

HEALTH EDUCATION III

MODULE 6

Health Skills Never Spill!



What this module is all about

Non-communicable diseases are non-infectious, non transferable nor can easily be transmitted. These diseases may be caused by the lifestyle of the individual including improper nutrition and stress management. Heredity is also a factor in the development of these diseases. Some environmental factors like chemical and change of season also contribute to the onset of these diseases.

Non-communicable diseases should not be taken for granted because they may disable individuals from being useful citizens. They can be life threatening or worst may lead to death. Nevertheless, non-communicable diseases are not hopeless cases. They can be prevented and treated if diagnosed early.

This module will help you understand the causes, prevention and treatment of common non-communicable diseases. The usefulness of herbal plants as alternative medicine and the regulatory laws for the maintenance of community health are also discussed in the module.



What you are expected to learn from this module

At the end of the module, you shall have:

1. analyzed the causes, prevention and treatment of some non-communicable diseases.
2. identified the use of alternative medicine particularly the herbal plants in treatment of common diseases.
3. identified the significance of regulatory laws and health services in the maintenance of community health.



How to learn from this module

This module is specially designed to help you learn the lessons on non-communicable diseases, the use of alternative medicine, and the regulatory laws and ordinances enacted to protect community health. To guide you on how to learn from this module, read and understand very well the following instructions:

1. Prepare and set your mind on this module before you begin.
2. Observe honesty in doing all the activities from pre-test to the post-test.
3. Try to give your best in doing the activities.
4. Do not allow anybody to do the activities for you. However you may ask assistance from your teacher for clarification of certain issues/problems.
5. Do not turn the page if unfinished, or never leave an unaccomplished page.
6. Have a special notebook for your notes and answers.
7. Have fun in doing the activities
8. Take good care of this module.

Let's try to find out what you already know about the lesson. Do not be afraid to take the pre-test. It is just a pre-assessment of what you already know. Turn the page and answer the pre-test confidently!

PRETEST

Choose the best answer. Write the letters only.

1. What is the condition in which fatty deposits accumulated in and render the lining of the artery walls?
a. Atheromas b. Plaques c. Arteriosclerosis d. Atherosclerosis
2. What instrument is used to measure blood pressure?
a. Thermometer b. Sphygmomanometer c. Barometer d. Anemometer
3. Which of the following is uncontrollable risk factor?
a. Smoking b. Obesity c. Heredity d. Lifestyle
4. Which one is not a warning sign of cancer?
a. Sore that does not heal c. wheezing
b. unusual bleeding or discharge d. obvious change in waist or mole
5. What disease is characterized by increased thirst and frequent urination?
a. Asthma b. Diabetes c. Heart Diseases d. Cancer
6. Which of the following can promote cancer?
a. too much exposure to sun c. non smoking
b. no alcohol intake d. watching diet high in fats or nitrate-cured

7. What is the most common procedure of preparing herbal medicine?
a. decoction b. frying c. steaming d. broiling
8. Which of the following is not a treatment for cancer?
a. Chemo therapy c. radiation therapy
b. immuno therapy d. chelation therapy
9. What medicinal plant is used for mild hypertension?
a. ampalaya leaves c. garlic cloves
b. guava leaves d. oregano
10. Which agency gives free health services in every barangay?
a. Department Health c. Philippine National Red Cross
b. Health Centers d. Department of Social Welfare and Development

You may look at the key to corrections.

