



Indian Dietetic Association

# ANEMIA

## What is anemia?

Anemia is a condition in which there is a decrease in the size or number of red blood cells, or the amount of hemoglobin they contain. Basic function of red blood cells, more specifically hemoglobin contained in them, is to supply oxygen to all cells of the body and carry carbon dioxide back to lungs, to be thrown out. Due to less hemoglobin there is limited exchange of oxygen and carbon dioxide between the blood and the tissue cells. This leads to feeling of tiredness, dullness, lack of breath in individuals with anemias.

## Symptoms *(iron deficiency anemia)*

Often anemia goes undetected because the symptoms can be very non-specific. A general feeling of not being well, tiredness, fatigue, shortness of breath, are some of the common symptoms. One may spend much more time doing the same work than what he/she was doing earlier or unknowingly decrease one's work capacity. In children, it leads to poor concentration and even poor school performance. Other symptoms include pale skin, inside of lower eyelid may be pale pink instead of red, finger nails may become brittle, spoon shaped and pale and so on.

## Causes of anemia

Most anemias are caused by a lack of nutrients required for normal red blood cell synthesis, mainly iron, vitamin B12, and folic acid. Others reasons for anemia are worm infestation, hemorrhage (bleeding), genetic abnormalities (thalassemia), chronic disease states (renal failure) or drug toxicity. Most common type of nutritional anemia is iron deficiency anemia. In this form of anemia, the haemoglobin concentration in the blood is low and size of red blood cells is small. This can be corrected by increasing the iron and protein content of diet.

Iron rich vegetable



### DISCLAIMER

This document is for information purpose only. It acts as a basic guideline for anemia. For specific and individual dietary advice and meal plans, please consult a qualified dietitian/nutritionist.

# Foods recommended in iron deficiency anemia



Sesame



Ragi



Bajra  
(pearl millet)



Garden cress

1. Foods containing iron should be emphasised. These include green leafy vegetables like amaranth leaves, drumstick leaves, fenugreek leaves (methi) coriander leaves; millets like ragi, bajra, and pulses like channa, horse gram, soy bean.
2. Fruits like dates etc also contain iron. Fruits like guava, amla contain plenty of vitamin C which enhances absorption of iron. Hence all iron rich foods should be eaten with a sour food like lemon, orange, guava, amla, sweet lime.
3. Oil seeds like garden cress seeds and sesame seeds are the richest sources of dietary iron. They can be soaked and consumed on daily basis.
4. Non-vegetarian foods like mutton and organ meats are a very rich source of bio- available iron. Iron in non-veg foods is called heme iron – which is readily absorbed by the body. Non-vegetarian foods are also rich sources of protein.
5. Foods containing folic acid and Vitamin B12 are also important nutrients in combating anemia. Folic acid is found in fresh vegetables and fruits especially those having orange colour. Vitamin B12 is found in non-vegetarian foods.

## Precautions

(to prevent iron deficiency anemia)

1. Hygiene is very important in prevention of anemia. Personal hygiene like washing hands after using toilet, trimming nails must be ensured. Food hygiene like washing green leafy vegetables thoroughly is very important. This prevents worm infestation, which is a leading cause of anemia.
2. In case of women, consult a doctor if there is excessive menstrual bleeding, miscarriages etc. It is important that these conditions are tackled early, before anemia sets in.
3. Iron and folic acid supplementation during pregnancy and lactation is important to prevent anemia.
4. The Ministry of Health & Family Welfare, Government of India, has a program of weekly iron and folic acid supplementation to meet the challenge of high prevalence of anemia in adolescent girls and boys.



Non-vegetarian

Dates

## Eat iron rich foods

1. Always eat iron rich foods with source of vitamin C
2. Avoid having iron rich foods with large amount of tea and coffee
3. Avoid having iron rich foods with calcium rich foods like milk and milk products
4. Avoid having large amount of fibrous foods especially cereals with bran with iron rich foods.