



# **Wellness Guidelines**

*(An Approach to Healthful Life)*

by

**Prof. Dr. Hani Rateb**

**Prof. Dr. Salma F. Dowara**



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## **PART I**

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University*

**December 2003**



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## **PART II**

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**December 2003**

# **Course Contents**

- 1. Self responsibility for wellness**
- 2. Understanding the human body**
- 3. Promoting mental health**
- 4. Family and social health**
- 5. Growth and development**
- 6. Nutrition**
- 7. Exercise and fitness**
- 8. Diseases and disorders**
- 9. Safety and first aid**
- 10. Community and environmental health**

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# 1.1 Introduction

Ability to cope with disease is determined

- 53% *by his lifestyle*
- 21% *by environment*
- 10% *by physician*
- 84% *under control of individual & society*
- Only 16% *not controlled, or hereditary*
- Genetic engineering can reduce the 16 %

## **1.1 Introduction (continued)**

- **Knowledge for optimum health is an individual responsibility.**
- **Health is a quality of life: physical, mental, and social well-being.**
- **Wellness is a holistic concept: all areas of life interact through positive and/or negative feedback loops.**



# 1.1 Introduction (continued)

- **Healthful behavior:** action that
  - 1) helps prevent illness or accident
  - 2) promotes health
  - 3) improves the quality of the environment.
- *Risky behavior: the opposite of healthful behavior.*
- **Health promotion:** informing and motivating people to adopt/maintain healthful behaviors.

# 1.2 What is health?

Health is not just the absence of disease.

It is part of a wider concept of wellness.

It emphasizes being well

- physically (condition of the body)
- mentally (condition of the mind)
- socially (relation to others)

*It is the interrelatedness of all aspects of life.*

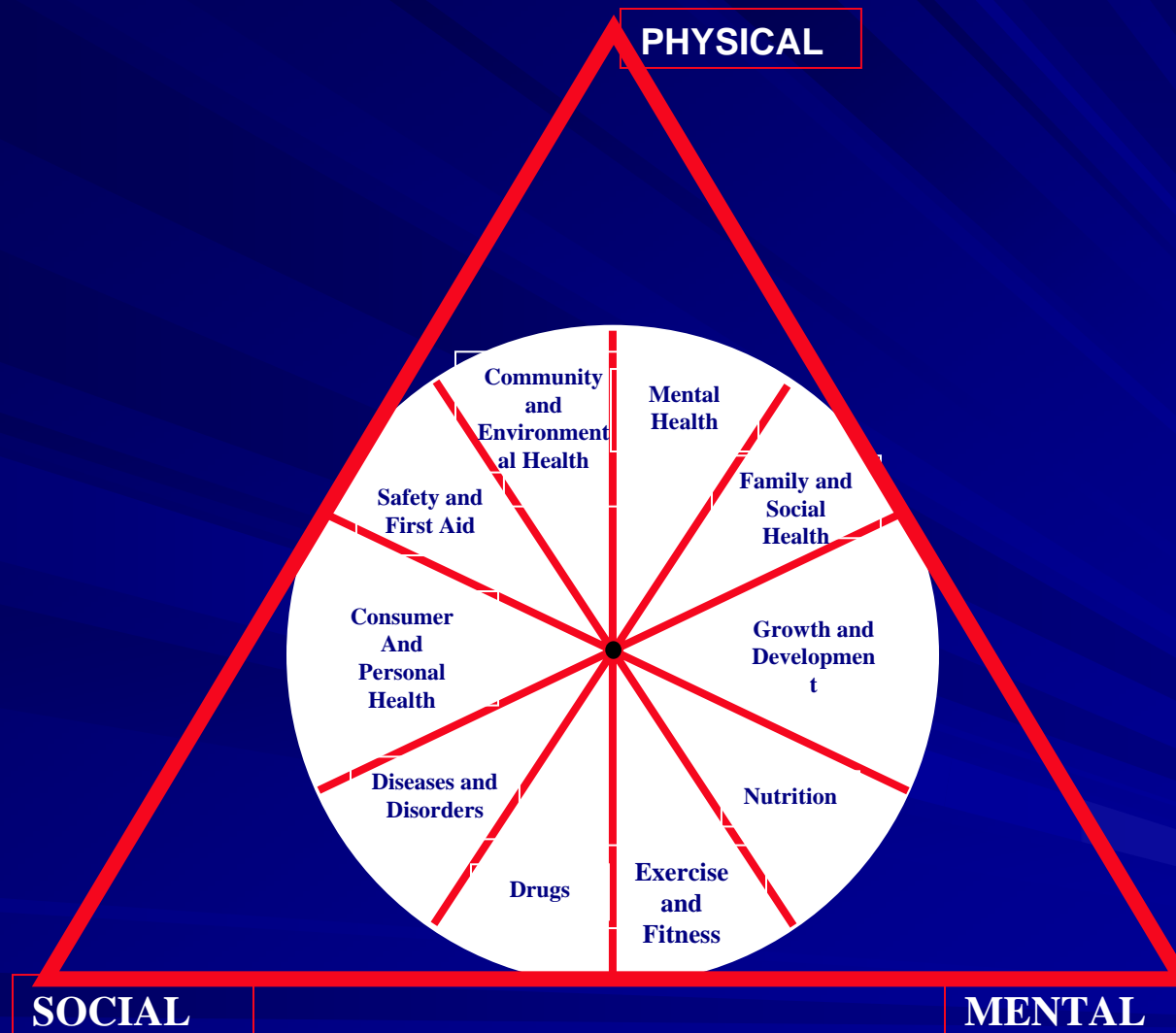
*Behavior in one area can affect other areas.*

# **1.3 Self-responsibility for health**

**An individual who is informed and motivated to adopt & maintain healthful behavior is more likely to achieve optimum health.**

**The wellness approach implies that the individual is responsible for:**

- choosing healthful behavior**
- making the most of his heredity and environment.**



# **1.4 Achieving optimum health**

**Four steps for achieving the optimum health:**

- 1) Have health knowledge**
- 2) Examine behaviors to develop awareness through appraisals**
- 3) Set personal health goals**
- 4) Make good health decisions**

# 1.4 Achieving optimum health

## National goals

Authorities identify health problems and set plans to overcome them.

- Mass vaccination program reduced mortality

## Causes of 72% of death in advanced countries

- Heart disease
- Strokes
- Cancer & accidents.

# **1.4 Achieving optimum health**

## **1) Preventive health services**

**a- family planning**

**b- pregnancy and infant care**

**c- immunizations**

**d- high blood pressure control**

**e- sexually transmitted disease service**

## **1.4.2 National goals (continued)**

### **2) Health protection messieurs**

- a- toxic agent control
- b- occupational safety and health
- c- accidental injury control
- d- fluoridation of water supplies
- e- infectious agent control



## **1.4.2 National goals (continued)**

### **3) Health promotion activities to promote healthy lifestyles:**

- a- eliminate use of tobacco**
- b- reduce misuse of alcohol and drugs**
- c- improve nutrition**
- d- encourage exercise and fitness**
- e- control stress**

# **Chapter 2**

## **Understanding the Human Body**

# **Chapter 2: Understanding the Human Body**

## **Introduction**

**knowing the importance of caring for your body systems.**

- Are you familiar body systems?**
- Do you know when your body is not functioning as it should?**

**Your body has many systems that work together.**

# Chapter 2: Understanding the Human Body

## 1-Support and Control Systems include:

- The skeletal and muscular systems.
- The integumentary system [skin]
- The nervous system.

