



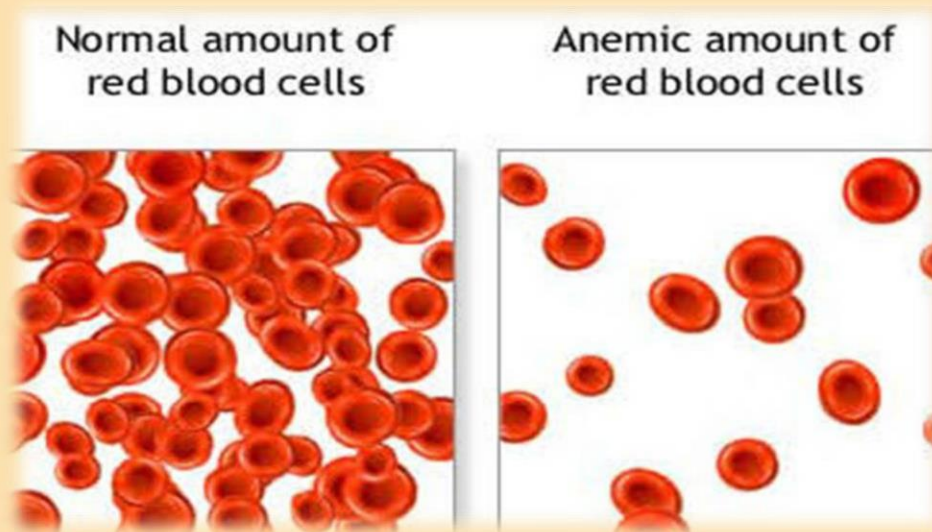
# Anemias

## Lecture-I I

- **Anemias are group of disorders in which the Hb concentration of the blood is below the normal range for the age and sex of the subject.**

# ANAEMIA

Anaemia is ↓ in total number of erythrocytes in circulating blood or ↓ in quality & quantity of Haemoglobin.



- When Hb concentration is less than
- 13g/dl in adult males
- 11.5 g/dl in adult females
- 9.5g/dl at 3 months of age
- Grading of anaemia
- Mild anaemia – Hb 8-10g/dL
- Moderate anaemia – Hb 6-8g/dL
- Severe anaemia – Hb below 6g/dL

# A-Deficiency anaemia

- Iron deficiency anaemia
- **Megaloblastic anaemia** due deficiency of vitamin B12 (pernicious anaemia)
- Megaloblastic anaemia due deficiency of folic acid
- Protein and vitamin C deficiency

## B- Blood loss anaemia

- Haemorrhagic anaemia
- Acute post haemorrhagic anaemia as in accidents
- Chronic post haemorrhagic anaemia

# C- Haemolytic anaemias

- Relatively uncommon.
- Associated with increased destruction of RBCs.

## I. Hereditary haemolytic anaemia seen in

- a) Thalassaemia
- b) Sickle cell anaemia
- c) Hereditary spherocytosis
- d) Glucose 6- phosphate dehydrogenase deficiency

## 2. Acquired haemolytic anaemias like immunohaemolytic anaemia

- Haemolytic anaemia due to direct toxic effects (malaria, snake venom, drugs etc.)
- Haemolytic anaemia in splenomegaly



# D- Aplastic anaemia

- Failure of bone marrow to produce RBCs.

# E- Anaemia due to chronic

- Tuberculosis, chronic infections, malignancies, chronic lung diseases.

- It is a disease state in which the proportion of blood volume that is occupied by red blood cells increases.
- An increase in the no of red blood cells =absolute polycythemia.
- Due to decrease in the volume of plasma =relative polycythemia .

# Polycythemia

- Hematocrit — Polycythemia in the adult patient is suspected when the HCT is  $>48$  or  $>52$  % in F and M, respectively.
- (The hematocrit (HCT) is expressed as the percent of a blood sample occupied by intact RBCs. ).
- Hemoglobin concentration — when the Hb is  $>16.5$  or  $>18.5$  g/dL in F and M, respectively.
- The Hb concentration is its content in grams per 100 mL of whole blood.

