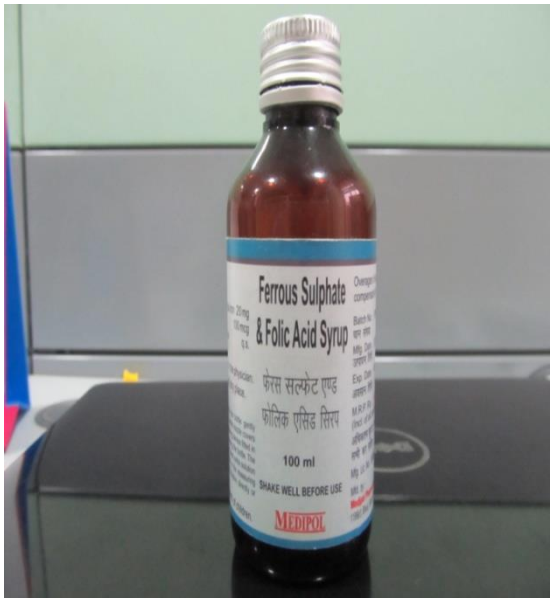
National Iron Plus Initiative

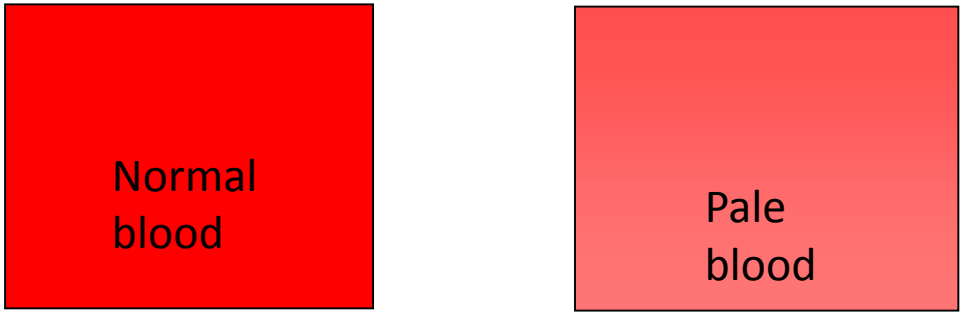
Concept of Iron Deficiency Anaemia



Orientation of DEO/BEO/ABEO

Anaemia

- Anaemia is a condition in which the number of Red Blood Cells (RBCs) and consequently their oxygen carrying capacity is insufficient to meet the body's physiological needs.
- For hemoglobin to be red and thick, it needs iron, folic acid, vitamin C, protein and vitamin B_{12} .
- Deficiency of these nutrients in diet makes haemoglobin thin, pale and less concentrated.



