

- ANAEMIA IS DEFINED AS A REDUCTION OF THE TOTAL CIRCULATING RED CELL MASS BELOW NORMAL LIMITS TO ADEQUATELY DELIVER OXYGEN TO PERIPHERAL TISSUE .

CLASSIFICATION	ICMR	WHO
MILD	10-11 gm/dl	9-11 gm/dl
MODERATE	7-10	7-9
SEVERE	4-7	< 7
VERY SEVERE	< 4 DECOMPENSATED	

- 1 IN 2 INDIAN PREGNANT FEMALE IS ANEMIC.
- 1.62 BILLION PEOPLE (FEMALE & CHILDREN) ARE ANEMIC INVOLVED.
- OUT OF COMMON CAUSE OF MATERNAL MORTALITY ANEMIA RESPONSIBLE FOR 20% AS A DIRECT CAUSE & ANOTHER 20% CAUSE.
- MAJOR CAUSE OF ANEMIA IS IRON DEFICIENCY ANEMIA WHICH IS MOSTLY DUE TO NUTRITIONAL DEFICIENCY WHICH INCLUDES POOR DIET AND VEGETARIAN DIET. OTHER CAUSES ARE POOR ABSORPTION, INCREASED DEMAND, AND EXCESS LOSS..

<p>INADEQUATE INTAKE OF IRON</p> <ul style="list-style-type: none"> ➤ POOR DIET ➤ POVERTY ➤ IGNORANCE ➤ INADEQUATE FOLATE OR VITAMIN C INTAKE ➤ FAT DIETS 	<p>POOR BIO AVAILABILITY/ ABSORPTION</p> <ul style="list-style-type: none"> ➤ ABSORPTION ONLY 5% ➤ POOR ABSORPTION – LESS NON HEME IRON, (FERRIC IRON), LESS VITAMIN C, LESS MPF ➤ INHIBITORS- FIBERS, OXALATES, FIBERS, ETC ➤ EXCESS TEA OR COFFEE, MILK, EGGS ➤ MALABSORPTION &/ OR DISORDERS OF SMALL INTESTINE ➤ ALCOHOLICS AND SMOKERS ➤ PICA ➤ CERTAIN MEDICATION / DRUGS
<p>INCREASED DEMAND OF IRON</p> <ul style="list-style-type: none"> ➤ ALL WOMEN OF REPRODUCTIVE AGE / CHILD BEARING AGE GROUP ➤ PREGNANCY ➤ PERIOD OF RAPID GROWTH LIKE INFANCY CHILDHOOD AND ADOLESCENCE ➤ FEMALE ATHLETES 	<p>EXCESSIVE LOSS OF IRON</p> <ul style="list-style-type: none"> ➤ NORMAL BASAL LOSS (1mg/day) ➤ MENSTRUATION (2mg/day) ➤ REPEATED OR FREQUENT PREGNANCIES ➤ IUCDs ➤ INTESTINAL WORMS ➤ HOOKWORM INFESTATION AND OTHER TRANSMITTED HELMINTHS ➤ PEPTIC ULCER/ BLEEDING PILES ➤ MALARIA, TB ➤ ACCIDENTS/TRAUMA/SURGERY

- IRON FROM NON VEGETARIAN DIET IS READILY ABSORBED, SO **VEGANS** HAVE MORE INCIDENCE OF IRON DEFICIENCY ANEMIA.
- IN VEGETARIAN DIET IRON IS PRESENT AS Fe^{+2} WHICH HAS TO BE CONVERTED IN Fe^{+3} FORM FOR ABSORPTION, WHILE IN NON VEGETARIAN DIET IRON IS PRESENT AS Fe^{+3} FORM (HEME IRON) WHICH IS EASILY ABSORBED.
- IRON IS AVAILABLE IN BODY AS TWO FORMS ,

STORAGE FORM	FERRITIN, HEMOSIDERIN
TRANSPORT FORM	TRANSFERRIN
FUNCTIONAL IRON	HEMOGLOBULIN, MYOGLOBULIN

- **HEPCIDIN** WHICH IS SYNTHESIZED IN LIVER (WHICH IS PEPTIDE HORMONE). PLAYS IMPORTANT ROLE IN IRON HOMEOSTASIS.
- IRON DEFICIENCY CAUSES HYPOCHROMIC MICROCYTIC ANEMIA, WHILE MEGALOBLASTIC ANEMIA CAUSED BY VITAMIN B12 &/ OR FOLATE DEFICIENCY .
- B12 WATER SOLUBLE VITAMIN MAINLY DEFICIENT IN VEGANS. ITS DEFICIENCY CAUSES MEGALOBLASTIC ANEMIA, SLOWER HEALING, AND TINGLING, NUMBNESS.
- IT HAS BEEN PROVED SINCE DECADE THAT FOLATE DEFICIENCY CAUSES ENCEPHALY, AND NEURAL TUBE DEFECTS.