

Nutritional anemia

Nutritional anemia occurs when the body lacks essential nutrients such as iron, vitamin B12, or folic acid, which are crucial for the production of red blood cells. Hemoglobin levels differ between women and men. Anemia is diagnosed when hemoglobin levels are below 11 in women and below 12.5 in men.

Iron is a key component of hemoglobin, and its availability is critical during the production of red blood cells in the bone marrow. Additionally, vitamin B12 and folic acid play important roles in blood cell formation. Therefore, a deficiency in any of these nutrients can lead to anemia.

Our body loses approximately 1mg of iron daily through urine, sweat, and skin. Women lose about 20-30mg of iron over the course of 4-5 days during each menstrual period. Pregnant women require even higher levels of iron, as they lose around 1000mg of iron during pregnancy and childbirth. Vitamin B12 and folic acid needs are also increased during pregnancy. Hence iron and folic acid tablets are given to pregnant women. Excess consumed iron is stored in various organs of the body.

To prevent anemia and compensate for lost iron, it is important to consume foods rich in iron such as meat, fish, cumin seeds, sesame seeds, pulses, cashews, chickpeas, lentils, peanuts, spinach, kidney beans, and mushrooms. Vitamin B12 is primarily found in non-vegetarian foods, while leafy greens are good sources of folic

acid. However, cooking can lead to a loss of folic acid in food.

Nutritional anemia can result from a diet that lacks sufficient intake of essential nutrients or an unbalanced diet. It is commonly observed in students staying in hostels, individuals facing poverty and unable to afford nutritious food, or those fasting due to religious observances, among others.

Nutrient deficiencies leading to anemia can occur even when individuals consume the right foods in the right amounts. Various factors can contribute to iron deficiency, including continuous oozing of blood from ulcers or cancer in the stomach or intestines, parasitic infections like hookworms, and disorders like hemorrhoids causing bleeding. Girls are more susceptible to iron deficiency anemia, especially if they experience heavy menstrual bleeding.

Malabsorption syndrome, which affects the proper digestion and absorption of nutrients like vitamin B12, can also lead to anemia.

The symptoms of nutritional anemia can vary, ranging from mild fatigue, hair loss, and lack of concentration to more severe symptoms like tiredness, palpitations, shortness of breath, headache, and chest pain. Jaundice may be seen in cases of vitamin B12 or folic acid deficiency. Mental issues such as depression and

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insomnia may also arise in some individuals.

To diagnose this type of anemia, hemoglobin levels, iron content tests, vitamin B12 levels, and LDH tests are done. Additionally, endoscopy tests are performed, especially in men and postmenopausal women, to check for colon or gastric cancer. Early detection of cancer is vital, as it allows for timely treatment and better outcomes.

Blood transfusions are usually reserved for cases of severe anemia, where the patient's hemoglobin is significantly low and requires immediate assistance.

Replenishing deficient iron and nutrients in the body is crucial in the treatment of nutritional deficiency anemia. Iron supplementation can be done in two forms - tablets and injectables. Taking iron tablets can gradually increase hemoglobin levels at a rate of one gram per week. Once the hemoglobin reaches a normal level, it is necessary to continue taking these tablets for an additional three months to replenish the body's iron stores. Failure to do so can result in a decline in blood levels again. However, some individuals may experience side effects such as constipation and acidity with iron tablets, and in such cases, iron can be administered via injections, providing a full dose in just two days. Similar injection-based supplementation is also used for pregnant women to address iron deficiency.

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Vitamin B12 replenishment is achieved usually through injections. A standard regimen involves giving a dose of 1000 micrograms daily for 5 days, followed by weekly injections for 5 weeks, and then administering injections every three months for life. This approach helps prevent recurrent anemia and maintains adequate vitamin B12 levels. Folic acid tablets are typically given for about 4 months to replenish the body's folic acid stores.

While nutrient replenishment can increase the hemoglobin level, addressing the underlying cause of nutritional deficiency is equally important. For example, if excessive bleeding is the cause, it needs to be treated properly to achieve a complete recovery from this problem and maintain a healthy life.

Pregnant women require special attention to prevent iron and folic acid deficiency, as these deficiencies can have adverse effects on the health of both the mother and the growing baby.

Diversification of the diet and ensuring an adequate intake of fruits, vegetables, greens, meat, eggs, milk, and pulses is an important strategy in preventing nutrient deficiency associated anemia and other nutritional deficiency diseases.

If you need any further information about nutritional anemia, it is best to consult your treating physician team.

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