## 2-Energy and Transport Systems include:

- The digestive system.
- The circulatory system.
- The respiratory system.
- The urinary system.

## 3-Endocrine and Reproductive Systems:

- The endocrine system.
- The male and female reproductive systems.

# **Chapter 2: Understanding the Human Body ?????**

## **2.2 Support and Control Systems**

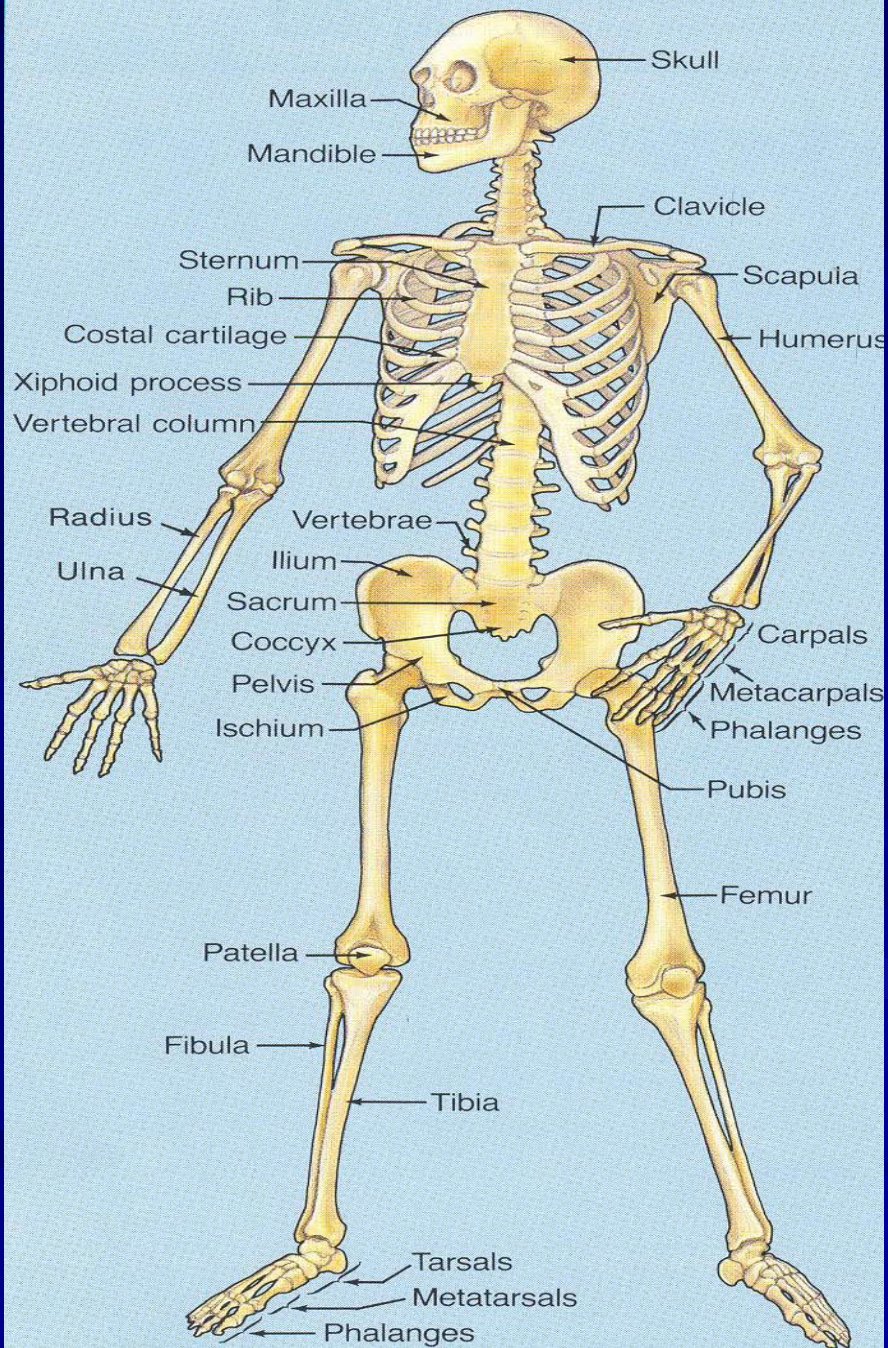
Think about a car. It is made of many different parts. the framework gives the car a definite style and also protects the engine and other inner structures. the car has an ignition system for starting the engine. Other systems work together to keep the engine running smoothly. Some mechanical parts in the car are capable of motion. these parts will move only if other factors are present and functioning properly. One of these factors is a source of energy, which is gasoline in most cars. Another factor is the engine. In the engine, the stored chemical energy in the gasoline is converted to mechanical energy, as a result the car moves.

## 2.2.1 Skeletal and Muscular Systems

### The Skeletal System (Fig1)

- Has the mechanical parts of the body
- Has bones and muscles
- Has ligaments and cartilages
- Has 200+ bones, many purposes.
- Serves as a framework for your body
- Works in harmony with muscles





