

Lecture 1

Body's Response to Disease

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Part 4 Response of the Body to Injury
Acute and Chronic Tissue Injury

Factors Relating to Tissue Recovery from Acute Injury

- Magnitude of injury
- Duration of injury
- Location of injury
- Cell type injured
- Type of injury
 - Nutrient deficiency
 - Physical injury
 - Infectious injury
 - Chemical injury

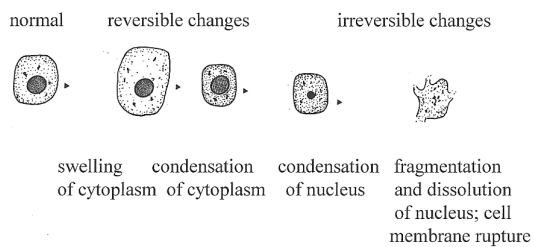
Stages of Tissue Injury

- Sublethal or reversible cell injury
 - Nuclear preservation
 - Variable changes in the cytoplasm

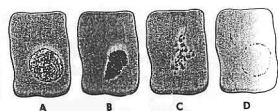
Lethal Cell Injury

- Acute or prolonged injury
- Cell energy system depleted
- Altered cell membrane permeability
- Cell nucleus destruction
- Cell membrane disruption
- Lysozomal autodigestion of necrotic cell

Cellular Changes Leading to Cell Death



Nuclear Changes in Cell Death



A=normal nucleus; B=pyknotic nucleus; C=karyorrhectic nucleus; D=karyolysis or autodigestion

Chronic Tissue Injury

Forms of Chronic tissue Injury

- Atrophy
 - Senile
 - Disuse
 - Pressure
 - Endocrine

Additional Forms of Chronic Tissue Injury

- Fatty metamorphosis
- Hyalinization
- Calcification
- Brown atrophy
- Hemosiderosis



Hemosiderin
Deposit
