains. In severe cases, there is also chronic cough, blood in the sputum, difficulty in breathing and loss of appetite and weight.

Women with TB experience severe menstruation. Both men and women suffer from weight loss and heavy sweating during night time.

In treating tuberculosis, doctors usually prescribe antibiotics for six months. The patient also needs to eat healthy foods and have plenty of bed rest.
**Asthma**

*Asthma* blocks the airways and makes them swollen. Breathing then becomes difficult. It appears mostly in childhood. However, it can also appear for the first time in adults. Many children outgrow asthma as they get older.

The symptoms of asthma are wheezing or difficult breathing, coughing, choking and shortness of breath. In severe cases, the patient turns blue as if near death. This happens when the small tubes of the lungs are clogged.

Many things cause asthma. It can be caused by an allergic reaction to certain objects. These may be dust, smoke, animal hair and certain food or medicines. Asthma can also be caused by over-exercise (doing too much and too quickly), emotional upset, changes in weather and colds or flu.

When one has asthma, he or she is usually given antibiotics. However, it is advisable for him/her to consult a doctor. Materials or objects that cause asthma should be avoided.
Let's Try This

Identify the respiratory disease referred to in each statement. Choose your answer from the words in the box. Then, write it before each number.

<p>| | | | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>asthma</td>
<td>common cold</td>
<td>cough</td>
<td></td>
</tr>
<tr>
<td>tonsillitis</td>
<td>tuberculosis</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. It occurs when the trachea or windpipe is irritated by something. It is the body's way of removing mucus and dust from the lungs.
2. You can be infected with this disease by breathing in bacteria called tubercle bacilli.
3. The enlargement or swelling of the tonsils caused by viruses inhaled through the nose or mouth.
4. It is a condition in which the airways are swollen and blocked, so that breathing becomes difficult.
5. It is the most widespread disease among humans. It is almost always caused by viruses. It occurs often during rainy days.

Compare your answers with those in the Answer Key on page 36.
Let’s Learn

You have learned about the common diseases that affect the respiratory system. How do we avoid these diseases? Here are some tips to keep our respiratory system healthy.

*Eat healthy foods.* Eat the right kinds of food in the right amount and your body will be healthy and strong. It will help you fight disease.

*Exercise regularly.* Exercise will strengthen your lungs and your body as a whole. It helps oxygen flow in your body.

*Always breathe in fresh air.* This lessens the possibility of inhaling disease-causing germs. Clean air has oxygen that is needed by the body.
Get the proper amount of sleep. As a young adult, you need eight hours of sleep a day.

When you sleep, make sure that your room receives enough fresh air. This ensures that you will not lack fresh air to breathe.

Sit, walk and stand straight or erect. This will prevent crowding or squeezing your lungs.

Have a physical examination once a year or as often as necessary. The doctor will give you advice on how to keep your body strong and healthy.
Do not smoke. Smoking is one of the primary causes of respiratory problems. It clogs the lungs and causes the airway to swell. It severely weakens the respiratory system.

Avoid pollution. Black smoke and other poisonous gases are harmful to the respiratory system, especially the lungs.

What other health tips do you know? Write them in the space below.

________________________________________________________________________________________
_________________________________________________________________________________________
_________________________________________________________________________________________
_________________________________________________________________________________________

Show your answers to your Instructional Manager for comments.
Let’s Try This

The following pictures show proper ways of caring for the respiratory system. Identify the health tip shown in each picture. Write your answer in the space below the picture.

1. _____________________________________
2. _____________________________________
3. _____________________________________
4. _____________________________________

Compare your answers with those in the Answer Key on page 36.
Let’s Remember

In this lesson, you learned the following:

♦ There are common diseases that affect the respiratory system:
  – **Coughing** occurs when the trachea or windpipe is irritated by something.
  – The **common cold** is the most widespread infectious respiratory disease. It is almost always caused by viruses.
  – **Tonsillitis** involves swelling of the tonsils.
  – **Asthma** is a condition in which breathing becomes difficult because the airways are swollen and blocked.
  – **Tuberculosis** is a contagious or infectious disease caused by breathing in bacteria called *tubercle bacillus*.