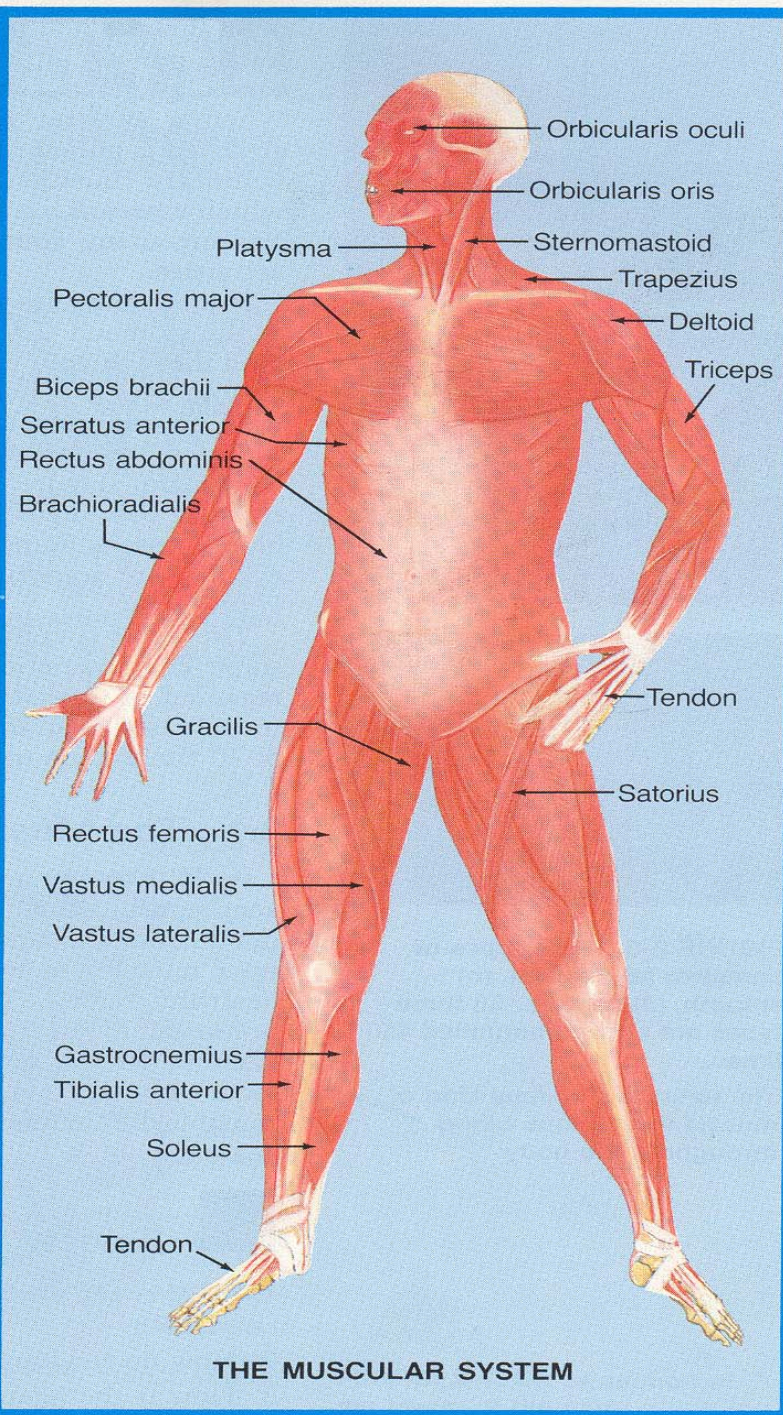
**THE SKELETAL SYSTEM**

## Chapter 2: Understanding the Human Body

### 2.2.2 The Muscular System (Fig-2)

- 600 muscles make
- It controls body movements
- Muscle tissue differ in appearance
- Muscles can to shorten, or contract
- Allows body movement.
- Three types of muscles:  
skeletal, smooth and cardiac muscles.





## **Chapter 2: Understanding the Human Body**

### **2.2.1 Skeletal and Muscular Systems**

**Bones also protects**

- **Ribs & breast protect heart & lungs**
- **Skull protects the brain**

**Bone marrow**

- **Special tissue in some bones**
- **Produces red blood cells**

## Chapter 2: Understanding the Human Body

### 2.2.3 The Integumentary System (skin)

**System covering & protecting body** (Fig-3)

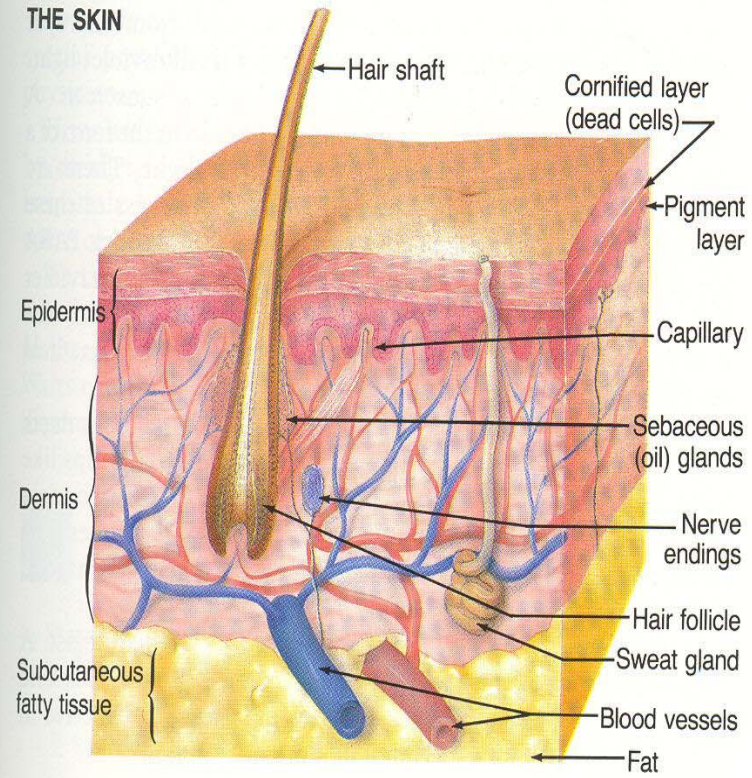
**Composed of**

- **Skin**
- **Hair follicles**
- **Nails**
- **Glands that are outgrowths of skin**

**Skin is the largest organ that consists of epidermis and dermis.**



## THE SKIN



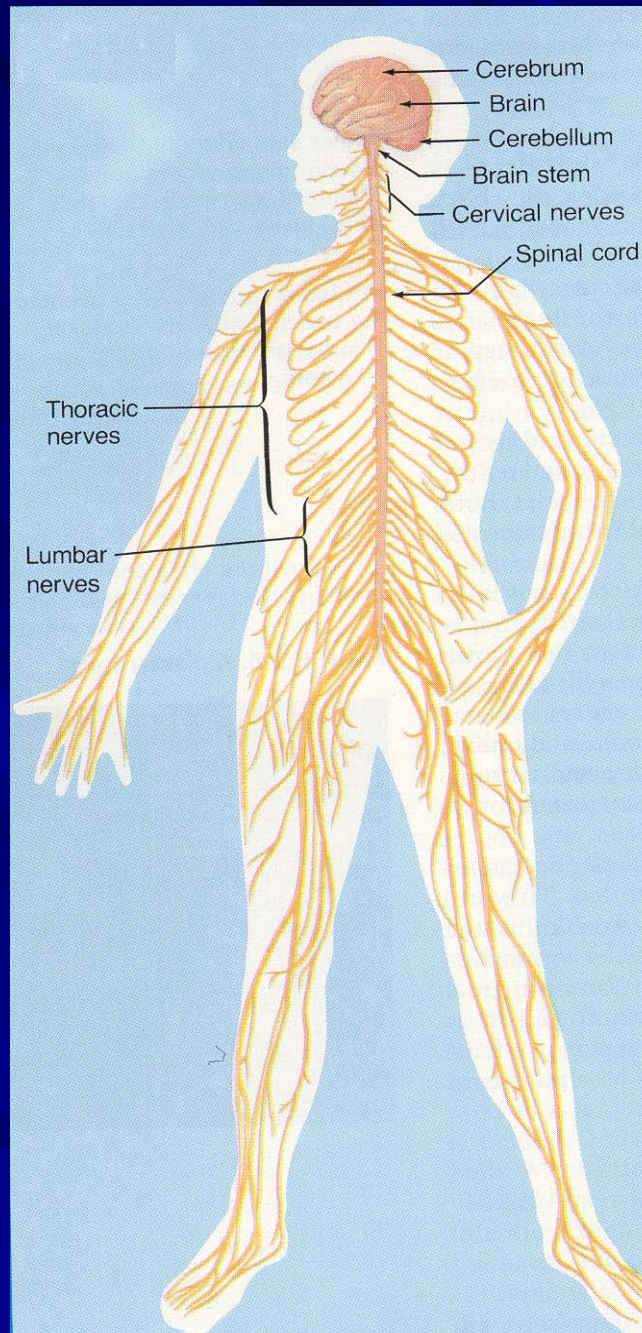
## Chapter 2: Understanding the Human Body

# 2.2.4 The Nervous System (Fig-4)

- A network of nerve cells
- carries messages to & from brain & spinal cord
- Sense organs

It is divided into two major parts:

- Central nervous system: brain and spinal cord.
- Peripheral nervous: nerves branching from brain and spinal cord twelve pairs of cranial nerves. Thirty one pairs of spinal nerves. The peripheral nervous into; the somatic & autonomic nervous systems.