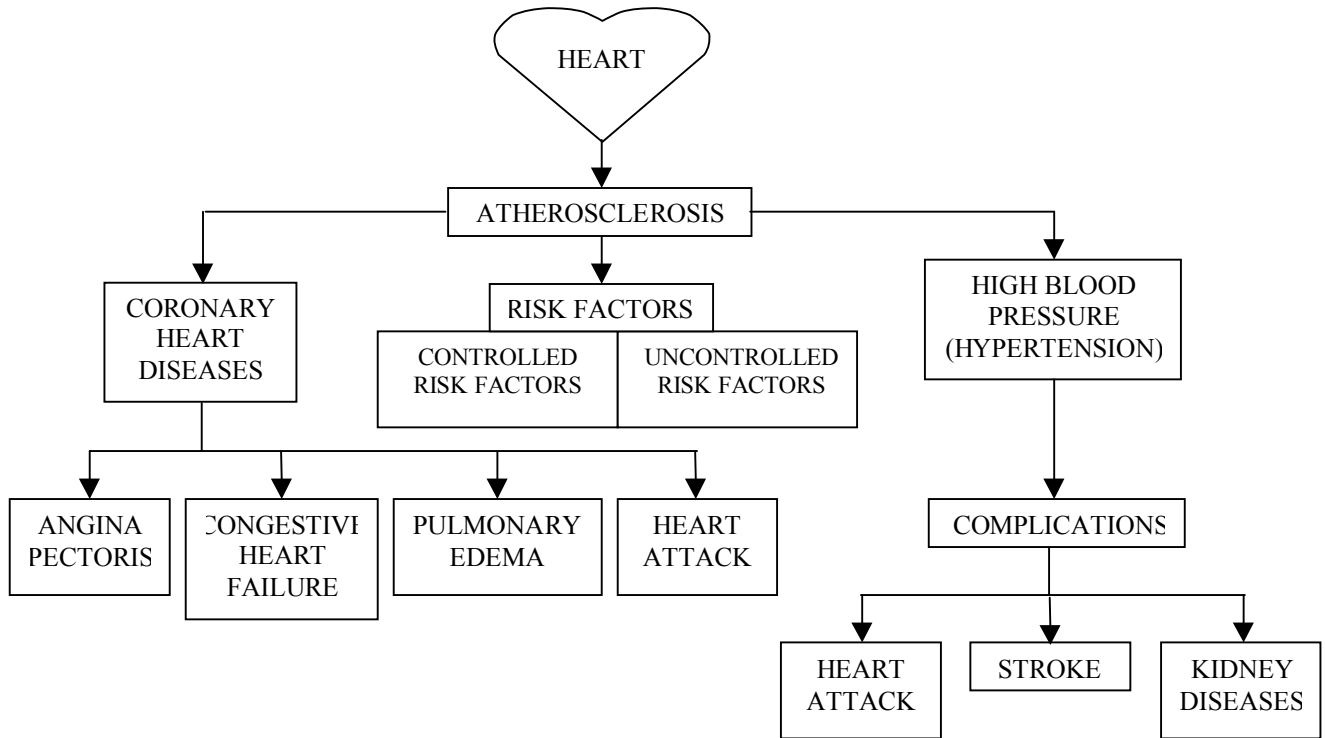
Lesson 1

Diseases of the Heart and Blood Vessels

Are you aware that the heart weighs only about a pound but manages to pump about 2000 gallons of blood a day through the circulatory system? The blood provides the tissue cells with the oxygen and nutrients they need. If circulation of the blood is interrupted for more than a few minutes, sudden death may occur.

The heart works constantly every minute of our life. Because of this there is a wide range of potential problems and disorders. The most common are coronary heart diseases and hypertension.

Analyze the diagram carefully. After analyzing the diagram, study the discussion. Take note of the terms you will encounter and understand their meaning.



ATHEROSCLEROSIS- the condition in which fatty deposits accumulate in and under the lining of the artery wall.

ATHEROMAS or PLAQUES- larger accumulation of fat and calcium deposits.

ARTERIOSCLEROSIS- hardening of the arteries.



narrowing of the arterial lining results to lack of oxygen supplies through the blood in the different organ of the body.

A **Risk Factor** is a behavior or condition that places you at greater risk of having a disease than if you were not exposed.