Cut off levels of Hb

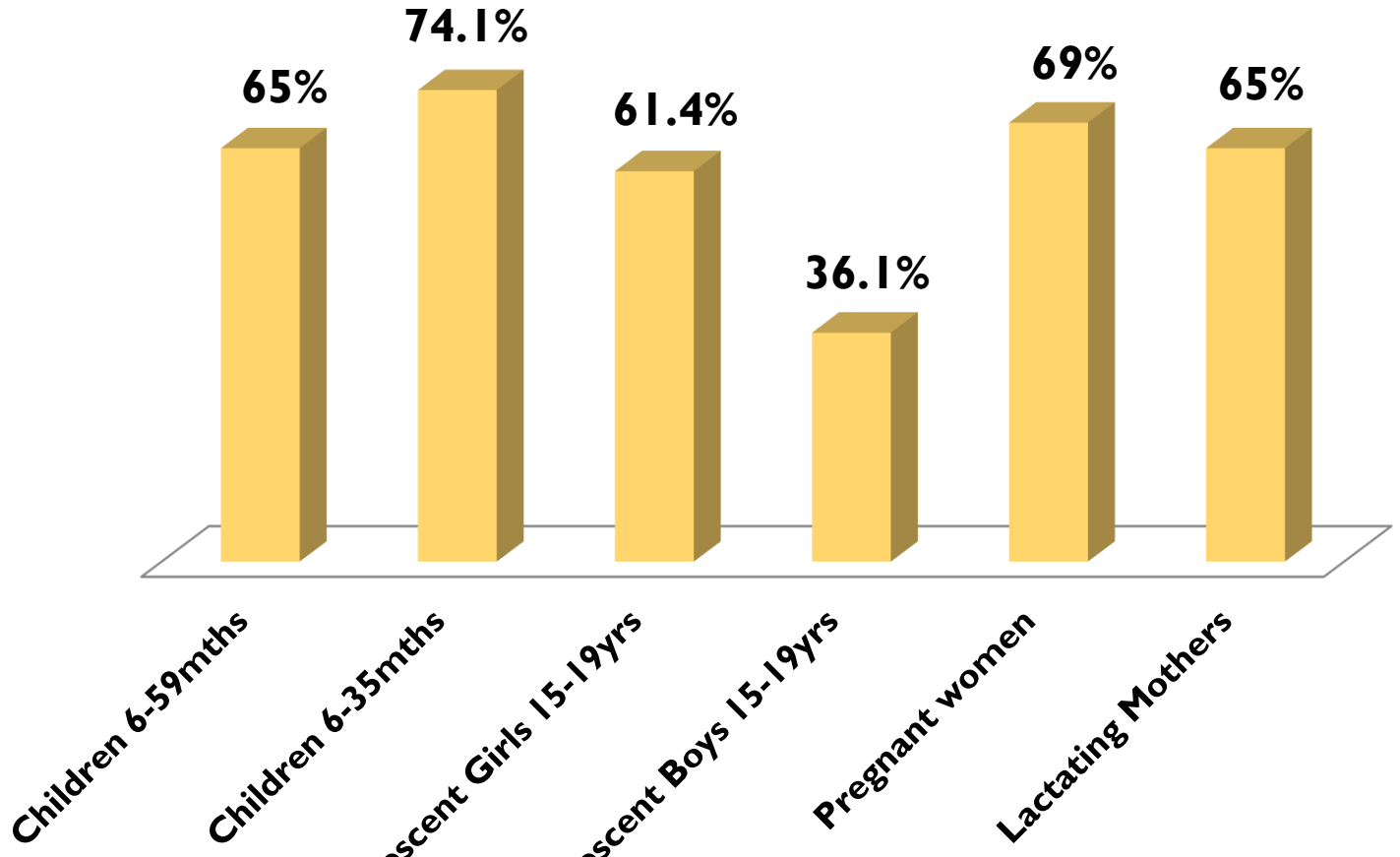
Age Groups	No anaemia	Mild	Moderate	Severe
Children 6-59 months	≥ 11	10 – 10.9	7 – 9.9	< 7
Children 5 – 11 years of age	≥11.5	11 – 11.4	8 – 10.9	< 8
Children 12 – 14 years of age	≥12	11 – 11.9	8 – 10.9	< 8
Non pregnant women (15 years and above)	≥12	11 – 11.9	8 – 10.9	< 8
Pregnant Women	≥11	10 – 10.9	7 – 9.9	< 7
Men	≥13	11 – 12.9	8 – 10.9	< 8

When do we consider anemia a public health problem?*

Population Prevalence	Dimension of Problem
Less than 5%	Not a problem
5% to less than 15%	Low magnitude
15% to less than 40 %	Moderate Magnitude
40% or more	High Magnitude

*WHO/UNICEF/UNU (2001)

Magnitude of Anaemia in Odisha



Source:
NFHS III

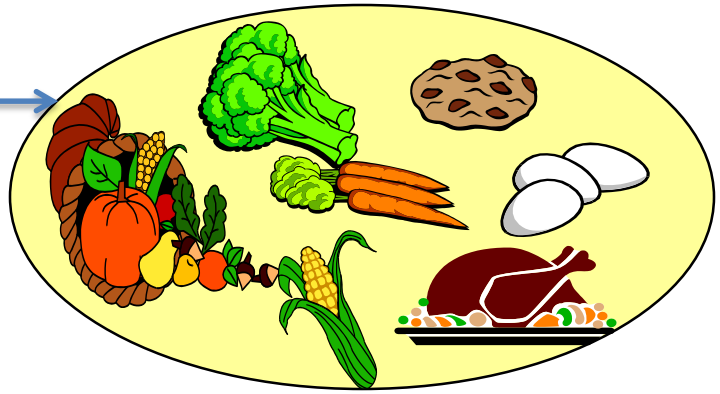
Consequences of Anemia

- Impaired Child Development
- Reduced Immunity
- Decreased level of concentration, IQ and lack of interest in work /study
- Poor school performance
- Poor work capacity, low energy & fatigue
- Poor productivity
- Maternal anaemia is associated with poor intrauterine growth and increased risk of preterm births resulting in increase low birth weight rates and affects their own survival during delivery

