

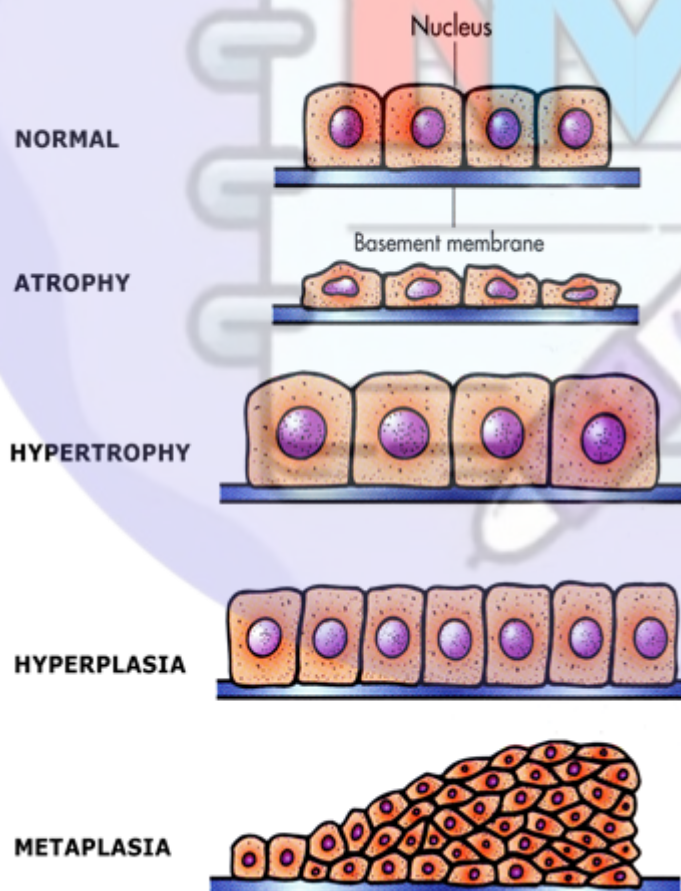
CELL ADAPTION

Definition

It is a process where cells respond to pathological stimuli or environmental changes by altering their structure and function to survive and this is called cell adaptation.

Types Of Adaptations

- (i) Hypertrophy
- (ii) Hyperplasia
- (iii) Atrophy
- (iv) Metaplasia



(i). Hypertrophy

Definition

Hypertrophy is defined as an increase in the size of the tissue or organ due to increase in the size of cells.

It develops in organ composed of non dividing cells such as muscle.

Example : Cardiac and Skeletal muscles.

(ii). Hyperplasia

Definition

Hyperplasia is defined as an increase in the number of cells in an organ or tissue, usually resulting in increased size / mass of the organ or tissue.

(iii). Atrophy

Definition

Atrophy is defined as reduced size of an organ or tissue resulting from decrease in cell size and number.

In atrophy function of an organ is also reduced.

(iv). Metaplasia

Definition

Metaplasia is defined as a reversible change in which one adult cell type (epithelial or mesenchymal) is replaced by another adult cell type.