

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.



Vitamin C rich

- 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)

This was developed as part of the project:
**Assessment of nutrition knowledge and impact of
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