Controlled Risk Factors-factors which you can do something about

- Smoking
- Diabetes
- Obesity
- High blood pressure
- Cholesterol and dietary fats

Uncontrolled Risk Factors-factors which you cannot change

- Age
- Gender
- Heredity

HIGH BLOOD PRESSURE (HYPERTENSION)

The blood is travelling through the arteries at a pressure that is too high for good health; have no symptoms; has been termed "SILENT KILLER".

SPHYGMOMANOMETER

(cuff)
-used to measure the blood pressure is 120/80 mm Hg.

High blood pressure accelerates the process of atherosclerosis depriving the heart muscle from oxygen.



CAUSE

The primary characteristics of high blood pressure is an increase in resistance to blood flow when the diameter of the arterioles becomes smaller, your heart has to work harder and the pressure increases.

COMPLICATIONS

High blood pressure can lead to damage in the various parts in the body.

HEART ATTACK

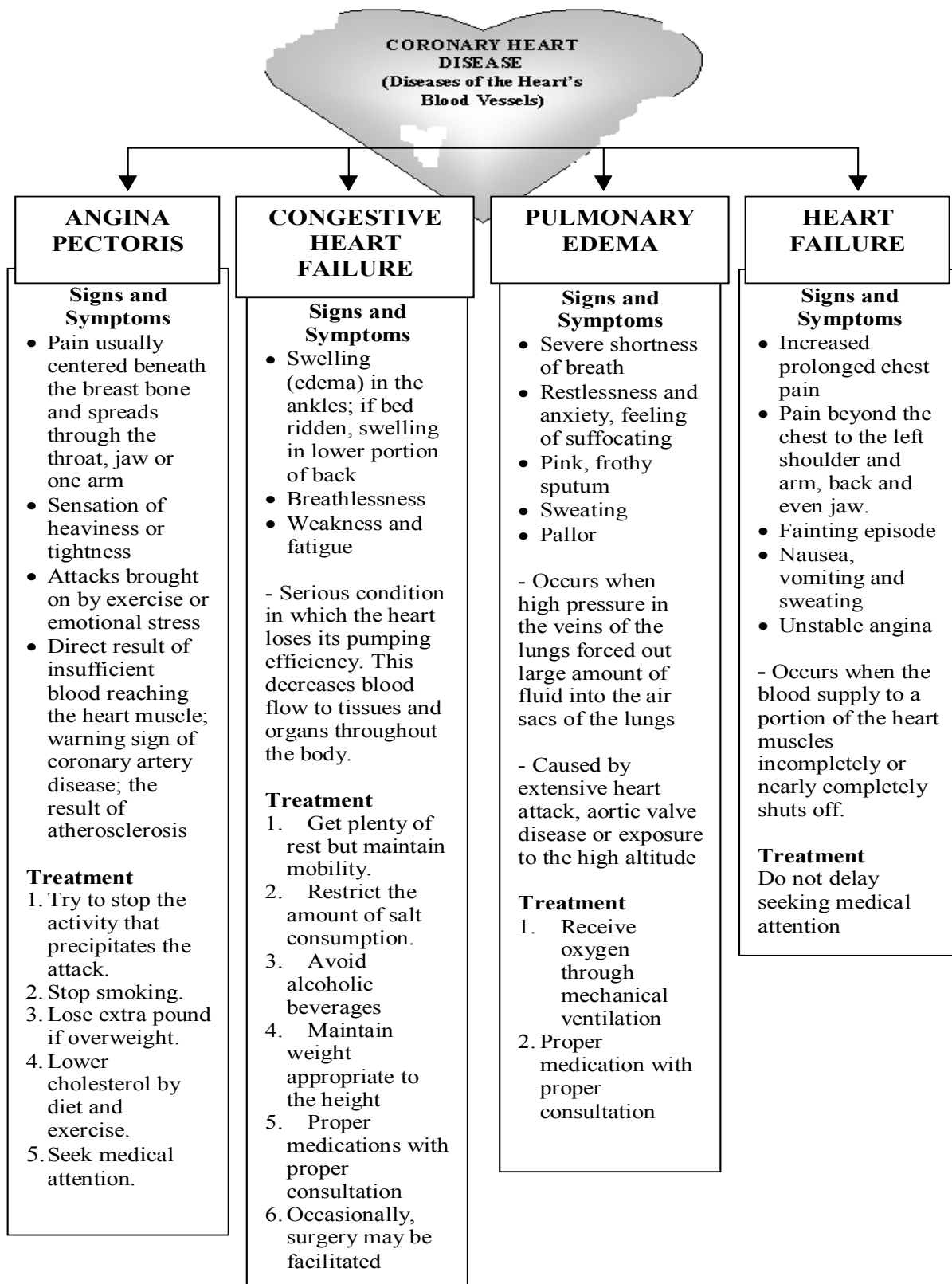
High blood pressure accelerates the process of atherosclerosis depriving the heart muscles of oxygen.

