

## **EXPERT COLUMN**

# IRON DEFICIENCY ANAEMIA

IN CHILDREN

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### INTRODUCTION

The development during infancy is rapid than any other period of life time. The growth and development is accompanied by a number of physiological changes which include change in body size, body composition, gastrointestinal system, excretory system, mental development feeding behaviour, circulatory development. The rapid growth during infancy is followed by generally slow growth between 1-6 years. The child becomes more active; social and environmental influences have a great impact on his food behaviour and eating pattern.

The need for nutrients is increased as growth and development continues. The schooling age 6-12 years is a latent period of growth. During this stage growth is slow and body changes occur gradually. The nutritional requirement is the same for boys and girls up to 9 years after which girls outdo boys and there is a change in some of nutrient requirements for boys and girls. If the adequate dietary intake of nutrients will not be fulfilled though diet or due to inadequate absorption and utilisation may develop severe deficiencies in children. Iron deficiency anaemia is one of the major nutritional deficiency disorder. Iron deficiency anaemia puts child at risk of developmental delays.



### **INCIDENCE**

More than 50% of preschool children suffer from iron deficiency anaemia. This is caused by the dietary lack of iron or inadequate absorption and utilisation of iron.

# **ICMR RECOMMENDATIONS: DIETARY ALLOWNCE OF IRON (MG)**

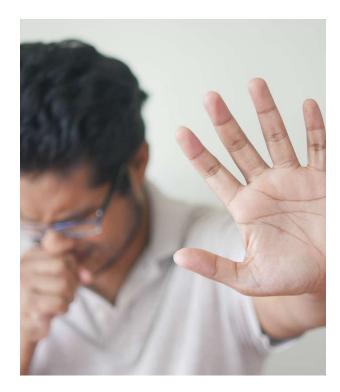
 Age 1-3 years: 12 4-6 years: 18

7-9 years: 26

10-12 years: Boys- 34 and Girls 19







# SIGNS AND SYMPTOMS OF IRON DEFICIENCY **ANAEMIA IN CHILDREN:**

- 1. Fatigue, Malaise in 90% of cases
- 2. Breathlessness in 50% cases
- 3. Poor memory
- 4. Depression
- 5. Palpitation
- 6. Personality changes
- 7. Early greying of hairs
- 8. Skin pallor
- 9. Fingernails become thin and flat and eventually results in koilonychia.
- 10. Atrophy of papillae of tongue, glossitis angular stomatitis
- 11. Dysphagia, gastritis.

### **MANAGEMENT**

The iron deficiency anaemia in child can be confirmed with the help of some pathological investigations. Plasma ferritin is a measure of iron stores and the single best test to confirm iron deficiency. A subnormal level is due to iron deficiency, hypothyroidism or vitamin C deficiency. Transferrin levels are lowered by malnutrition, liver diseases. In difficult cases it may still be necessary to examine a bone marrow aspirate for iron store. Without any blood investigations on the basis of signs and symptoms, anaemia can be suspected. In that case, dietary errors need to be corrected. Haemoglobin level should be above 10gm/dl.

# SOME NUTRITIONAL HEATH FOODS WHICH ARE REALLY HELPFUL TO RAISE THE **HAEMOGLOBIN LEVEL NATURALLY:**

- 1. Iron rich bread, whole wheat bread
- 2.Legumes
- 3. Dried fruits
- 4. Dark, green leafy vegetables
- 5. Fortified cereals
- 6. Carrots, beet root
- 7. Jaggery, black dates, black resins
- 8. Pomegranate, apple
- 9. Red meats, shellfish (Esp clams), poultry.
- 10. Egg yolk
- 11. Vitamin C (As vitamin C helps in absorption of iron)
- 12. Fruits kiwi, mango, pineapple, papaya, strawberries, cranberries, watermelon, blueberries, orange, grapefruit.
- 13. Vegetables broccoli, Brussels sprout, cauliflower, spinach, sweet and white potato, tomatoes.

Please note - In case of severe iron deficiency proper medicinal line of treatment under expert's opinion is mandatory.

