OEDEMA

Definition: Pathological accumulation of excess fluids in the interstitial tissue spaces and serous sacs.

- **Causes of oedema**:
  (1) **Increased capillary hydrostatic pressure:** as in cases of congestive heart faileur.
  (2) **Decrease colloid osmotic pressure of the plasma:** as in cases of malnutrition and in renal disease.
  (3) **Increased capillary permeability:** as in inflammation and allergic edema.
  (4) **Lymphatic obstruction**: as in filariasis.

- **Classification of oedema**
  I. LOCALIZED OEDEMA
  (a) Inflammatory Oedema:
  (b) Obstructive Oedema: Lymphatic obstruction caused by flariasis.
  (c) Allergic (angioneuritic) oedema:
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  II.GENRALIZED OEDEMA
  (1)Cardiac oedema: Occurs in congestive heart failure.
  (2) Renal oedema: Occurs in renal diseases:
  (3) Nutritional oedema: Caused by hypoproteinaemia:

- **Another classification**
- **Soft oedema (pitting*):*** The accumulated fluid is present free in the tissue spaces and can be moved by pressure so the affected part pits on pressure e.g. cardiac, renal and nutritional oedema.
  Hard oedema (non-pitting). The oedema fluid is united with the tissue elements, so the oedematous part does not pit on pressure e.g. lymphatic oedema.

- **DISTURBANCES OF GROWTH**

  ATROPHY

  definition: Decrease in the size and weight of a tissue or organ after it has reached its full development. Atrophy may be due to reduction in the number or size of component cells, or both.

  Types of Atrophy:

  Physiological Atrophy:

  (1) Atrophy of the thymus after puberty.

  (2) Atrophy of the ovary and breast after menopause.

- **Pathological Atrophy:**
  (1) General Atrophy:
  (a) Increased catabolism as in tuberculosis and malignancy.
  (b) Chronic malnutrition and starvation.
  (c) Senile atrophy in old age.
  (2) Iocalized Atrophy:
  Atrophy of the limb muscles after immobilization
  Atrophy of the female genital organs and breast after removal of the ovary.

- **HYPertrophy**
  Definition: Abnormal increase in the size and weight of an organ or tissue due to increase in the size of its cells.
  Types:
  (1) Physiological hypertrophy: Occurs in the pregnant uterus and in the muscles of the athletes.
  (2) Pathological hypertrophy:
  Hypertrophy of the left ventricle in hypertension, aortic stenosis.
  Hypertrophy of the bladder in bladder neck obstruction.

- **HYPERPLASIA**
  Definition: Increase in the size and weight of an organ or tissue due **to** increase in the number of its component cells.
  Types:
  (I) Physiological Hyperplasia: Occurs in the breast and genital organ at puberty.
  (2) Pathological Hyperplasia:
  Hyperplasia of the bone marrow after haemorrhage.
  Mamary cystic hyperplasia.
  Nodular hyperplasia of prostate

- **METAPLASIA**
  Definition: Transformation of differentiated cells (mature) into another differentiated cells of the same category.
  Types:
  Epithelial metaplasia: Columnar or transitional epithelium change the stratified squamous type, e.g. in chronic inflammation of the bronchi and in bilharziasis of the urinary bladder.