STROKE

Stroke happens when a blood vessel in the brain ruptures (cerebral hemorrhages) or a clot or fragment of atherosclerotic plaques blocks blood flow to parts of the brain (cerebral thrombosis).

KIDNEY DISEASES

Increase in blood pressure can lead to gradual failure of the kidney to remove impurities in the blood.



Now, are you ready to find out how much you understand the lesson? Do the next activities and find out yourself.

Activity 1 "Hidden Letter"

Fill-up the blanks with correct letters to identify the word/s described below. The boxes will form the word/s related to the lesson.

- 1. _ _ □ _ _ _ _ _ _ _ _
- 2. _ _ _ _ _ _ _ _ _ _ □
- 3. _ _ _ _ _ □ _ _ _ _
- 4. _ _ _ _ _ _ _ _ □ _ _ _
- 5. _ _ □ _ _ _ _ _ _ _
- 6. □ _ _ _ _ _ _ _ _
- 7. _ _ _ _ _ _ □ _ _
- 8. _ _ _ _ _ □ _ _ _ _
- 9. _ _ _ _ □ _ _ _ _
- 10. _ □ _ _ _ _ _ _
- 11. □ _ _ _ _ _ _
- 12. _ □ _ _ _ _ _ _ _

- 1. The condition in which fatty deposits accumulate in the lining of the arterial wall.
- 2. A clot or fragment of atherosclerotic plaques blocks blood flow to part of the brain.
- 3. Used to measure blood pressure.
- 4. Happens when a blood vessel in the brain ruptures
- 5. Blood vessel
- 6. Factors which you can do something about
- 7. A behavior or condition that places you at greater risk of having a disease than if you were not exposed
- 8. Hardening of the artery
- 9. The silent killer
- 10. Larger accumulation of fat deposits
- 11. Another term for atheromas
- 12. Factors which you cannot change

Activity 2 "Salamat Dok"

Dr. Javier is in front of a panel of students who want to be informed about heart diseases. He is a heart specialist. If you were Dr. Javier, how would you answer the following questions. Write your answers in your notebook.



1. What is atherosclerosis? Is it dangerous? Why?
2. What is meant by risk factors? Can they be controlled? If not, why?
3. Why does blood pressure rise? Can high blood pressure lead to complications?
4. How do you know if you are suffering from the following diseases of blood vessels:
 - a. Angina pectoris
 - b. Congestive heart failure
 - c. Pulmonary edema
 - d. Heart attack

Lesson 2

ASTHMA, DIABETES, CANCER

In lesson one, you have learned the common examples of diseases of the heart. It is equally important to understand asthma, diabetes and cancer because although they are not contagious, they may be life-threatening too. Early diagnosis and proper attitude are two essential factors in treating these diseases. These factors can help save life. If you know the signs and symptoms of these diseases, you can help save life too!

ASTHMA

The cause of asthma is often unknown. It is usually an inherited condition. Asthma is the leading cause of a chronic illness. It is also a common cause of absenteeism among school children who suffer from this condition.