## **2.3 Energy and transport systems**

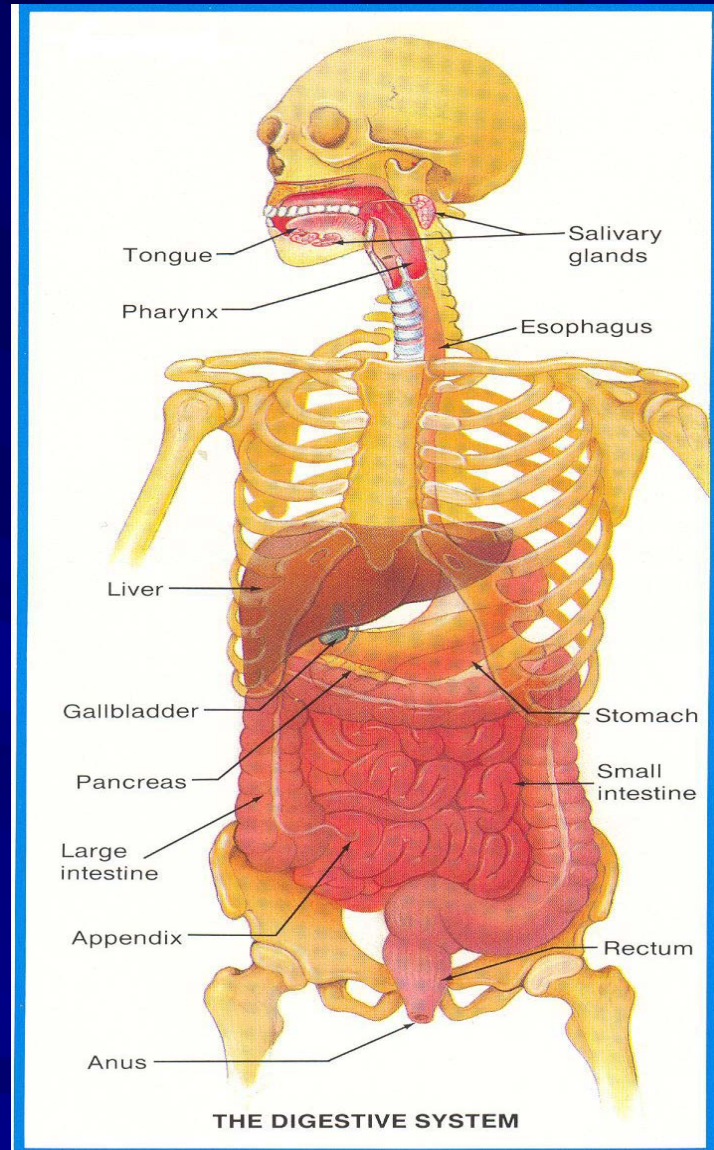
**Systems involved with the use of energy and the disposal of waste products**

- **Digestive system**
- **Circulatory system**
- **Respiratory system**
- **Urinary system**

## **2.3.1 Digestive system** (Fig-5)

- **Cells take energy from food.**
- **Digestion changes food to a form that can pass through cell membrane.**
- **Food stays in stomach 4 hrs**
- **Food is changed into chyme**
- **Then moves to the small intestine**
- **Organs involved in digestion: liver, pancreas and gall bladder**
- **Food that is not digestive pass into the large intestine (colon) where water is absorbed. The remaining material forms semisolid mass called feces.**





## **2.3.1 Digestive system**

### **The digestive system and health**

#### **Disorders that affect the digestive system**

- Indigestion (dyspepsia)
- Hyper acidity
- Duodenal ulcer
- Gall bladder diseases
- Appendicitis, constipation, diarrhea, hemorrhoids

## **2.3.2 Circulatory System**

**It is formed of the heart, blood vessels & blood.**

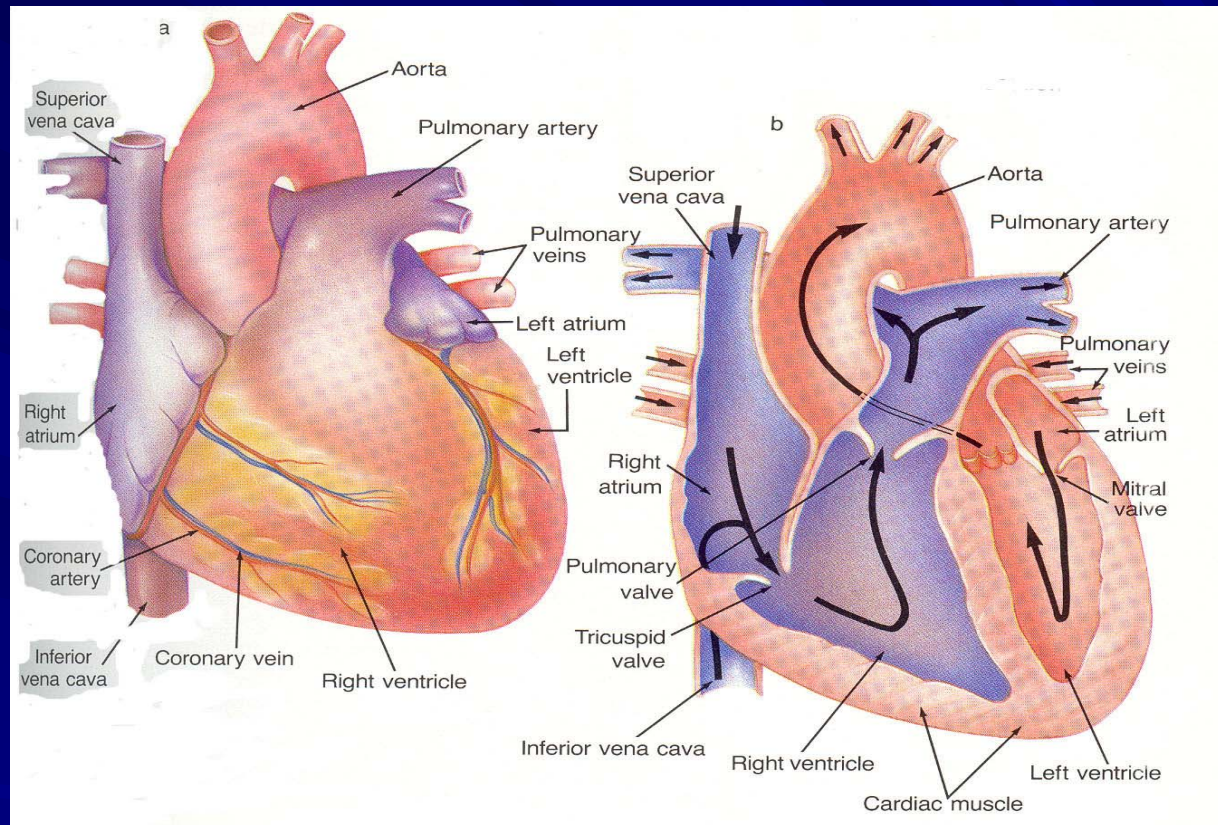
- Transports materials & waste from body cells**
- Blood transports essential substances**
- The liquid of blood is called plasma**
- There are 3 blood cells: red cells, white cells and platelets.**

