



Pathology L 1

1. A patient experiences chronic hypertension, leading to increased left ventricular workload. Which of the following best describes the cellular response in the myocardium?

- A) Pure hyperplasia
- B) Physiologic hypertrophy
- C) Pathologic hypertrophy
- D) Metaplasia
- E) Apoptosis

2. Which mechanism is responsible for the increase in the size of skeletal muscle cells during resistance training?

- A) Hyperplasia
- B) Pure hypertrophy
- C) Mixed hypertrophy
- D) Atrophy
- E) Dysplasia

3. A 50-year-old man with benign prostatic hyperplasia is likely to experience which of the following changes in his prostate?

- A) Pure hypertrophy
- B) Physiologic hyperplasia
- C) Pathologic hyperplasia
- D) Apoptosis
- E) Metaplasia

4. Barrett's esophagus, resulting from chronic GERD, is an example of which type of cellular adaptation?

- A) Hypertrophy
- B) Hyperplasia
- C) Dysplasia
- D) Metaplasia
- E) Necrosis

5. Which of the following best explains why neurons do not undergo hyperplasia?

- A) They lack stem cells
- B) They are terminally differentiated
- C) They undergo hypertrophy instead
- D) They undergo metaplasia under stress
- E) They have high regenerative capacity

6. In cases of prolonged ischemia, which of the following is the most likely irreversible change in myocardial cells?

- A) Hypertrophy
- B) Necrosis
- C) Hyperplasia
- D) Metaplasia
- E) Autophagy

7. A 45-year-old woman with a history of heavy smoking presents with bronchial squamous metaplasia. Which factor most increases her risk of developing cancer?

- A) Persistent stress from smoking
- B) Vitamin A deficiency
- C) Loss of bronchial cilia
- D) Loss of mucus-secreting goblet cells
- E) Reversible adaptation

8. A decrease in estrogen levels in postmenopausal women leads to which form of cellular adaptation in the endometrium?

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

9. A 40-year-old man experiences significant muscle wasting after prolonged immobilization of a limb. What cellular adaptation is most likely responsible for this change?

- A) Atrophy
- B) Hypertrophy
- C) Hyperplasia
- D) Metaplasia
- E) Apoptosis

10. In compensatory hyperplasia of the liver following partial resection, what is the primary stimulus for increased cell division?

- A) Hormonal stimulation
- B) Growth factor stimulation
- C) Loss of innervation
- D) Hypoxia
- E) Chronic inflammation

11. Which of the following distinguishes reversible from irreversible cell injury in the context of ischemia?

- A) Necrosis in reversible injury
- B) Apoptosis in reversible injury
- C) Loss of cell function in irreversible injury
- D) Preservation of membrane integrity in irreversible injury
- E) Reversible injury leads to cell death by necrosis

12. A 60-year-old man presents with benign prostatic hyperplasia. Which of the following features is correct regarding pathologic hyperplasia?

- A) Occurs due to decreased androgen levels
- B) Does not increase the risk of cancer
- C) Can develop into cancer over time
- D) Involves apoptosis
- E) Only occurs in terminally differentiated cells

13. Which cellular adaptation is least likely to be reversible after the removal of a stressor?

- A) Atrophy
- B) Hyperplasia
- C) Hypertrophy
- D) Metaplasia
- E) Apoptosis

14. Squamous metaplasia of the bronchial epithelium in smokers is associated with loss of which of the following?

- A) Cellular differentiation
- B) Proliferative capacity
- C) Ciliary function
- D) Nerve supply
- E) Membrane integrity

15. A patient presents with myocardial hypertrophy due to chronic hypertension. Which of the following explains why this hypertrophy is considered pathologic?

- A) It results in increased contractile strength
- B) It is triggered by growth factor stimulation
- C) It leads to eventual heart failure
- D) It affects both ventricles equally
- E) It involves an increase in cell number

1-C

2-B

3-C

4-D

5-B

6-B

7-A

8-D

9-A

10-B

11-C

12-C

13-E

14-C

15-C