Asthma can be aggravated by the following:

- respiratory infections
- exercise
- cold air/excessive heat
- stress
- exposure to pollen, mold spores, animal dander or house-dust mites

Signs and Symptoms

1. wheezing
2. difficulty in breathing
3. painless tightness in the chest
4. coughing

Emergency Symptoms

1. extreme difficulty in breathing
2. bluish lips and nails
3. severe breathlessness
4. increased pulse rate
5. sweating
6. severe coughing

Treatment

1. Re examine activity levels and lifestyle
2. Modify strenuous activity
3. Be alert to symptoms
4. Try to avoid indoor and outdoor allergies and irritants.
5. Cooperate with your physician
6. Use proper medications to control asthma

DIABETES

When the body cells are unable to use the glucose in the blood stream because of lack of insulin activity (absence of enough hormone or resistance to the hormone), diabetes is developed.

Signs and Symptoms

- increased thirst
- increased urination
- weight loss
- fatigue, nausea, vomiting
- vaginitis, skin infections, blurred vision, frequent bladder infections

Treatment

- appropriate diet and weight control plan
- a sensible approach to physical activity
- use proper medication, approach physician for proper consultation

CANCER

Cancer is caused by the uncontrolled growth and spread of abnormal cells. There are more than one hundred different types of cancer. People believed that cancer is an incurable disease but statistics showed that it can be treated when it is diagnosed early.

Seven Warning Signs

1. Change in bowel or bladder habits
2. Sore that does not heal
3. Unusual bleeding or discharge
4. Thickening or lump in a breast or elsewhere in the body
5. Indigestion or swallowing difficulty
6. Obvious change in a wart or mole
7. Nagging cough or hoarseness

Prevention

1. stop smoking
2. limit exposure to sun
3. limit alcohol intake
4. weigh carefully the benefits and risks of estrogen replacement therapy
5. avoid exposure to x-ray radiation
6. avoid exposure to nickel, chromate, asbestos, vinyl chloride and other industrial agents
7. watch diets high in fats or salt-cured, smoked or nitrate-cured

Treatment

- Surgery
- Radiation Therapy
- Chemo Therapy
- Immuno Therapy

Activity 1 “Wazz-Up!”

Find out five words related to common non-communicable diseases and tell something about each word. Write your answers in your notebook. You can find them horizontally, vertically, upward and downward.

A	L	L	E	R	G	E	N	S	Y
S	R	O	M	A	L	I	V	I	R
T	H	Q	S	T	U	X	H	O	E
H	OP	C	A	N	C	E	R	B	G
M	D	W	X	R	O	F	M	Y	R
A	A	M	A	C	S	L	A	N	U
Z	D	I	A	B	E	T	E	S	S

Activity 2 “Doctor’s Corner”

Play the role of a doctor. How would you answer the questions regarding the patient’s condition below? Write your answers in your notebook.

- a. Mrs. Chavit’s son, after strenuous activity, experienced difficulty in breathing accompanied by coughing with wheezing sound. He also felt tightness in the chest.
 1. What could have happened to Mrs. Chavit’s son?
 2. What triggered his condition?
 3. How can he be treated?
- b. Mrs. Tizon is remarkably losing weight. She experiences increased thirst and urination. She feels very tired. Occasionally she suffers from nausea and vomiting
 1. What can be her condition?
 2. What treatment would you advise her?
- c. Mrs. Crisol is in middle age, almost in menopausal stage. She considered estrogen replacement therapy. After months of therapy, she had unusual bleeding or discharge.
 1. What could possibly happened to her?
 2. What are the warning signs of other cases similar to her?
 3. Can she still be treated? How?
 4. Can her disease be prevented? How?

Lesson 3

MEDICINA



ire

Are you aware that there are a lot of drugs, basic diseases? Careful studies and researches lead to the development of commercially approved and used by consumers.

The Philippines is rich in medicinal plants. These plants can be found in the backyard or home garden! Medicinal plants can be good alternatives for costly drugs. However, it is important to be careful in the preparation of these medicinal plants for safety and more effective results.

