



QUIZ TIME

Bio- chemistry

Lec 11

Done by:

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1. A 3-year-old child presents with bow legs, a protruding forehead, pigeon chest, and delayed milestones (sitting, teething, walking). Radiographs show widened epiphyses and bowed tibiae. The most likely diagnosis is:

- a) Osteomalacia
- b) Osteogenesis imperfecta
- c) Rickets
- d) Scurvy
- e) Achondroplasia

Answer: c) Rickets

Which vitamin deficiency is most commonly associated with the condition described in the case?

- a) Vitamin A
- b) Vitamin B12
- c) Vitamin C
- d) Vitamin D
- e) Vitamin K

Answer: d) Vitamin D

Which of the following is NOT a symptom or consequence of chronic Vitamin A toxicity?

- A) Dry, itchy skin with hair loss
- B) Birth defects in pregnant women
- C) Increased bone density
- D) Liver abnormalities

Ans: C

Which of the following is a provitamin for Vitamin D3?

- a) Ergocalciferol
- b) β -Carotene
- c) 7-dehydrocholesterol
- d) Cholecalciferol
- e) Retinol

Answer: c

?Which of the following is a provitamin for Vitamin A

- a) Retinol
- b) Retinal
- c) β -Carotene
- d) 7-dehydrocholesterol
- e) Ergosterol

Ans:c

Which of the following is a poor source of Vitamin D3?

- A) Cod liver oil
- B) Liver
- C) Milk
- D) Egg yolk

Ans :C

Which of the following enzymes converts 25-hydroxycholecalciferol (25-OH-D3) into the active form 1,25-dihydroxycholecalciferol (calcitriol)?

- A) 25-hydroxylase in the liver
- B) 1α -hydroxylase in the kidney
- C) 7-dehydrocholesterol reductase in the skin
- D) Hydroxysteroid dehydrogenase in the intestine

Ans B

8Which of the following functions is directly related to β -carotene's ability to trap free radicals in tissues?

- a) Vision
- b) Antioxidant activity
- c) Growth
- d) Reproduction
- e) Epithelial integrity

Answer: b

The role of Vitamin A in vision is mainly due to:

- a) Cholecalciferol production in the retina
- b) Retinal involvement in light detection
- c) β -carotene conversion to retinol in the eye
- d) Maintenance of conjunctival epithelium only
- e) Prevention of lens calcification

Answer: b

Which function of Vitamin A helps maintain normal differentiation and function of skin and mucous membranes?

- a) Vision
- b) Epithelial integrity
- c) Growth
- d) Anticancer activity
- e) Antioxidant activity

Answer: b

Vitamin A supports reproduction by:

- a) Stimulating pituitary gonadotropin release only
- b) Enhancing spermatogenesis and placental function
- c) Increasing estrogen production
- d) Maintaining vaginal epithelial keratinization
- e) Promoting oocyte meiosis only

Answer: b

Both Vitamin A and carotenoids are believed to have:

- a) Anti-inflammatory activity
- b) Anticancer activity
- c) Anti-parasitic activity
- d) Anticoagulant activity
- e) Antiviral activity

Answer: b

The role of Vitamin A in growth involves:

- a) Increasing appetite only
- b) Stimulating protein breakdown
- c) Normal growth, cell differentiation, and bone growth
- d) Increasing only muscle hypertrophy
- e) Suppressing growth hormone

Answer: c

Which mnemonic can help remember the main functions of Vitamin A

- a) ABCDE
- b) AVERAG
- c) AVENGER
- d) AVERT
- e) GAVER

Answer: b

Vitamin E deficiency can cause sterility due to:

- a) Impaired spermatogenesis and fetal resorption**
- b) Hormonal imbalance**
- c) Lack of vitamin K**
- d) Low calcium levels**

Ans:A

Which of the following is NOT a symptom of rickets?

- a) Delayed walking and teething**
- b) Bow legs**
- c) Pigeon chest**
- d) Blue sclera**

Ans :d