Anemia causes

a) Nutritional: deficiency of these nutrients due to

Low Dietary intake of iron



and

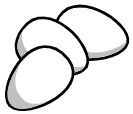
Low bio-availability

Tea with meal

Phytic acid and fibre in bran of cereals

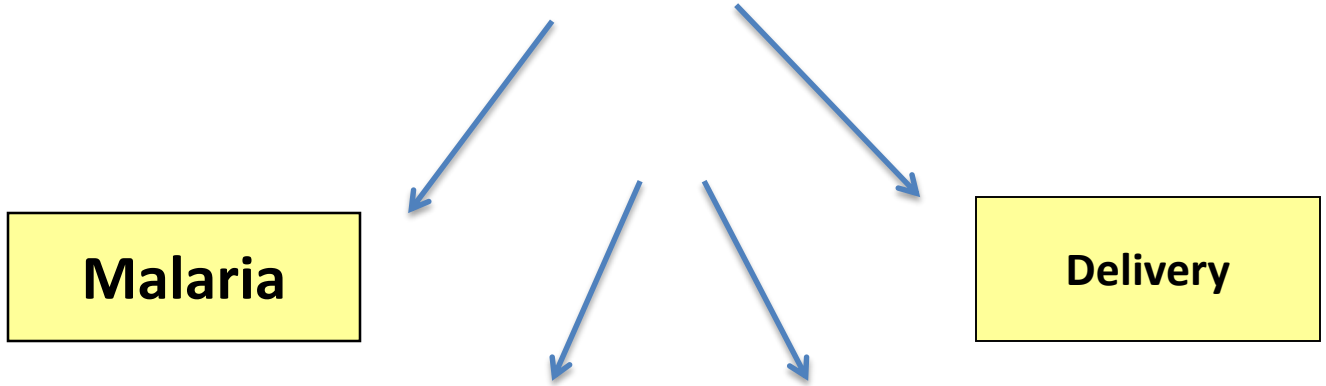
Calcium phosphate supplement with meal

Phosphvitin in egg



Anemia causes…..continued

b) Blood loss or destruction of blood cells due to:



In addition: During adolescence & pregnancy iron needs are very high

50% of Anaemia is due to Iron deficiency

Approaches to Control Iron Deficiency Anaemia

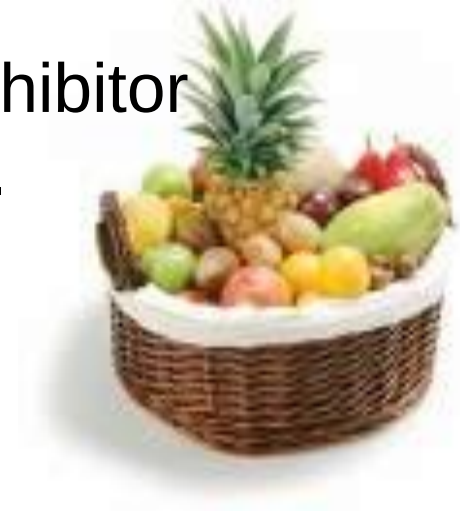
- **Food-Based Approach**
  - **Improve quantity and quality of diet**
  - **Fortification of food**
- **Prevention of malaria**
- **Family Planning**
- **IFA Supplementation**
- **De-worming**

Counseling for Dietary Diversification

- Green leafy vegetables and fruits
- Liver, egg, fish , meat
- Grains-wheat, jowar, bajra, sprouted pulses, ground nut, sesame , jaggery ,dried fruits
- Vitamin C rich foods help in absorption of iron. Citrus fruits (oranges, lemon), Indian gooseberry (Amla), apple, pear are rich in vitamin C.

Need to Improve food intake, iron fortified food and iron rich food - Dietary Diversification

- Long term approach.
- Involves nutrition education and changes in dietary habits of the population.
- Improve absorption of iron by lowering inhibitor and increasing promoter concentrations.



Thank you