

# **ANAEMIA AND FOLATES**



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In India, Iron Deficiency Aneamia (IDA) is a significant public health problem. It is particularly prevalent among pre-school children, adolescent girls and pregnant and lactating women.

Recent survey conducted by the National Family and Health Survey (NFHS-3) indicated that, about 75% of infants between 6 months and 3 years of age are anaemic.

About 50% of pregnant women continue to be anaemic.

As compared to the earlier NFHS-2 survey, carried out 5 years ago, the proportion of anaemic in fact had marginally increased today.

Anaemia is a condition characterized by low haemoglobin levels in the blood and the poor haemoglobin status has negative impact on health.

### **Causes of anaemia**

- Low iron and folate intake from diets
- Blood loss
- Hookworm infestation
- Increased needs of dietary iron & lack in consumption of iron rich foods

### **Consequences of anaemia**

- Fatigue
- Low work efficiency and productivity
- Maternal morbidity and mortality
- Pregnancy wastage

- Premature delivery
- Low birth weight babies

## Symptoms



Pale spoon-shaped nails



Pale tongue (pallor)

## Prevention of anaemia



Green leafy vegetables (GLVs) are rich in vital micro-nutrients including iron, vitamin A, calcium, folates & vitamin C.

Consumption of GLVs daily or atleast 4-5 times a week will improve iron as well as vitamin A status among the individuals.

## Folic acid

- Fruits and vegetables are our best sources of vitamins and minerals in the diet.



- The word Folic acid is derived from a Latin word 'Folia' meaning leaves.

- Folic acid is abundantly available in leafy vegetables.
- Poor folic acid status of the mother during the first days of pregnancy may add to the increased risk of neural-tube defects.
- Chicken liver, beef, spinach, orange juice are also good sources of folic acid.



## Green leafy vegetables (GLVs)

- GLVs are a store house of important micronutrients including Iron and Beta carotene (Vitamin A).
- Regular intake of GLVs increases haemoglobin levels, thus, helping in checking anaemia in children, adolescents and pregnant and lactating women.



- Inclusion of vit.C rich foods in the diet ensures better absorption of iron from GLVs.

- GLVs help in building strong bones, teeth and gums.
- GLVs are also a good source of dietary fibre.

## Precaution : Do's

- Wash GLVs thoroughly to remove dirt and filth before chopping.



- Use minimum water for cooking.
- Cook leafy vegetables for short time in a covered vessel.
- Use the left over water after cooking GLVs in *dals*, soups or for making dough.
- Add little oil while cooking the GLV's as beta carotene (VitA) is fat soluble.



## Don't

- Don't wash chopped GLVs in water as it removes water-soluble vitamins.
- Don't throw away the water in which leafy vegetables are cooked.
- Don't deep fry leafy vegetables.
- Don't take tea immediately after consumption of foods as tea inhibits iron absorption.



Regular intake of seasonal fruits and vegetables helps to reduce the risk of degenerative diseases such as CVD.



## Iron and Folic Acid rich foods and their nutritive values

### Iron rich green leafy vegetables mg/100g

Amaranth <i>polygonoides</i>	27.3
Amaranth <i>spinosus</i>	22.9
Amaranth <i>panicelatus</i>	18.4
Amaranth <i>tristis</i>	38.5
Amaranth <i>viridis</i>	18.7
<i>Portulaca oleracea</i> (Paruppu keerai)	14.8

### Folic acid rich foods µg/100g

Curry leaves	93.9
Mint leaves	114
Spinach	123
Amaranth <i>gangeticus</i>	149
Cluster beans	144
Ladies finger ( <i>Bhendi</i> )	105.1
Fenugreek seeds	84
Egg ( <i>Hen</i> )	78.3
Liver ( <i>Goat</i> )	176.2
Liver ( <i>Sheep</i> )	188.0
Milk ( <i>Cow</i> )	8.5
Curds ( <i>Cow's milk</i> )	12.5

(Source: Nutritive Value of Indian Foods, NIN, ICMR)

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**Assessment of nutrition knowledge and impact of  
nutrition education related maternal health on  
adolescent girls in urban slums of Hyderabad.**

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