Let’s identify some medicinal plants commonly found in our community and discover the healing power of these herbal plants.

- Lagundi – for cough, asthma, fever and skin infections
- Oregano – for cough
- Sambong – for fever, asthma, edema, and to treat kidney stones
- Guava – for asthma, diabetes, diarrhea and for wounds
- Ampalaya – for hemorrhoid, diabetes and wounds
- Sabila or Aloe Vera – to grow hair, treating burns, skin ulcer and wounds
- Garlic Cloves – for mild hypertension

How do we prepare these herbal plants?

Most common procedure in preparing these herbal plants is through “decoction”. It is the process of extracting the healing elements of plant parts through boiling. The extracted juice can be drunk hot or cold.

Another procedure is by chopping the plants and applying it to the affected area commonly referred to as poultice.

Activity 1 “MIX AND MATCH”

Arrange the letters in column A to form the word and match with its use in column B.

A	B
1. AUVAG	a. cough
2. APLAYAMA	b. fever
3. GLANDIU	c. to grow hair
4. GRACIL SLECOV	d. diarrhea
5. GROANEO	e. diabetes
	f. mild hypertension

Activity 2 “EUREKA”

Write big and important ideas/concepts you have learned from the lesson on medicinal plants

Lesson 4

Regulatory Laws for Community Health and Health Services from Professional Agencies

The government established regulatory laws to protect peoples’ health. Proper implementation of these laws and ordinances and the cooperation of the people in the community will surely result to better quality life, the ultimate goal of health.

Are you aware of the existing ordinances promulgated and being implemented in your community? Let’s study them!

Existing Ordinances/Laws

1. Republic Act No. 9003, otherwise known as the Ecological Solid Waste Management Act of 2000. Some of the prohibitions of the act are the following:
 - Littering, throwing or dumping in public places such as roads, canals, esteros, or parks and establishments;
 - Open burning of solid waste;
 - Causing or permitting the collection of non-segregated or unsorted waste;
 - Squatting in open dumps and landfills;
 - Open dumping, burying of biodegradable and non-biodegradable in flood-prone areas;
 - Unauthorized removal of recyclable materials intended for collection by authorized persons.

2. Republic Act No. 9275, otherwise known as *The Philippine Clean Water Act* enacted on March 22, 2004. Some of the prohibited acts under R.A.9275 are the following:
 - Discharging or depositing any water pollutant to the water body or such which will impede natural flow in the water body;
 - Discharging, injecting or allowing to enter into the soil anything that would pollute groundwater;
 - Disposal of potentially infectious medical waste into sea by vessels;
 - Unauthorized transport or dumping into waters of sewage or solid waste;
 - Transport, dumping or discharge of prohibited chemicals, substances or pollutants listed under *Toxic Chemicals, Hazardous and Nuclear Waste Control Act* (R.A. No. 6969)

3. Republic Act No. 8749, otherwise known as *The Philippine Clean Air Act of 1999*. Its prohibitions include the following:
 - Plying on the road of smoke belching vehicles;
 - Use of leaded gasoline;
 - Smoking inside a public building; enclosed public places including public vehicle and other means of transportation; in any closed area outside of one's private residence, private place or work; or any duly enclosed designated.

It is also worth knowing that there are professional agencies, which extend professional health services to the community. These professional agencies and health services are as follows:

- Department of Health – its primary concern is to promote and protect peoples' health
- Health Center – gives free health services in every barangay
- Philippine Mental Health Association – helps promote mental health
- Philippine Tuberculosis Society – helps patients with tuberculosis
- Philippine Cancer Society – helps patients with cancer
- Department of Environment and Natural Resources – protects, sustains, enhances the environment and manages the wise use of our natural resources

Medical Professionals

- Pediatrician – specialized in treating diseases of the children
- Geriatrician – specialized in treating diseases of the elderly
- Obstetrician – specialist for pregnant women
- Ophthalmologist – specialized in medical and surgical care of the eyes
- Neurologist – specialist for brain diseases
- Oncologist – specialized in the treatment of cancers and malignancies
- Cardiologist – specialist for heart diseases

Activity 1 “CALL A FRIEND”

Match the agencies in column A with their services in column B. Write your answers in your notebook.