♦ Practice proper health habits to prevent respiratory illnesses and diseases.
  – Always eat healthy foods.
  – Exercise regularly.
  – Get at least 8 hours of sleep every day.
  – Always breathe fresh air. Do not expose yourself to pollution. Do not smoke.
  – Have a regular physical check-up.
Let’s See What You Have Learned

A. Match the following diseases in Column B with their symptoms in Column A. Write the letter in the blank before the number.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>______ 1. wheezing or difficult breathing, coughing, choking and shortness of breath</td>
<td>a. tuberculosis</td>
</tr>
<tr>
<td>______ 2. in severe cases: slight fever, chest pains, chronic cough, blood in the sputum, difficulty in breathing and loss of appetite</td>
<td>b. tonsillitis</td>
</tr>
<tr>
<td>______ 3. difficulty in breathing, painful swallowing, a serious cold and a sore throat</td>
<td>c. cough</td>
</tr>
<tr>
<td>______ 4. itchy or sore throat and painful chest muscles</td>
<td>d. cold</td>
</tr>
<tr>
<td>______ 5. mild fever, clogged nose, sneezing, watery eyes, runny nose, cough, sore throat and muscle pains</td>
<td>e. asthma</td>
</tr>
</tbody>
</table>

B. Complete the table below. Give the causes and treatment of the following respiratory illnesses and diseases.

<table>
<thead>
<tr>
<th>Illness/Disease</th>
<th>Cause(s)</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Asthma</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. Cold

3. Cough

If you find it difficult to complete the table, go back to pages 16–24

C. Study the following statements. Put a check (✓) in the blank before the number of the statement that shows proper care of the respiratory system.

   ______ 1. Exercise regularly.
   ______ 2. Smoke as often as you can.
   ______ 3. Eat balanced meals.
   ______ 4. Get the proper amount of sleep.
   ______ 5. Expose yourself to pollution.

Compare your answers with those in the Answer Key on pages 37–38.

Well, how was it? Did you get all the right answers? If you did, very good! If not, you may read the lesson again and try to understand it better.
Let’s Sum Up

In this module, you learned that:

♦ The **respiratory system** is responsible for your breathing. It allows you to inhale and exhale air. This involves the exchange of gases between you and your environment.

♦ Exchange of gases occurs in your lungs:
  
  – **Oxygen** is supplied to your blood through your blood vessels when you inhale. It is needed to release energy from the food you eat.
  
  – **Carbon dioxide** is removed from the blood when you exhale. It is a waste material of the body that is produced when food combines with oxygen.

♦ The common diseases that affect the normal function of the respiratory system are **asthma, colds, cough, tonsillitis** and **tuberculosis**.

♦ To avoid respiratory diseases, practice good health habits.
What Have You Learned?

Choose the correct answer for each question below. Write its letter on the blank before the number of the statement.

_____ 1. What does the respiratory system do?
   a. digests food
   b. provides the body with oxygen
   c. removes wastes
   d. provides the body’s physical framework

_____ 2. It is a two-way process that involves taking in and releasing air.
   a. breathing
   b. inhalation
   c. exhalation
   d. smoking

_____ 3. What gas is released when you exhale?
   a. oxygen
   b. smoke
   c. dust
   d. carbon dioxide
4. Where does the exchange of gases take place?
   a. lungs  
   b. mouth  
   c. nose  
   d. trachea

5. What is the tiny hair that protects the nose from dirt and dust from the air?
   a. trachea  
   b. tonsil  
   c. cilium  
   d. bronchial tube

6. How does the body remove excess mucus and dust from the lungs?
   a. through inhaling  
   b. through coughing  
   c. through smoking  
   d. through exhaling

7. What are the symptoms of a cold?
   a. cough, slight fever and chest pains, blood in the sputum, difficulty in breathing and loss of appetite  
   b. difficulty in breathing, painful swallowing, a serious cold and a sore throat  
   c. wheezing or difficult breathing, coughing, choking and shortness of breath  
   d. mild fever, clogged nose, sneezing, watery eyes, runny nose, cough, sore throat and muscle pains
8. What is the condition in which breathing becomes difficult because the airways are swollen and blocked?
   a. asthma
   b. cough
   c. cold
   d. tuberculosis

9. What is the proper treatment for tonsillitis?
   a. inhaling steam
   b. taking antibiotics
   c. drinking water
   d. avoiding materials that cause allergy

10. Which of the following is NOT a proper way of caring for your respiratory system?
    a. Exercise regularly.
    b. Eat healthy foods
    c. Smoke often.
    d. Get the proper amount of sleep.

Well, how did you do? Compare your answers with those in the Answer Key on pages 38–39.

If the number of correct answers you got is:

10 Very good! You have learned a lot from this module.
8 – 9 Good! Just go back and review the items that you answered incorrectly.
0 – 7 You have to review the whole module again.