## **2.3.2 Circulatory System**

### **The Heart** (Fig-6)

**An incredible organ beats 70-80 times a minute 100, 000 times each day.**

**The myocardium is the muscular wall of the heart. Within the heart are four chambers: two atria & two ventricles.**





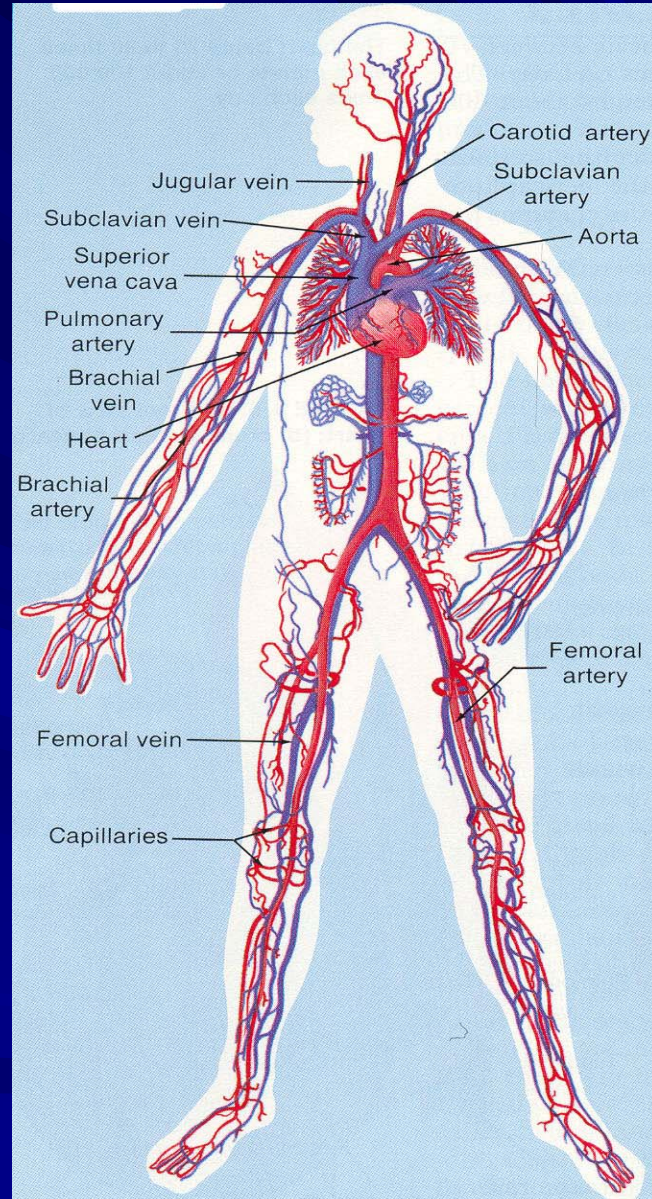
## 2.3.2 Circulatory System

### **Blood vessels** (Fig-7)

Blood is continually circulating in a series of close tubes that carry it from the heart to all body cells and back to the heart again.

These tubes are called blood vessels there are three types of vessels:

- 1- Arteries
- 2- Capillaries
- 3- Veins



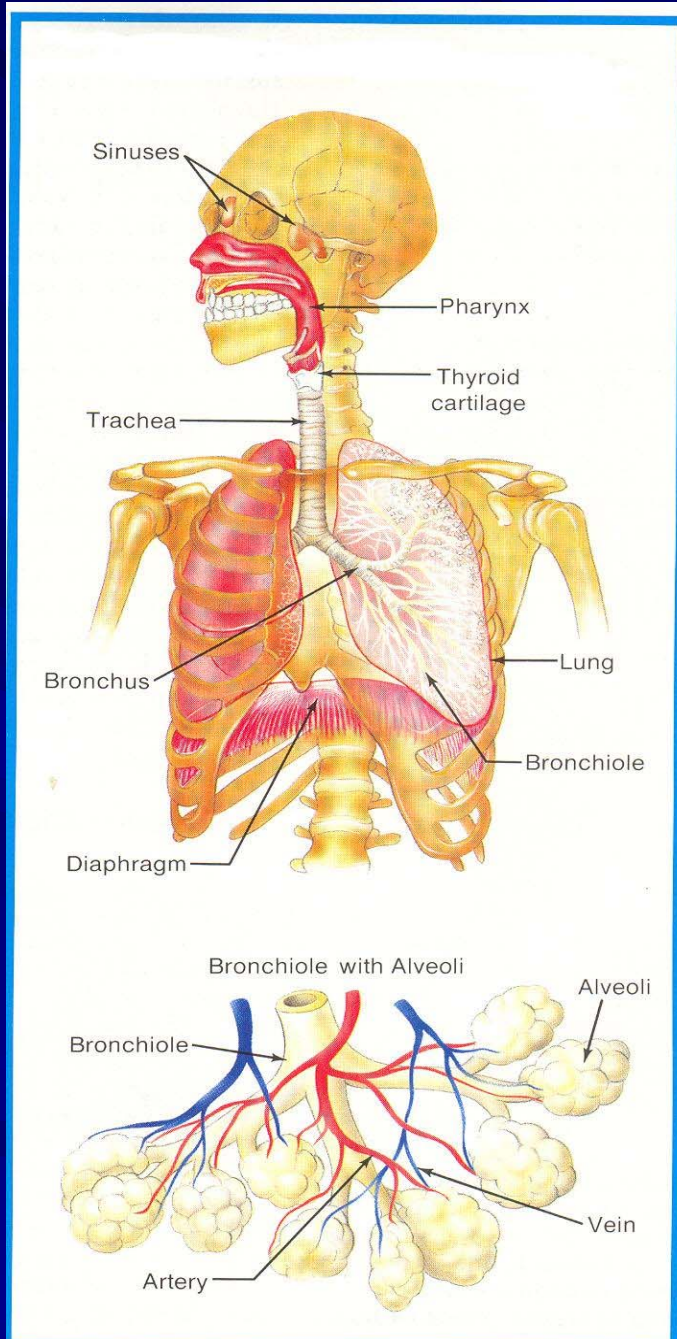


## **2.3.3 Respiratory System** (Fig-8)

- Cells release energy from nutrients through chemical action of oxygen ( $O_2$ )
- Carbon dioxide ( $CO_2$ ) is produced as a waste product
- Respiratory System is involved in making  $O_2$  available to the cells and is ridding the body of ( $CO_2$ )
- Respiration is exchange of gases between a living organism and its environment

## 2.3.3 Respiratory System (RS)

- **External respiration:**  $O_2$  &  $CO_2$  exchanged between blood and air in lungs
- **Internal respiration:**  $O_2$  &  $CO_2$  exchanged between cells and blood



## 2.3.3 Respiratory System

### Mechanics of breathing

An adult inhales ~ 12 times/minute at rest

- Inspiration
- expiration.