Column A

1. Department of Health
2. Health Centers
3. Philippine Mental Health Association
4. Philippine Cancer Society
5. Philippine Tuberculosis Society

Column B

- a. helps patients with cancer
- b. helps promote mental health
- c. helps patients with tuberculosis
- d. promote and protect peoples health
- e. gives free health services in every barangay
- f. helps promote dental care

Activity 2 “WHO AM I?”

Identify the medical professionals described in the statement. Choose from the list below. Write your answers in your notebook.

1. I am a specialist in heart diseases
2. My specialization is in medical and surgical care of the eyes
3. I am a specialist for pregnant women
4. I specialized in treating childrens diseases
5. Treating diseases of elderly is my specialization



Pediatrician	Geriatrician
Obstetrician	Ophthalmologist
Neurologist	Cardiologist

Activity 3 “The Law Breakers”

Read the following situations. Can you identify the ordinances violated? Write your answers in your notebook.

1. Mr. De Vera’s mega taxi emitted dark and heavy smoke from its exhaust pipe.
2. Richard strolled in the park together with his girlfriend with cup of popcorn and softdrinks. They left their garbage on the ground.
3. Mr. Asuncion smokes cigarette while riding in a passenger jeep.
4. Don urinated in a public place in Marikina
5. Mang Damian threw his garbage in nearby river bank.

List down 5 other situations showing violations of health ordinances committed by some people in your community

Lets summarize :

- Non-communicable diseases are non transferable, non contagious but equally life threatening diseases
- The blood provides the tissue cells with the oxygen and nutrients they need
- If circulation of the blood is interrupted it may result to sudden death
- The most common problems of the heart are coronary heart disease and hypertension
- Risk factor is a condition that places a person at greater risk of having a disease
- Controlled risk factors are factors which you can do something about
- Uncontrolled risk factors are those which you can not change
- Asthma is inherited
- Diabetes is the result of lack of insulin activity
- Cancer is caused by the uncontrolled growth and spread of abnormal cells
- Medicinal plants can be a good alternative for costly drugs
- Most common procedure in preparing herbal plants is through decoction
- There are regulatory laws for community health
- People can enjoy health services from professional agencies

POST TEST

Choose the best answer. Write the letters only.

1. It is an uncontrolled risk factor
 - a. Obesity
 - b. Heredity
 - c. smoking
 - d. lifestyle
2. The condition in which fatty deposits accumulate in and under the lining of the artery walls
 - a. atherosclerosis
 - b. plaques
 - c. atheromas
 - d. arteriosclerosis
3. An instrument used to measure blood pressure
 - a. anemometer
 - b. barometer
 - c. thermometer
 - d. sphygmomanometer
4. Activity which can promote cancer
 - a. non-smoking
 - b. no alcohol intake
 - c. too much exposure to sun
 - d. watching nitrate-cured diet

5. All are warning signs of cancer, except one
 - a. sore that does not heal
 - b. wheezing
 - c. unusual bleeding or discharge
 - d. obvious change in wart or mole

6. A disease characterized by increased thirst and frequent urination
 - a. asthma
 - b. diabetes
 - c. heart-diseases
 - d. cancer

7. All are treatment for cancer except one
 - a. chemo therapy
 - b. immuno therapy
 - c. radiation therapy
 - d. chelation therapy

8. Agency which gives free health services in every barangay
 - a. Department of Health
 - b. Health Center
 - c. Philippine National Red Cross
 - d. Department of Social Welfare and Development

