

# Developmental Biology and Physiology

Developmental Psychology · Practice Test · 18 Questions

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**1. At what stage of prenatal development does the human heart typically begin to beat?**

- A) Weeks 3-4
- B) Weeks 8-9
- C) Weeks 12-14
- D) Week 20

**2. Which bone in the human body is the last to complete ossification, typically occurring in the mid-twenties?**

- A) Femur
- B) Clavicle
- C) Sternum
- D) Patella

**3. What is the primary factor responsible for the 'growth spurt' observed during early adolescence?**

- A) Increased sleep duration
- B) Release of growth hormone and sex steroids
- C) High protein intake
- D) Increased physical activity

**4. Which part of the brain is the last to reach full structural maturity in humans, often not until the mid-twenties?**

- A) Amygdala
- B) Cerebellum
- C) Prefrontal cortex
- D) Hippocampus

**5. What is the medical term for the programmed cell death that helps shape human digits during embryonic development?**

- A) Mitosis
- B) Apoptosis
- C) Meiosis
- D) Necrosis

**6. During which decade of life does human muscle mass (sarcopenia) typically begin to naturally decline in sedentary individuals?**

- A) 20s
- B) 30s
- C) 50s
- D) 70s

**7. What is the primary source of nutrition for the human fetus during the first trimester?**

- A) Maternal blood direct infusion
- B) The yolk sac
- C) Placental transfer
- D) Amniotic fluid absorption

**8. The fontanelles (soft spots) in a human infant's skull typically close completely by what age?**

- A) 3-6 months
- B) 9-12 months
- C) 18-24 months
- D) 3-4 years

**9. Which hormone is predominantly responsible for the development of secondary sexual characteristics in females?**

- A) Testosterone
- B) Estrogen
- C) Progesterone
- D) Cortisol

**10. What is the approximate age at which the human brain reaches about 90% of its adult volume?**

- A) Age 2
- B) Age 5
- C) Age 10
- D) Age 16

**11. What is the function of the myelin sheath in the developing nervous system?**

- A) To produce neurotransmitters
- B) To increase the speed of nerve impulse conduction
- C) To anchor neurons in the cortex
- D) To protect the brain from toxins

**12. At what developmental stage does the 'palmar grasp reflex' typically disappear in infants?**

- A) 1 month
- B) 4-6 months
- C) 1 year
- D) 2 years

**13. What is the main physiological cause of menopause in the female reproductive system?**

- A) Uterine atrophy
- B) Depletion of ovarian follicles
- C) Decrease in pituitary function
- D) Hypothalamic shutdown

**14. During fetal development, which organ is the last to reach full functional maturity?**

- A) Heart
- B) Liver
- C) Lungs
- D) Kidneys

**15. The loss of skin elasticity in older adults is primarily due to the breakdown of which structural protein?**

- A) Keratin
- B) Collagen
- C) Myosin
- D) Actin

**16. What happens to the human lens of the eye as part of the normal aging process?**

- A) It becomes more flexible
- B) It loses transparency and elasticity (presbyopia)
- C) It increases in refractive power
- D) It shifts color to blue

**17. Which type of fat, which helps with thermoregulation, is prominent in newborns but decreases significantly with age?**

- A) White adipose tissue
- B) Brown adipose tissue
- C) Visceral fat
- D) Subcutaneous fat

**18. By the end of the first year of life, a human infant's birth weight typically:**

- A) Doubles
- B) Triples
- C) Quadruples
- D) Increases by 50%