### The respiratory system and health

**Emphysema:** lung disease due to destruction of lung tissue. Lungs lose elasticity  
is common in smokers & who inhale polluted air.

**Lung cancer:** is a leading cause of cancer death in males. The main cause is cigarette smoking.

Heavy smokers are 20 times more likely to develop lung cancer than non smokers.

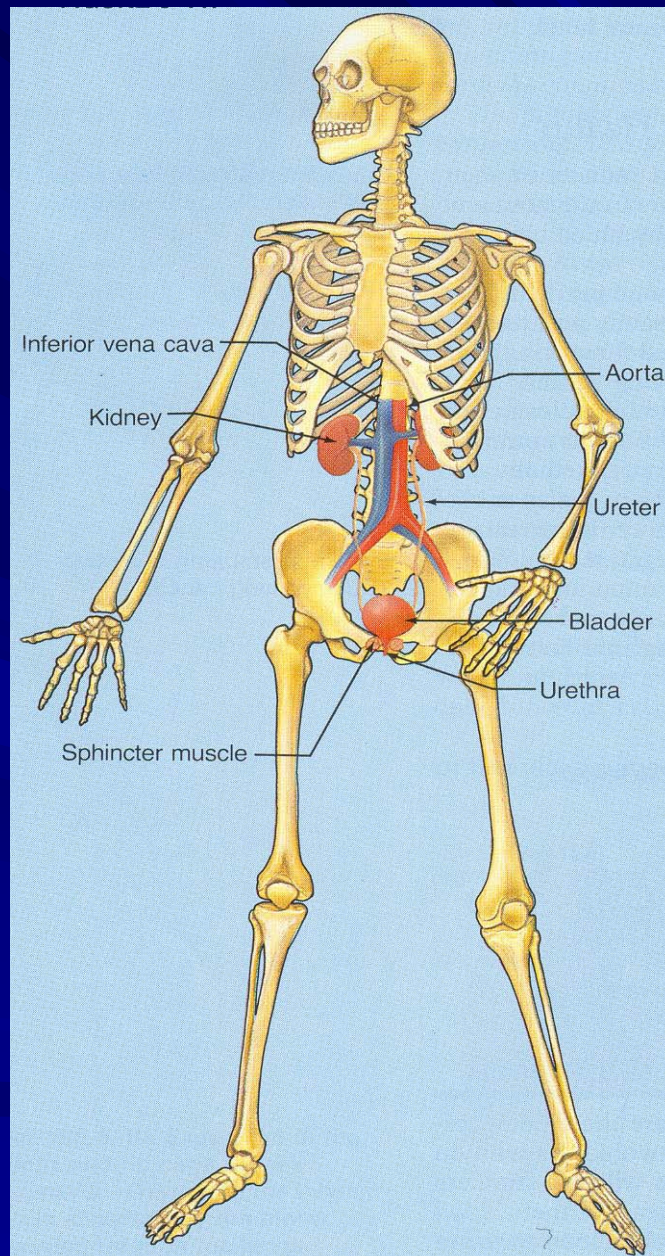
## 2.3.4 Urinary System (Fig-9)

- Removes wastes from the blood.
- Helps control the amount of fluid in the
- body.
- The organs of the system are kidneys,
- ureters, bladder, and urethra.

### Urinary system and the health

- Drink at least 6 glasses of water daily.





## **2.4 Endocrine System and Reproductive Systems**

### **2.4.1 Endocrine System**

- Works closely with the nervous system**
- controls many functions**
- consists of glands that secrete hormones**



## **2.4 Endocrine System and Reproductive Systems**

### **Female Reproductive Organs (fig-10)**

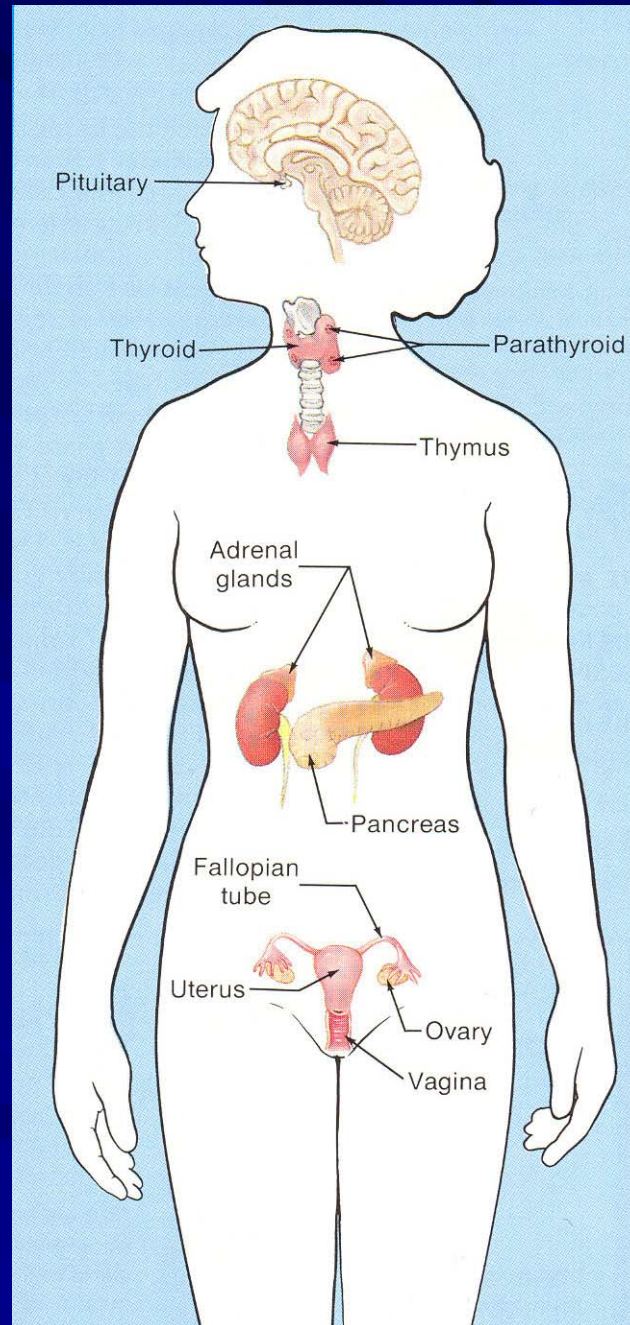
**The internal reproductive organs of the female include**

two ovaries, fallopian tubes, uterus and vagina.

Associated reproductive structures, the external part of the female reproductive systems are known as genitalia or genitals. Also the mammary glands of the breasts secrete milk.

### **Female Reproductive Health**

- Perform breast self examination
- Breast lump should be checked
- Early detection improve chances of cure.



## 2.4.2 Reproductive System (continued)

### Male Reproductive System (Fig-11)

The main organs of the male reproductive system are the testes (testicles). The other organ of the system can be grouped as internal & external reproductive organs.

Testes are two glands that are contained in a sac called the scrotum. Sex hormones & reproductive cells called sperm are produced in seminiferous tubules and epididymus.

From epididymus, sperm move through the vas deferens to the prostate. Behind the prostate lies the seminal vesicles.