9. Medicinal plant for mild hypertension
 - a. ampalaya leaves
 - b. guava leaves
 - c. garlic cloves
 - d. oregano

10. Most common procedure of preparing herbal medicine
 - a. decoction
 - b. frying
 - c. steaming
 - d. broiling

Key to Corrections

PRE-TEST

1. D
2. B
3. C
4. C
5. B
6. A
7. A
8. D
9. C
10. B

Lesson I Disease of the Heart and Blood Vessels

Activity I Hidden Ladder

1. ATHEROSCLEROSIS
2. CEREBRAL THROMBOSIS
3. SPHYGMOMANOMETER
4. CEREBRAL HEMMORHAGE
5. CORONARY ARTERY
6. CONTROLLED
7. RISK FACTOR
8. ARTERIOSCLEROSIS
9. HYPERTENSION
10. ATHEROMAS
11. PLAQUES
12. UNCONTROLLED

Activity 2 Salamat Doctor

1. Atherosclerosis is the condition in which fatty deposits accumulated in and under the lining of the artery wall. Yes, narrowing of the arterial lining results to lack of oxygen supplies through the blood in the different organs of of the body.
2. A risk factor is a condition that places you at greater risk having a disease if you were not exposed. They can be controlled. They cannot be controld because of the factors which cannot be changed like age, gender, and heredity.
3. High blood pressure arises because of stress, high cholesterol level, diseases/infection, etc. Yes.
4. Signs and symptoms
 - a. Angina pectoris - pain beneath the breast bone and spreads through the throat, jaw; sensation of heaviness or tightness
 - b. Congestive heart failure - swelling in the ankles, breathlessness, weakness, and fatigue
 - c. Pulmonary endema - severe shortness of breath, restlessness, and anxiety
 - d. Heart attack - prolonged chest pain, fainting episode, nausea, vomiting and sweating

Lesson 2 Asthma, Diabetes, Cancer

Activity 1 “Wazz -Up”

ALLERGENS

GLUCOSE

CANCER

DIABETES

SURGERY

ASTHMA

Activity 2 Doctor’s Corner

- a. 1. He may be suffering from asthma
 2. exercise
 3. - consult the physician and cooperate with him
 - use proper medications prescribed by the physician to control asthma
 - engage in moderate activity
 - avoid indoor and outdoor allergens and irritants
- b. 1. She may be suffering from diabetes
 2. Advise her to eat appropriate diet, control her weight, exercise moderately, use proper medication prescribed by the physician, always consult the physician.
- c. 1. Mrs. Crisol may be suffering from cancer.
 2. The other warning signs of other cases similar to the condition of Mrs. Crisol are: change in bowel movement, sore that doesn’t heal, lump in the breast or elsewhere in the body, difficulty in swallowing, indigestion, obvious change in a wart or mole, nagging cough or hoarseness of voice.
 3. Yes. She should consult an oncologist, cancer specialist for proper diagnosis and treatment.
 4. Yes, By consulting the physician at once when she experienced the unusual bleeding/discharged. Cancer can be prevented when detected and treated at the early stage.

Lesson 3 Medicinal Plants

Activity 1 “Mix and Match”

1. guava
2. ampalaya
3. lagundi
4. garlic cloves
5. oregano

Activity 2 “Eureka”

Medicinal plants can be good alternatives for costly drugs.

Lesson 4 Regulatory Laws for Community Health and Health Services from Professional Agencies

Activity 1 “Call A Friend”

1. D
2. E
3. B
4. A
5. C

Activity 2 “Who Am I?”

1. cardiologist
2. ophthalmologist
3. obstetrician
4. pediatrician
5. geriatrician

Activity 3 “The Law Breaker”

1. Phil. Clean Air Act of 1999 - Anti-Smoke Belching Vehicle
2. Ecological Solid Waste Management Act of 2000 - Anti Littering
3. The Philippine Clean Air Act of 1999 - Anti-smoking while in public vehicles
4. Republic Act No. 9275 or The Philippine Clean Water Act of 2004
5. Republic Act No. 9275

POST TEST

1. B
2. A
3. D
4. C
5. B
6. B
7. D
8. B
9. C
10. A