

# Iron deficiency: Causes, symptoms, and treatment options.

Jose Baldaia\*

Department of Gastroenterology and Hepatology, Medical University of Vienna, Währinger Gürtel Vienna, Austria

## Introduction

Iron is an essential nutrient that plays a vital role in many bodily functions, including the production of red blood cells, carrying oxygen to tissues, and supporting the immune system. Iron deficiency occurs when the body doesn't have enough iron to meet its needs. Iron deficiency is the most common nutritional deficiency worldwide, affecting both developed and developing countries. In this article, we'll discuss the causes, symptoms, and treatment options for iron deficiency [1].

## Causes of iron deficiency

Iron deficiency can occur due to several reasons, including:

- **Inadequate Intake of Iron:** The body requires a regular supply of iron through diet. Iron-rich foods include red meat, poultry, fish, beans, lentils, and spinach. A diet low in iron can lead to iron deficiency.
- **Blood Loss:** Blood loss is the most common cause of iron deficiency. Women who have heavy menstrual periods, people with gastrointestinal bleeding, and individuals who have undergone surgery are at a higher risk of iron deficiency.
- **Pregnancy:** Pregnant women need more iron to support their developing fetus. If a woman's iron intake is inadequate during pregnancy, it can lead to iron deficiency.
- **Malabsorption:** Certain conditions like celiac disease, inflammatory bowel disease, and gastric bypass surgery can cause malabsorption of iron, leading to iron deficiency [2].

## Symptoms of iron deficiency

Iron deficiency can lead to several symptoms, including:

- **Fatigue:** Iron is essential for the production of red blood cells that carry oxygen to tissues. Iron deficiency can cause fatigue, weakness, and decreased stamina.
- **Pale Skin:** Iron deficiency can cause the skin to appear pale or yellowish.
- **Shortness of Breath:** Low levels of iron in the blood can reduce the amount of oxygen carried to tissues, leading to shortness of breath, especially during physical activity.
- **Brittle Nails:** Iron deficiency can cause brittle, ridged, or spoon-shaped nails.

- **Headaches:** Iron deficiency can cause headaches and dizziness.
- **Pica:** Pica is a condition where a person has a craving to eat non-food items like ice, dirt, or clay. Iron deficiency can cause pica [3].

## Treatment options for iron deficiency

The treatment for iron deficiency depends on the severity of the condition and the underlying cause. Here are some treatment options for iron deficiency:

- **Iron Supplements:** Iron supplements are available over-the-counter and can be taken orally or intravenously. Iron supplements are recommended for people who have a severe iron deficiency.
- **Iron-Rich Diet:** A diet rich in iron can help prevent and treat iron deficiency. Iron-rich foods include red meat, poultry, fish, beans, lentils, and spinach.
- **Vitamin-C:** Vitamin C can enhance the absorption of iron from the diet. Including vitamin C-rich foods like citrus fruits, kiwi, strawberries, and tomatoes in the diet can improve iron absorption.
- **Blood transfusion:** In severe cases of iron deficiency, a blood transfusion may be necessary.
- **Surgery:** Surgery may be required in cases where the iron deficiency is caused by a gastrointestinal disorder like ulcerative colitis or Crohn's disease [4].

## Prevention of iron deficiency

Preventing iron deficiency involves making some lifestyle changes, including:

- **Eating a balanced diet:** A balanced diet that includes iron-rich foods can help prevent iron deficiency.
- **Taking iron supplements:** Iron supplements can help prevent iron deficiency in individuals at risk, like pregnant women.
- **Managing menstrual bleeding:** Women with heavy menstrual bleeding should talk to their doctor about ways to manage the condition.
- **Screening for iron deficiency:** Screening for iron deficiency can help identify the condition early, allowing for prompt treatment [5].

\*Correspondence to: Jose Baldaia, Department of Gastroenterology and Hepatology, Medical University of Vienna, Währinger Gürtel Vienna, Austria, E-mail: jose.baldaia768@gmail.com

Received: 12-Apr-2023, Manuscript No. AAINM-23-98208; Editor assigned: 15-Apr-2023, PreQC No. AAINM-23-98208(PQ); Reviewed: 29-Apr-2023, QC No. AAINM-23-98208; Revised: 03-May-2023, Manuscript No. AAINM-23-98208(R); Published: 10-May-2023, DOI: 10.35841/ainm-7.3.142

## Conclusion

Iron deficiency is a common nutritional deficiency that can cause a range of symptoms, including fatigue, pale skin, shortness of breath, and brittle nails. The condition can occur due to inadequate iron intake, blood loss, pregnancy, or malabsorption. Treatment options include iron supplements, an iron-rich diet, vitamin C, blood transfusion, and surgery in severe cases. Preventing iron deficiency involves eating a balanced diet, taking iron supplements, managing menstrual bleeding, and screening for the condition. If left untreated, iron deficiency can lead to serious health problems, so it's important to seek medical attention if you suspect you may have the condition.

## References

1. Allen RP, Auerbach S, Bahrain H, et al. The prevalence and impact of restless legs syndrome on patients with iron deficiency anemia. *Am J Hematol.* 2013;88(4):261-4.
2. Anker SD, Comin Colet J, Filippatos G, et al. Ferric carboxymaltose in patients with heart failure and iron deficiency. *N Engl J Med.* 2009;361(25):2436-48.
3. Falkingham M, Abdelhamid A, Curtis P, et al. The effects of oral iron supplementation on cognition in older children and adults: a systematic review and meta-analysis. *Nutr J.* 2010;9(1):1-6.
4. Maguire JL, deveber G, Parkin PC. Association between iron-deficiency anemia and stroke in young children. *Pediat.* 2007;120(5):1053-7.
5. Weiss G, Goodnough LT. Anemia of chronic disease. *N Engl J Med.* 2005;352(10):1011-23.