Sperm also receive secretions from the Cowper's glands on either side of the urethra.

From the prostate sperm enter the ejaculatory (tube that leads from the prostate to the urethra).

## 2.4.2 Reproductive System (continued)

Before leaving the body, sperm move through a series of small tubes  
From the epididymus, sperm move through the vas deferens to the prostate gland

The prostate secretes a fluid to nourish the sperm

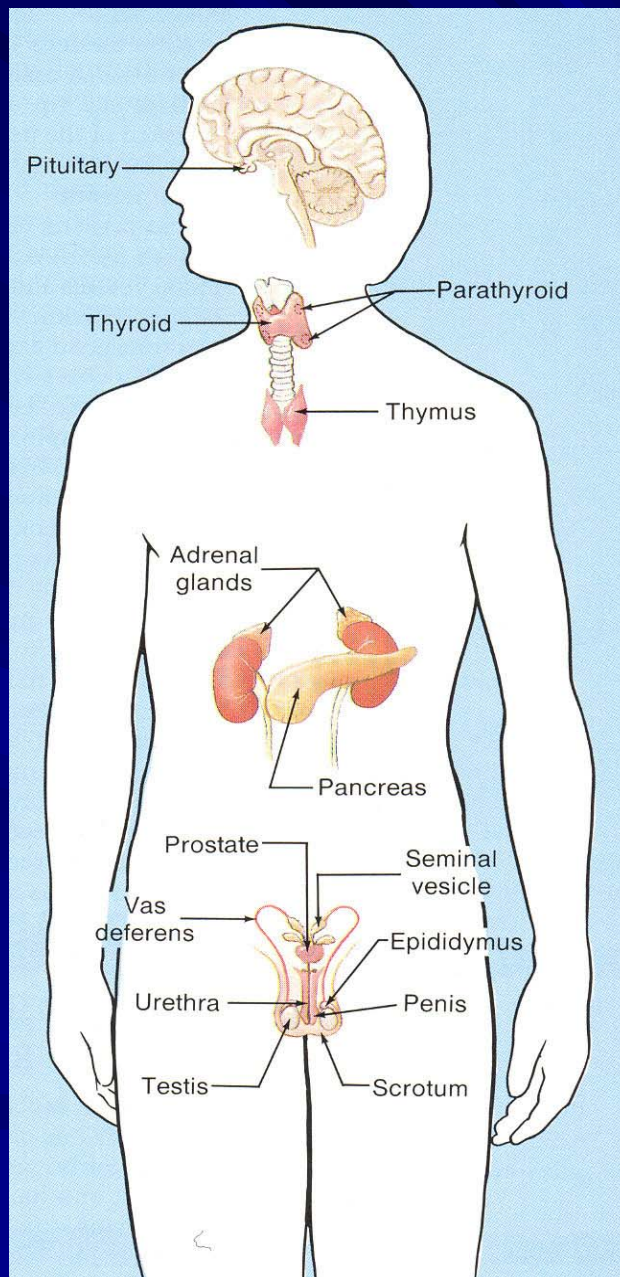
Behind the prostate lies the seminal vesicles; sac like structures that secrete fluids to help sperm motility. Sperm also receive secretions from the Cowper's glands on either side of the urethra. From the prostate sperm enter the ejaculatory duct (tube that leads from the prostate to the urethra). the urethra in the male serves as a way through the penis for both urine and sperm. However, urine and sperm do not pass through the urethra at the same time. The urethra extends through the penis to the outside of the body.

### Male Reproductive Health

Examine changes in the testes

Be aware of sexually transmitted diseases (STDs).





## 2.4.2 Reproductive System (continued)

### ■ Male Reproductive Health

- Examine changes in the testes
- Be aware of sexually transmitted diseases (STDs).

# **Chapter 4**

## **Family and Social Health**



## **4.1 Healthful and Responsible Relationships**

- **Your relations greatly influence your health**
- **having healthful relations is meaningful for life**

## **4.1.1 Relationships with Family**

**Three factors that may affect your health status:**

- **Communication is the verbal and nonverbal sharing of ideas, information, and feelings.**
- **Philosophy of life is an overall attitude about life and the purpose of life.**
- **Philosophy helps determine your values.**

## **4.1.2 Relationships With Friends**

**The quality of relationship is more important than quantity.**

**Skills to be good friend include:**

- Listening carefully and keeping confidences.**
- Offering suggestions on how to reach goals.**
- Offering expressions of affection.**
- Sharing new activities and new friends.**
- Providing good companionship.**
- Sharing joys and sorrows.**

## **4.1.3 Relationships at work and in your Community**

**These relationships can be healthful when you take time to understand your responsibilities in each of them.**

- Find out what is expected of you.**
- Follow through with your obligations.**
- Be cooperative.**
- Do your best.**

## 4.2 Communication in Relationships

- **Communication is important in all kinds of relationships.**
- **Different relationships require different levels of communication.**

## 4.2.1 Levels of Communication

The amount of healthful self disclosure depends on the depth of the relationship.

### Self-disclosure

- Cliché small talk used to avoid silence.  
how are you? Great weather!
- Reporting Facts
- Sharing Ideas
- Expressing feelings



## 4.2.1 Levels of Communication

Communication at the highest level involves some risk

Some of your ideas and decisions may be rejected

Communicating at this level promotes optimum health in several ways

## 4.2.2 I messages & Active Listening

Communicating feeling can be established by using I messages (statement that tell about you, your feeling, and your need)

To have the greatest impact must have three parts: a specific behaviors, an effect of that behavior and a feeling. Here an example of I messages; [page 40](#)

## 4.2.3 Nonverbal Communication

- Use of behavior rather than words to show feelings
- Some nonverbal communication expresses a negative response
  - Pressing lips
  - Shaking head in disapproval
  - Tapping feet indicates lack of patience
  - A beaming smile expresses joy

## 4.2.4 Aggressive, Passive, and, Assertive Behaviors

You respond to situations with aggressive, passive, or assertive behavior.

**Aggressive behavior** is the use of words and /or actions that communicate disrespect toward others

- Name calling
- Loud and sarcastic remarks
- Statement of blame
- Glaring at someone
- Using threatening hand gestures

## 4.2.4 Aggressive, Passive, and, Assertive Behaviors

**Passive behavior** is

- holding back of ideas
- looking away or laughing when discussing

**Assertive behavior** is the honest expression of thoughts

- Assertive behavior is healthiest behavior, promotes high quality relationships includes
- I messages and active listening
- body posture, hand gestures and comfortable eye contact.



# **Chapter 6**

## **Nutrition Healthful Eating**

# Chapter 6: Nutrition-Healthful Eating

## Objectives:

- Identify the nutrients needed for optimum health.
- Plan a healthful diet.
- Make changes in your diet to reduce your risk of cancer.