You may now proceed to the next module.
A. Let’s See What You Already Know *(pages 2–3)*

**1.** The respiratory system is the system of the body that enables us to breathe. The circulatory system (a) is responsible for the flow of blood through the body. The digestive system (b) is responsible for the breakdown of food and absorption of nutrients by the body. The muscular system (d) is responsible for the body’s movements.

**2.** Oxygen is the element in the air that is needed primarily by the human body for it to live. The body’s cells need oxygen so that they can release energy from the food we eat. Dust (b) and smoke (d) are harmful to the body. Carbon dioxide (c) is waste produced when food combines with oxygen in the cells.

**3.** When you have a cold, it is best to drink lots of water and have plenty of rest. If you still go to work, never mind the cold (b), take a cold bath (c) or play in the open field (d), you may get worse.

**4.** The symptoms of tonsillitis are difficulty in breathing, painful swallowing, heavy colds and sore throat. Clogged nose, sneezing, runny nose and muscle pains (a) are symptoms of the common cold. Wheezing, coughing, choking and shortness of breath (c) are symptoms of asthma. Itchy or sore throat and painful chest muscles (d) are symptoms of cough.

**5.** If you smoke as often as you can, you may develop a respiratory disease. Smoking is one of the leading causes of respiratory diseases. To properly take care of your respiratory system, you should always breathe fresh air (b), exercise regularly (c) and eat healthy foods (d).
B. Lesson 1

Let's Review (page 11)

1. When we **inhale**, we take in air through our nostrils.
2. Carbon dioxide is given off from our body when we **exhale**.
3. The tiny hair that protects our nose from dust and dirt is called **cilium**.
4. The respiratory system provides the body with **oxygen**.
5. The waste material produced when food combines with oxygen in the body’s cells is **carbon dioxide**.

Let's See What You Have Learned (pages 13–14)

A. _____ 1. The **respiratory system** is a system of the body that sustains human life. It is responsible for the exchange of gases in the body.

   _____ 2. **Breathing** is a two-way process that involves inhalation and exhalation.

   _____ 3. **Oxygen** is the element in the air that is needed by the body’s cells to release energy from food we eat.

   _____ 4. **Carbon dioxide** is the waste produced when food combines with oxygen in the body’s cells.

   _____ 5. **Cilium** is the tiny hair that protects the nose from dirt and dust from the air.
B.

C.  ____3____ Air reaches the lungs through the bronchial tubes.
    ____5____ Carbon dioxide is exhaled through the mouth.
    ____2____ Air passes through the throat to the trachea or windpipe.
    ____1____ Air enters the nose and is cleaned by the cilia.
    ____4____ Exchange of gases occurs.
C. Lesson 2

Let's Try This (page 21)

1. **cough**
   - It occurs when the trachea or windpipe is irritated by something. It is the body’s way of removing mucus and dust from the lungs.

2. **tuberculosis**
   - You can be infected with this disease by breathing in bacteria called *tubercle bacilli*.

3. **tonsillitis**
   - The enlargement or swelling of the tonsils caused by viruses inhaled through the nose or mouth.

4. **asthma**
   - It is a condition in which the airways are swollen and blocked, so that breathing becomes difficult.

5. **common cold**
   - It is the most widespread disease among humans. It is almost always caused by viruses. It occurs often during rainy days.

Let's Try This (page 25)

1. Don’t smoke.
2. Eat healthy foods.
3. Exercise regularly.
4. Get the proper amount of sleep.
Let’s See What You Have Learned (pages 27–28)

A.  _____  1.  Wheezing or difficult breathing, coughing, choking and shortness of breath are symptoms of **asthma**.

    _____  2.  Slight fever, chest pains, chronic cough, blood in the sputum, difficulty in breathing and loss of appetite are symptoms of **tuberculosis** in severe cases.

    _____  3.  Difficulty in breathing, painful swallowing, a serious cold and a sore throat are symptoms of **tonsillitis**.

    _____  4.  Itchy or sore throat and painful chest muscles are symptoms of **cough**.

    _____  5.  Mild fever, clogged nose, sneezing, watery eyes, runny nose, cough, sore throat and muscle pains are symptoms of a **cold**.

B.

