

IRON AND IRON SOURCES

Hemoglobin is a protein found in red blood cells that assists in the transport of oxygen, throughout the human body; it also contains an important mineral called iron.

Iron helps in the formation of hemoglobin, the oxygen carrying capacity of red blood cells. A deficiency in iron is the most significant contributor to the onset of anemia, a condition where, the number of circulating red blood cells or the concentration of hemoglobin is lower than normal, (Smith 2010). Some of the risk factors for the development of iron deficiency anemia include low iron intake and poor absorption of iron from compounds rich in phytates, Bonoist (2008).

Iron deficiency anemia affects the physical work performance of adults and it also impairs children's mental and physical development.

The best sources of iron are meat, fish and poultry; these are called heme sources of iron and they are efficiently absorbed. These sources also have a Factor called MFP which helps in the absorption of plant sources of iron. Plant sources of iron include dark leafy vegetables, beans and whole grains like wheat iron from plant sources is referred to as non-heme iron. These plant sources of iron are not absorbed as well as animal sources. Therefore, in order to increase their absorption in the body one can eat a plant and animal source of iron, moreover, eating fruits with meals containing plant sources of iron is also advisable as the Vitamin C in fruits help in absorption of non- heme iron.

Foods for example tea, coffee, cocoa, soya drink and red wine should not be eaten together with plant sources of iron as they inhibit absorption of non-heme iron. Moreover, beans should be soaked overnight before cooking to increase the absorption of the non- heme iron in them. In conclusion, avoid mixing spinach and kales ("sukuma wiki") as spinach has some substances which will inhibit the absorption of the iron in Kales, instead eat these two vegetables in different meals.

In conclusion, bioavailability of iron is high in meats, fish, and poultry, it is intermediate in grains and legumes and low in most vegetables, especially those containing oxalates for example spinach. Foods in the milk group are notoriously low in iron, Rady (2009).

However, it is important to know other causes of anemia that may also cause low hemoglobin levels, they include: heavy blood loss; parasitic infections for example hookworms, ascaris and schistosomiasis; acute and chronic infections such as malaria, cancer, tuberculosis and HIV; the presence of other micronutrient deficiencies for example Vitamin A, B12, Folate, Riboflavin, Copper and finally haemoglobinopathies.

References

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