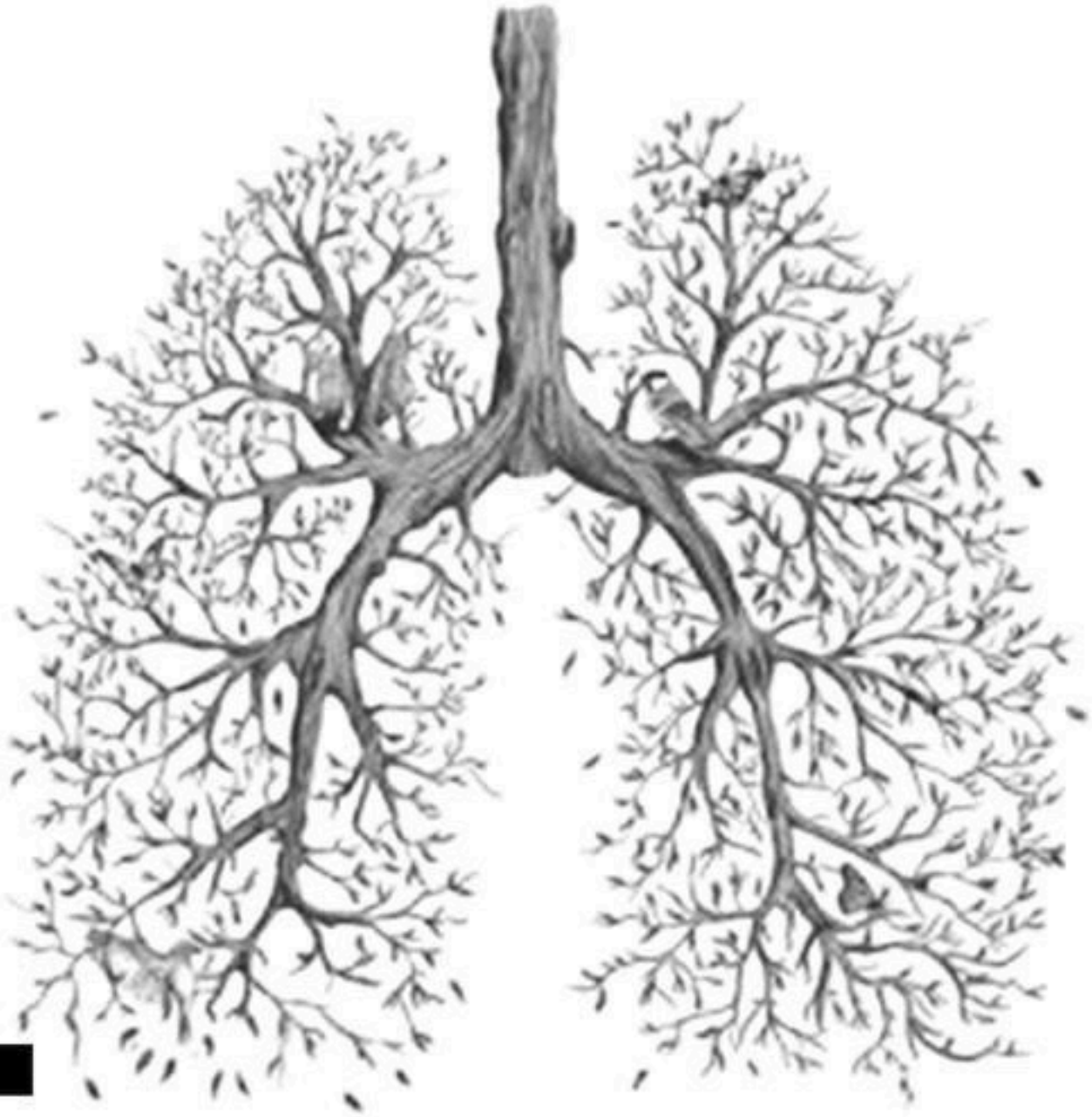




Medical Committee  
The University of Jordan

# Community Medicine



Slides

Sheet

Slide #: 12

Doctor: *Ahmad Al-Bataineh*

Date:



# Nutrition in Adolescence

Krause's *Food  
& Nutrition Therapy*



# Nutrition in adolescence

- n** Adolescence growth and development include both rapid physical growth and dramatic psychosocial development with sexual maturing.
- n** Normal adolescent growth and development require increased nutritional support.
- n** Adolescence physical activities and health problems lead to specific nutritional needs.
- n** Personal needs guide approaches to adolescent nutrition assessment, counseling, and management.

