

A warm welcome students for this lecture on physical development during middle adulthood,

I'll be speaking about physical changes. I'm assistant Professor Elvira from St.Xavier's college Mapusa

I will be covering physical changes during middle adulthood. From this class, the student will be able to gain an understanding of physical changes during middle adulthood.

What are some of the changes, physical changes or person goes through during middle adulthood?

### ***Physical Changes***

Although everyone experiences some physical change due to aging in the middle adulthood years, the rates of this aging vary considerably from one individual to another.

Genetic makeup and lifestyle factors play important roles in whether chronic disease will appear and when.

Middle age is a window through which we can glimpse later life while there is still time to engage in prevention and to influence some of the course of aging.

#### **1. *Visible Signs***

One of the visible signs of physical changes in middle adulthood is physical appearance.

The first outwardly noticeable signs of aging usually are apparent by the forties and fifties.

The skin begins to wrinkle and sag because of a loss of fat and collagen in underlying tissues.

Small localized areas of pigmentation in the skin produce aging spots, especially in areas that gray due to a lower replacement rate and a decline in melanin production.

Finger and toenails develop ridges and become thicker and more brittle.

Since a youthful appearance is stressed in many cultures, individuals whose hair is graying, whose skin is wrinkling, whose teeth are yellowing strive to make themselves look younger.

Undergoing cosmetic surgery, dyeing hair, purchasing wigs, enrolling in weight reduction programs, participating in exercise regimes and taking heavy doses of vitamins are common in middle age.

#### **2. *Height and weight:***

Individuals lose height in middle age, and many gain weight.

On average from 30 to 50 years of age, men lose about inch in height then may lose another inch from 50 to 70 years of age.

The height loss for women can be as much as 2 inches from 25 to 75 year of age.

There are large variations in the extent to which individuals become shorter with aging.

The decrease in height is due to bone loss in the vertebrae.

On average body fat accounts for about 10% of body weight in adolescence; it makes up 20% or more in middle age.

Obesity increases the probability that an individual will suffer a number of other ailments, among them hypertension (abnormally high blood pressure), diabetes, and digestive disorders.

Although there are health risks of being overweight or obese in middle adulthood, severe weight loss also can pose a risk in the case of acute disease.

### **3. Strength, Joints and Bones:**

Maximum physical strength is attained in the twenties.

The term sarcopenia is given to age related loss of muscle mass and strength.

The rate of muscle loss with age occurs at a rate of approximately 1 to 2% per year past the age of 50.

A loss of strength especially occurs in the back and legs.

Exercise can reduce the decline involved in sarcopenia.

Peak functioning of the body's joints also usually occurs in the twenties.

The cushions for the movement of the bones (tendons and ligaments) become less efficient in the middle-adult years, a time when many individuals experience joint stiffness and more difficulty in movement.

Maximum bone density occurs by the mid to late thirties from which point there is progressive loss of bone.

The rate of this bone loss begins slowly but accelerates in the fifties.

Women experience about twice the rate of bone loss as men.

By the end of midlife, bones break more easily and heal more slowly.

### **4. Vision and Hearing:**

Accommodation of the eye- the ability to focus and maintain an image on the retina – experiences its sharpest decline between 40 and 59 years of age.

Middle aged individuals begin to have difficulty viewing close objects.

The eye's blood supply also diminishes although usually not until the fifties or sixties.

The reduced blood supply may decrease the visual field's size and account for an increase in the eye's blind spot.

At 60 years of age the retina receives only one- third as much light as it did at 20 years of age, which is due to a decrease in the size of the pupil.

Hearing also can start to decline by the age of 40.

Sensitivity to high pitches usually decline first.

The ability to hear low-pitched sounds does not seem to decline much in middle adulthood.

Men usually lose their sensitivity to high pitched sounds sooner than women do.

However this gender difference might be due to men's greater exposure to noise in occupations such as mining, automobile work and so on.

### **5. Cardiovascular System:**

High blood pressure and high cholesterol often take adults by surprise.

The level of cholesterol begins to accumulate on the artery walls increasing the risk of cardiovascular disease.

Cholesterol comes in two forms: LDL (low density lipoprotein) and HDL (High Density lipoprotein).

LDL is often referred to as bad cholesterol because when the level of LDL is too high it sticks to the lining of blood vessels which can lead to atherosclerosis (hardening of the arteries).

HDL is often referred to as "good" cholesterol because when it is low the risk of cardiovascular disease is lessened.

Blood pressure (hypertension) rises in the forties and fifties.

At menopause a women's blood pressure rises sharply and usually remains above that of a man through life's later years.

Another problem in middle and late adulthood is metabolic syndrome a condition characterized by hypertension, obesity and insulin resistance.

Metabolic syndrome often leads to the development of diabetes and cardiovascular disease.

Exercise, weight control, and a diet rich in fruits, vegetables and whole grains can often help to stave off many cardiovascular problems.

#### **6. Lungs:**

At about the age of 55 the proteins in lung tissue become less elastic.

This decreases the lung's capacity to shuttle oxygen from the air people breathe to the blood in their veins.

The lung capacity of individuals who are smokers drops in middle age, but if the individuals quit smoking their lung capacity improves although not to the level of individuals who have never smoked.

#### **7. Sleep:**

The total number of hours slept usually remains the same as in early adulthood, but beginning in the forties wakeful periods are more frequent and there is less of the deepest type of sleep.

The amount of time spent lying awake in bed at night begins to increase in middle age, and this can produce a feeling of being less rested in the morning.

Sleep problems in middle – aged adults are more common in individuals who use a higher number of prescription and non prescription drugs, are obese, have cardiovascular disease or are depressed.

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