**You are what you eat**

Healthful diet helps perform well in work

**Food has a holistic effect on health**

## 6.2 Nutrients in Food

### Proteins:

- Needed for growth, development and repair of body tissues
- Made of small units called amino acids
- Body needs 22 amino acids
- Body produces 14 of the amino acids
- Other 8 are essential amino acids

## 6.2 Nutrients in Food

### Carbohydrates:

- Chemical substances that are the main source of energy
- Types of carbohydrates: starch and sugars

### Fats:

- Chemical substances that provide additional energy
- Help body store vitamins A, D, E, K
- Help body absorb vitamin D

## 6.2 Nutrients in Food

### vitamins:

- Help chemical reactions in the body
- Vitamins: water soluble and fat soluble
- Water soluble vitamins are easily dissolved and cannot be stored
- Vitamin B complex and vitamin C are water soluble vitamins
- Fat soluble vitamins are stored
- The liver is the main storage organ for fat soluble vitamins
- Excess fat soluble vitamins causes headache, upset stomach & fatigue



## 6.2 Nutrients in Food

### Minerals:

Form 5% of body weight

Regulate chemical reactions

**Found in body:** calcium, chlorine, magnesium, phosphorus, potassium, sodium and sulfur. iodine, iron and zinc are of importance.

### Water:

Is considered a nutrient

Makes up 60% of body weight

## 6.3 Planning a Healthful Diet

### The 7 diet goals

- Goal 1: eat a variety of food
- Goal 2: maintain (ideal) weight
- Goal 3: avoid eating too much fat
- Goal 4: eat foods, starch and fiber
- Goal 5: avoid too much sugar
- Goal 6: avoid too much sodium
- Goal 7: avoid alcohol

**N.B.: breakfast is important**

## **6.4 Diet and cancer**

**Follow the guidelines**

- **Avoid obesity**
- **Cut down on total fat intake**
- **Eat more high-fiber foods**
- **use foods rich in vitamins A and C in daily diet**
- **Include cruciferous vegetables in diet**
- **Eat limited amounts of salt**
- **Avoid alcohol and cigarettes & tobacco**

# **Chapter 9**

## **Safety and First Aid**

# **Chapter 9: Safety and First Aid**

## **9.1 Personal Safety**

- **Every one has the right to be protected**
- **Violent crime has become a major health problem**
- **Among these crimes are homicide and robbery**
- **Avoid persons who are argumentative and under the influence of drugs**
- **Always follow certain precautions to protect yourself from crime.**



# **Chapter 9: Safety and First Aid**

## **9.2 Accident Prevention**

- **Almost all accidents can be prevented.**
- **The best way to prevent accidents is to be aware of their causes**
- **Then you can follow preventive behaviors.**

# **Chapter 9: Safety and First Aid**

## **9.2.1 Causes of Accidents:**

- 1- Stress is a major cause of all kinds of accidents**
- 2- A person's age plays an important role in accidents**
- 3- Drugs especially alcohol play a significant role**
- 4- Illness cause changes in the body**
- 5- Accidents depends on the time**
- 6- Attitude : some people are more susceptible to accidents**

# **Chapter 9: Safety and First Aid**

## **9.2.2 Preventing Vehicle Accidents**

- **Preventive efforts involve vehicles, high ways, drivers and laws.**
- **Vehicle factor**
- **High way factors**
- **On city streets shielded signs**
- **The driver**
- **Laws: mandating the use of seat belts are practiced, wearing a helmet**

# **Chapter 9: Safety and First Aid**

## **9.2.3 Preventing Home Accidents**

**Major causes of accidental deaths:  
falls, fires, burns and poisoning**

# **Chapter 9: Safety and First Aid**

## **9.2.4 Preventing Accidents in Work place**

- **Employers must have and meet standards such as OSHA ( Occupational Safety & Health Act).**
- **New employers should be trained and made aware of hazards**
- **Supervisors must be alert to factors that can cause accidents**

# Chapter 9: Safety and First Aid

## 9.2.5 Preventing Accidents during Dangerous conditions

### In earthquake.

- Stay calm – do not panic.
- Stay clear of any objects that can fall on you, whether indoors or out door.
- Move to an open space.
- In a building, get under a desk or table.
- In out doors, avoid broken power lines.
- In an automobile, stop as soon as possible, and get out. If on a bridge get off as soon as possible.



# **Chapter 9: Safety and First Aid**

## **9.3 Emergency Care**

### **Objectives**

**you will be able to describe the importance of first aid. Identify the priorities of giving first aid.**

# Chapter 9: Safety and First Aid

## 9.3.1 Importance of First Aid

### First aid

- Is the immediate and temporary care given to an injured or ill person
- Includes self help and home care when medical assistance is delayed.

Having knowledge of proper first aid procedures may help you or others.

# **Chapter 9: Safety and First Aid**

## **9.3.2 Priorities of the First Aid**

- **Have a plan of action to follow**
- **Know how to call for help**
  - **Identify exact location**
  - **If possible, leave telephone number**
  - **Give the name of rescuer**
  - **Provide specific information**
- **Ask someone else to call for help**
- **Prompt rescue**
- **Check for open airway**
- **Control severe bleeding**
- **Check for signs of poison**
- **Give psychological first aid**

## 9.3.3 Asphyxiation

### Causes for respiratory emergencies

- Drowning
- Heart failure
- Electric shock
- Drug overdose
- Carbon monoxide poisoning
- Choking

## 9.3.3 Asphyxiation

**Artificial respiration** (includes techniques that are used by one person do another to restore breathing)

**Abdominal thrust** (for choking who can not cough, speak or breathe)

**Stand behind the victim**

- Wrap your arms around victim's waist.
- Make a fist with one hand and place the thumb side just above victim's navel and below the top of the sternum.
- Grasp fist with your other hand.
- Press fist into victim's abdomen with quick upward thrust.
- Do 4-5 times. Check lodged matter in mouth

## 9.3.4 Cardiopulmonary Resuscitation

- Emergency procedure used with mouth-to-mouth resuscitation when heart stops beating.
- CPR should never be done on a conscious person or on someone who has a heart beat
- Only persons trained in CPR should administer these techniques.



## 9.3.4 Cardiopulmonary Resuscitation

### General procedures you should know

- **Airway** – always be sure the victim's airway is open. The tongue is the most common cause of airway obstruction in an unconscious victim.
- **Breathing** –check if the person is breathing.
- **Circulation** – Check pulse to determine if chest compression will be necessary.

## 9.3.4 Cardiopulmonary Resuscitation

### **Procedure** (continued)

- Check responsiveness
- Activate emergency system. Call for help, local emergency telephone number
- Roll person onto back
- Open airway
- Check for breathing – give 2 full breaths.
- Check for pulse – do 15 chest compressions

## 9.3.5 Controlling Bleeding

- A break in the skin is called a wound
- Stopping bleeding is a priority
- Direct pressure and elevation can stop bleeding
- Use of pressure on a supplying artery
- Two pressure points: **under the arm** (the brachial artery) & **inside the groin area** (the femoral artery).

## 9.3.6 Poisoning

Poisons enter the body through ingestion (swallowing), inhalation, injection, or absorption through skin or mucous membrane.

- Determine the poison ingested.
- Call a local poison center or physician
- Seek medical help for the victim
- Dilute poison: milk, or water
- Never force unconscious victim to vomit.

## 9.3.7 Sudden Illness or Injury

- When a person becomes injured or ill, body function and structure change.
- Maintain body temperature and blood circulation in a shock victim.

### ■ Other situations

- Heart attack and stroke
- Fractures, dislocations, sprains and strains
- Burns
- Some environmental hazards.

Many thanks