# Adolescent growth and development

**n** Physiologic Growth:

**n** Puberty: the process of physically developing from a child to an adult is called puberty. Puberty referring to maturation of the total body, is initiated by poorly understood physiologic factors.

**n** The individual will gain about 20% of adult height and 50% of adult weight during pubertal growth.

**n** Most of the body organs will double in size.

# Initiation of puberty

- n** What causes the upsurge in hormonal activity that initiates pubertal development?
- n** The exact factors or combination of factors that trigger these changes is still unknown. Many theories have been suggested. One popular theory proposes that there is a “gonadostat”, an area in the brain that is extremely sensitive to the sex steroids estrogen, testosterone, and progesterone. This “gonadostat” governs the release of these hormones by a feedback mechanism that allows increased production with the onset of puberty.



# Growth and Development

- n Physiologic changes
- n Puberty
- n Sexual maturity rating (Tanner stage)
- n Growth velocity
- n Independence and autonomy
- n Body image

# Cognitive and Emotional Development

- n** Early adolescence (ages 13 to 15)
- n** Middle adolescence (ages 15 to 17)
- n** Late adolescence (ages 18 to 21)

# Nutrient Requirements

**n** Energy

**n** Protein

**n** Carbohydrates and fiber

**n** Fat

**n** Minerals and vitamins: calcium, iron, zinc, folic acid



# Supplement Use

- n** Variety of foods preferred over supplements
- n** Most adolescents do not consume nutrient-dense foods
- n** Use of herbal and botanical supplements

# Food Habits

- n** Irregular meals
- n** Excessive snacking
- n** Eating away from home (especially fast foods)
- n** Dieting and meal skipping

# Factors Influencing Food Habits

- n Decreasing influence of family
- n Increasing influence of peers
- n Increasing media exposure
- n Increasing prevalence of employment outside home
- n Greater discretionary spending capacity
- n Increasing responsibilities (less time to eat with families)



# Dieting and Body Image

- n Disturbance in body image
- n High prevalence of dieting

# Nutrition Screening, Assessment, and Counseling

- n** Recommend annual screening
- n** Include weight, height, and BMI
- n** Nutritional assessment should include an evaluation of the nutritional environment, including parental, peer, school, cultural, and personal lifestyle factors

# Vegetarian Dietary Patterns

- n** Well-planned vegetarians diets can provide adequate nutrients
- n** Very restrictive diets may signal disordered eating
- n** Vegan diets do not provide vitamin B<sub>12</sub> and may be low in calcium, vitamin D, zinc, and iron
- n** Inappropriately selected vegetarian diets can result in malnutrition



# Eating Disorders

- n** Third most common chronic illness in adolescent females
- n** Anorexia nervosa
- n** Bulimia nervosa
- n** Eating disorders not otherwise specified

# Obesity

- n** Increasing prevalence of overweight and obese teenagers
- n** Multifactorial health issue
- n** Short-term and long-term health outcomes
- n** Importance of early identification and intervention
- n** Concern over bariatric surgery

# Hyperlipidemia and Hypertension

- n** Onset of CVDs during youth
- n** Many risk factors are co-morbid conditions
- n** Diagnosis and treatment
- n** NCEP and DASH diets



# Physical Activity

- n** Numerous health benefits from physical activity
- n** Decline in physical activity during adolescence

# Sports Nutrition

- n** Unique nutrient needs
- n** Adequate fluid intake to prevent dehydration
- n** Vulnerable to eating disorders
- n** Female athlete triad

# Teen Pregnancy

**n** Recommended weight gain based on BMI. Weight gain during teen pregnancy is at the upper end of the recommended range, 16 to 18 kg.

Young gynecologic age or undernourished at time of conception = greatest nutritional needs

**n** Importance of nutrition assessment and referral



# Focal Points

- n** Adolescence is a period of tremendous physical and cognitive changes.
- n** Teens are nutritionally vulnerable because of increased need for all nutrients at a time when changes in lifestyle and food habits greatly affect nutrient intake.
- n** Adolescents with special needs, such as those who participate in sports, have a chronic illness, are pregnant, diet excessively, or use alcohol and drugs, are at high risk for nutritional inadequacies and have the greatest need for nutrition education and counseling.
- n** Educating adolescents about the optimal energy and fat intake and level of physical activity helps them to develop a healthy body and lifestyle and avoid overweight, obesity and its co-morbidities of hypertension and hyperlipidemia.