

## **The Basics of Aging**



Nurse Aide Education Program  
Inservice/Continuing Education Credit Courses

## The Basics of Aging

### Introduction

Aging is a "normal" process that all living organisms experience. When we are young, aging is defined as growth and maturation; but by age 30 aging starts to become defined as deterioration, decline, or the inability to do something we were once able to do. These age-related changes continue to occur throughout our lives.



It is true that we tend to slow down as we get older, but there is no certain age that suddenly affects a person's ability to function. Today most people over age 65 are healthy, happy and fully independent.

Most scientists agree that an individual's aging process is directly related to related to intrinsic factors such as heredity and extrinsic factors such as environment. There are key aspects of heredity and environment that will affect the speed at which we age, such as loss of fitness, disease and social changes.

Some changes that individuals experience due to aging are not necessarily harmful, such as gray, thinning hair or thinner and less elastic skin. Other changes may greatly affect one's physical, mental, emotional or social well-being. Nobody can stop the aging process but everyone can do something to slow it down.

Although there are changes that are directly related to the aging process, there is no way to predict when a condition will occur and no way to predict the combination or severity of the conditions. We are all individuals and the aging process will affect each of us differently. One thing we can predict is that our genetics, lifestyle and environment will play a major role in how we age.

### Changes That Can Be Expected Due To the Aging Process



#### Nervous System

- The "transmission" of messages to and from the brain can be affected
- There are slower reflexes which can affect driving or lead to falls
- Balance may be affected, which can trigger falls



#### Cardiovascular System

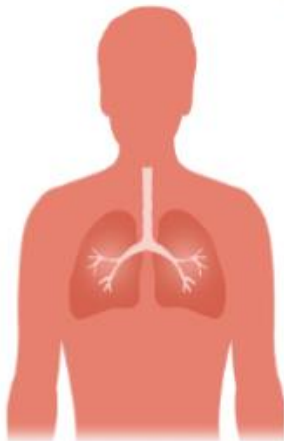
- There is a decrease in the efficiency of the heart muscle which can result in less of an ability to respond to stress of any type (physical or emotional) and a possibility of increased blood pressure
- We all can minimize cardiovascular disease with a healthy lifestyle, an appropriate diet and consistent exercise



### Sensory Losses

- Sensory losses can occur
- By age 65 or 70, most have some degree of visual loss & about a third will have significant hearing loss
- Losses in hearing and/or vision can cause inappropriate responses, confusion, anger, disorientation or social isolation
- It is important for older adults to "exercise" their minds as well as their bodies as decline in intellectual function can result from lack of stimulation as well as other factors
- Long-term memory remains intact, but there may be some changes in short-term memory
- A significant decline in mental function may be an important clinical sign of illness and should always be investigated

### Respiratory System



- Changes in lung tissue can result in decreased lung efficiency
- These changes are complicated by life-long exposure to pollutants, damage from disease, and habits such as smoking
- The effects of changes in the respiratory system, including shortness of breath and fatigue, may lead to decreased activity levels for older adults
- Regular, appropriate activity will help to maintain function
- Studies tell us that with proper exercise and conditioning, older adults can continue to remain very active and benefit from physical activity at any age



### Skin

- Normal age-related changes in the skin can result in wrinkles, dryness, and thinning of skin (making it more susceptible to breaks, with slower healing)
- There is loss and thinning of hair as well as graying
- Nail growth slows and nails become thicker and more brittle. Care of the nails, especially for the feet, is very important and requires more attention



### **Gastrointestinal (GI) System**

- Nutritional status and enjoyment of food can change
- Reduction in saliva production can lead to a dry mouth and cause problems chewing
- Reduction in digestive enzymes can cause digestive problems
- Slowed peristaltic action (waste-removing intestines' smooth muscle contractions) can lead to constipation (worsened by inactive lifestyles)
- Changes in the mucosal lining of the digestive tract can affect absorption of nutrients
- Dental problems may affect ability to chew



### **Musculoskeletal System**

- There are changes in ligaments, joints and bones
- Bone loss occurs as we age. The most serious form of bone loss is a disease called osteoporosis which occurs most frequently in post-menopausal women, although it also occurs in men. This disease leads to frequent fractures
- A decrease in muscle bulk and strength. Regular exercise helps to slow the process of loss of bone and muscle mass
- A decrease in speed, strength and endurance (worsened by inactivity)
- Being less active contributes to the loss of muscle and bone

### **Genitourinary**

- Incontinence is not a normal part of aging and should always be investigated
- There are changes in kidney function as well as bladder capacity. The message that "you have to go" can be slowed resulting in greater urgency so that when you realize you have to go, you can not wait for any period of time
- With age, there are some changes in both sexual function (such as common prostate gland problems in men) and response in males and females. However, these changes should not prevent a sexually active life well into old age
- Attitude changes: many older people avoid sexual relationships for fear of ridicule by others



### Changes to Consider in the Aging Process

As people age, so do their friends and relatives, and many will experience the loss of a spouse or spouses, friends, and relatives. Physical losses and social losses that can accompany aging may be difficult emotionally, and as people become more dependent on others for assistance they become more susceptible to social isolation and depression.



### Nutrition and Aging

There is a decreased need for calories as we age but not for nutrients, so the challenge is to ensure a healthy diet, but avoid excessive weight gain. As noted, there are several changes in the digestive tract which obviously would have an impact on nutrition

### Environment



- We become slower, with slower reflexes, speed and response times
- Consider elevator doors that only remain open for seconds or traffic lights that change to red when you are halfway through the intersection
- Consider as well, poor lighting on stairways, shiny floors that reflect the light and are slippery, elevator buttons that are the same gray color as the panel

### Long Life Expectancy

People who live in areas with especially long life expectancy have the following characteristics, apart from hereditary or genetic influences:



- Diets tend to be low in animal fats and high in vegetables, whole grains
- Moderate amounts of alcohol are consumed, alcoholism is uncommon
- Physical activity continues throughout life
- Sexual activity continues in later years
- Social involvement continues and is respected and valued.
- Physical environment is moderately challenging and free from pollutants

Regular physical activity, a balanced diet, social involvement, moderate or no drinking, and no smoking can significantly decelerate the aging process.

***Many problems that are commonly seen in older people are preventable and/or treatable and few of the problems that are seen in old age are actually caused by the aging process: most are caused by disease, loss of fitness, and environmental or social changes; and can be addressed.***

### Summary

It is important to know basic information about aging so you can understand the changes that you and your clients will experience as you get older. This information will help you prolong your health and manage the effects of aging.