<table>
<thead>
<tr>
<th>Illness/Disease</th>
<th>Cause(s)</th>
<th>Treatment</th>
</tr>
</thead>
</table>
| 1. Asthma       | – allergic reaction to certain objects  
|                 | – over-exercise  
|                 | – emotional upset  
|                 | – changes in the weather  
|                 | – colds or flu  | – take antibiotics (as prescribed by a doctor)  
|                 |                 | – avoid materials or objects that cause asthma  
|                 |                 | – consult a doctor  | |
| 2. Cold         | – viruses  
|                 | – spread through sneezing and using personal things of a person with a cold  | – stay at home and have a good rest  
<p>|                 |                 | – drink plenty of fluids, like water and fruit juices | |</p>
<table>
<thead>
<tr>
<th>Illness/Disease</th>
<th>Cause(s)</th>
<th>Treatment</th>
</tr>
</thead>
</table>
| 3. Cough       | an infection of the airway and chest caused by viruses or bacteria | – inhale steam  
– take lozenges  
– take warm drinks  
– have a good rest  
– consult a doctor |

C.  
1. Exercise regularly.  
2. Smoke as often as you can.  
3. Eat balanced meals.  
4. Get the proper amount of sleep.  
5. Expose yourself to pollution.

D. **What Have You Learned?** *(pages 30–32)*

1. The function of the respiratory system is **to provide the body with oxygen**. Digesting food (a) is the function of the digestive system. Removing wastes (c) is the function of the excretory system. Providing the body’s physical framework (d) is the function of the skeletal system.

2. **Breathing** is a two-way process that involves taking in and releasing air. Inhalation (b) and exhalation (c) are the two specific processes in breathing. Smoking (d) is not a process that is involved in respiration.
3. **Carbon dioxide** is the gas released during exhalation. Oxygen (a) is the gas taken in during inhalation. Smoke (b) and dust (c) are harmful substances that should not enter the respiratory system.

4. The exchange of gases takes place in the **lungs**.

5. **Cilium** is the tiny hair that protects the nose from dirt and dust from the air.

6. The body removes excess mucus and dust from the lungs **through coughing**.

7. The symptoms of a cold are **mild fever, clogged nose, sneezing, watery eyes, runny nose, cough, sore throat and muscle pains**. Cough, slight fever and chest pains, blood in the sputum, difficulty in breathing and loss of appetite (a) are symptoms of tuberculosis. Difficulty in breathing, painful swallowing, a serious cold and a sore throat (b) are symptoms of tonsillitis. Wheezing or difficult breathing, coughing, choking and shortness of breath (c) are symptoms of asthma.

8. **Asthma** is the condition in which breathing becomes difficult because the airways are swollen and blocked. A cough (a) occurs when the trachea is irritated by something. It is the body’s way of removing mucus and dust from the lungs. A cold (c) is the most widespread disease among humans. It is almost always caused by viruses and occurs often during rainy days. Tuberculosis (d) is caused by bacteria called **tubercle bacilli**.

9. The proper treatment for tonsillitis is **taking antibiotics** as prescribed by the doctor. An antibiotic is a substance that can destroy or stop the growth of viruses and bacteria. It can help prevent further swelling of the tonsils and making it worse.

10. **Smoking often** is not a way of properly taking care of your respiratory system. To maintain a healthy respiratory system, you should exercise regularly (a), eat healthy foods (b) and get the proper amount of sleep (d).
**Glossary**

**Antibiotic** A substance that can destroy or stop the growth of viruses and bacteria. It is used to prevent and treat infectious diseases, like colds.

**Asthma** A respiratory illness that causes the airways to become swollen and blocked, so that breathing becomes difficult.

**Bronchial tube** Either of the two main branches of the trachea or windpipe that opens into the lungs.

**Carbon dioxide** The waste produced when food combines with oxygen in the body’s cells.

**Cilium** The tiny hair that protects the nose from dirt and dust from the air. Its plural form is cilia.

**Cold** A condition caused by a virus, which is characterized by swelling of the walls of the upper parts of the respiratory system.

**Cough** The body’s way of removing mucus and dust from the lungs. It occurs when the trachea or windpipe is irritated by something.

**Oxygen** The element in air that is needed by the body’s cells to release energy from food that is eaten.

**Tonsils** A small mass of tissue located on the walls at the back of the mouth.

**Tonsillitis** The enlargement or swelling of the tonsils caused by viruses inhaled through the nose or mouth.

**Trachea** A thin-walled tube that starts from the throat and carries air into the lungs; windpipe.

**Tuberculosis** A contagious disease that is caused by breathing in bacteria called *tubercle bacillus*.
References


