

Biological Anthropology: Human Biology and Health

Anthropology · Practice Test · 15 Questions

1. Which specific cranial measurement index, used in historical physical anthropology, defines dolichocephalic skulls as having a breadth-to-length ratio of less than 75?

- A) Cephalic Index
- B) Frankfurt Horizontal
- C) Glabella-Opisthocranium distance
- D) Bizygomatic width

2. In human osteology, the presence of 'cribra orbitalia' in the superior eye orbits is most commonly associated with which physiological condition in bioarchaeological contexts?

- A) Scurvy
- B) Porotic hyperostosis resulting from anemia
- C) Hypervitaminosis A
- D) Congenital syphilis

3. The 'thrifty gene hypothesis,' proposed by James Neel, suggests that the prevalence of Type 2 diabetes in modern populations is a maladaptive byproduct of evolutionary selection for what?

- A) High basal metabolic rate
- B) Efficient fat storage for feast-famine cycles
- C) Increased insulin sensitivity
- D) Reduced dietary fiber digestion

4. Which bone in the human body is characterized by the presence of a 'linea aspera' which serves as a primary attachment point for the muscles of the posterior compartment of the thigh?

- A) Tibia
- B) Fibula
- C) Femur
- D) Humerus

5. What is the primary diagnostic skeletal indicator used to distinguish between treponemal diseases like yaws or syphilis in ancient remains?

- A) Vertebral collapse
- B) Periosteal reaction on the tibia (saber shin)
- C) Cranial vault porosity
- D) Sacral fusion

6. The metabolic cost of encephalization in humans requires what percentage of total resting metabolic rate, despite the brain representing only 2% of body mass?

- A) 5-8%
- B) 10-12%
- C) 20-25%
- D) 35-40%

7. Which dental pathology is characterized by horizontal linear defects in the enamel, indicating physiological stress during the individual's childhood development?

- A) Dental caries
- B) Linear enamel hypoplasia
- C) Calculus deposition
- D) Periapical abscess

8. In evolutionary medicine, the 'mismatch hypothesis' explains modern autoimmune disorders as a result of:

- A) Lack of exposure to parasites and commensal microbes (Hygiene Hypothesis)
- B) Rapid shift to high-glycemic diets
- C) Over-exposure to ultraviolet radiation
- D) Genetic drift in small populations

9. Which anatomical structure, absent in all other extant primates, is essential for the precision grip and is highly developed in the human hand?

- A) Opposable hallux
- B) Flexor pollicis longus
- C) Adductor pollicis
- D) Extensor digitorum communis

10. The 'obstetric dilemma' in human evolution posits a trade-off between which two competing biological requirements?

- A) Bipedal locomotion and large brain size
- B) Tool use and digestive capacity
- C) Dental size and jaw musculature
- D) Skin pigmentation and Vitamin D synthesis

11. Which skeletal feature is considered a hallmark of bipedal locomotion, reflecting the repositioning of the foramen magnum?

- A) Increased cranial capacity
- B) Anterior placement of the foramen magnum
- C) Expansion of the zygomatic arches
- D) Flattening of the mastoid process

12. What is the clinical significance of the 'sacral index' when determining sex in skeletal remains?

- A) It measures the curvature of the spinal column
- B) It represents the ratio of the breadth to the length of the sacrum
- C) It indicates the degree of lumbar lordosis
- D) It measures the angle of the pelvic inlet

13. The presence of Harris lines on long bones, visible via radiography, indicates:

- A) Periods of arrested growth due to illness or malnutrition
- B) Genetic markers for height
- C) Fracture healing patterns
- D) Bone density loss due to osteoporosis

14. Which of the following describes the 'Allen's Rule' as applied to human body morphology?

- A) Humans in cold climates have shorter, stockier limbs to conserve heat
- B) Humans in hot climates have larger body mass to store water
- C) Humans in high altitudes have larger lung capacities
- D) Humans in cold climates have flatter faces to prevent frostbite

15. Which specific morphological change in the pelvis is an essential adaptation for the bipedal gait, acting as an abductor mechanism to stabilize the trunk?

- A) Widening of the ischial tuberosity
- B) Shortening and widening of the iliac blades
- C) Expansion of the pubic symphysis
- D) Increased length of the coccyx