

Cell Injury, Death, and Adaptations

Pathology · Practice Test · 15 Questions

1. What is the most common stimulus for hypertrophy in skeletal and cardiac muscle?

- A) Hormonal stimulation
- B) Increased workload
- C) Decreased blood flow
- D) Nutritional deficiency

2. Which cellular adaptation involves the replacement of one differentiated cell type with another?

- A) Hyperplasia
- B) Atrophy
- C) Metaplasia
- D) Dysplasia

3. Which of the following is considered the earliest manifestation of almost all forms of cell injury?

- A) Fatty change
- B) Cellular swelling
- C) Necrosis
- D) Apoptosis

4. Which type of necrosis is characterized by the transformation of tissue into a viscous liquid?

- A) Coagulative necrosis
- B) Caseous necrosis
- C) Liquefactive necrosis
- D) Fibrinoid necrosis

5. What is the hallmark morphological change of irreversible cell injury?

- A) Cell death
- B) Hyperplasia
- C) Atrophy
- D) Metaplasia

6. Which nuclear change in necrosis refers to nuclear fading due to DNA degradation?

- A) Pyknosis
- B) Karyorrhexis
- C) Karyolysis
- D) Chromatin condensation

7. In which condition would you most likely encounter caseous necrosis?

- A) Brain infarct
- B) Tuberculous infection
- C) Acute pancreatitis
- D) Atherosclerosis

8. What is the primary function of the caspases in apoptosis?

- A) Energy production
- B) DNA replication
- C) Enzymatic degradation
- D) Lipid synthesis

9. Which endogenous pigment is known as the 'wear and tear' pigment?

- A) Hemosiderin
- B) Melanin
- C) Lipofuscin
- D) Carbon

10. What is the primary mechanism of metastatic calcification?

- A) Local tissue necrosis
- B) Hypercalcemia
- C) Ischemia
- D) Aging

11. Which organ is most commonly affected by steatosis (fatty change)?

- A) Heart
- B) Liver
- C) Kidney
- D) Muscle

12. What are the repeating DNA sequences at the ends of chromosomes called?

- A) Centromeres
- B) Chromatids
- C) Telomeres
- D) Nucleosomes

13. Which pathway of apoptosis is triggered by death receptors like TNF and Fas?

- A) Intrinsic pathway
- B) Extrinsic pathway
- C) Mitochondrial pathway
- D) Autophagic pathway

14. What term describes the accumulation of carbon pigment in the lungs?

- A) Hemosiderosis
- B) Anthracosis
- C) Xanthoma
- D) Steatosis

15. Which enzyme catalyzes the oxidation of tyrosine to produce melanin?

- A) Tyrosinase
- B) Phospholipase
- C) Endonuclease
- D) Caspase