

About Iron Deficiency Day

Iron Deficiency Day takes place every year on November 26. The day is dedicated to:

- **Raising awareness about the serious public health problem iron deficiency poses**
- **Highlighting the significant impact iron deficiency and iron deficiency anaemia can have on the lives of those living with it¹**
- **Helping people recognise the common and often overlooked symptoms**

We want people to get iron-informed! To understand why iron is so important to our bodies and what can happen if we're not getting enough, by recognising the symptoms and taking action. By informing people about the importance of healthy iron levels, we will encourage more people to speak to their healthcare providers about iron deficiency and iron deficiency anaemia.

The importance of iron and iron deficiency

Simply put, without enough iron, the human body cannot work properly. Iron is required throughout the body. It is essential for the production of red blood cells, and ensuring that the heart and skeletal muscles can function effectively.² Iron also plays a vital role in fighting off infections and illness,³ maintaining energy levels³ and normal brain function.

Iron deficiency means that there is not enough iron available in the body to enable it to function properly.⁵

Iron deficiency anaemia

Iron deficiency anaemia occurs when the level of iron stored in the body is so low, the body can no longer make enough haemoglobin needed to develop healthy red blood cells.⁶ Haemoglobin is the protein found inside red blood cells that carries oxygen to tissues and organs throughout the body, which is essential for them to function properly.⁷

Iron deficiency, or iron deficiency anaemia?

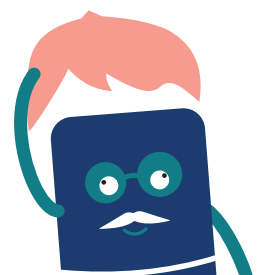
There is a clinical difference between iron deficiency and iron deficiency anaemia.⁵ Having low iron availability (iron deficiency), doesn't necessarily mean you will develop iron deficiency anaemia. To determine whether someone is iron deficient or has iron deficiency anaemia, a blood test is performed, which will look at a number of things:

- **Haemoglobin level:** this is the main component of red blood cells, which requires iron to transport oxygen around the body. A blood test will confirm if the level falls within the normal range expected for the person's age, sex, and physiological status (e.g. pregnancy).⁸ Haemoglobin alone however, cannot be used to diagnose iron deficiency.⁹
- **Serum ferritin:** measures the amount of iron that is stored in the body.¹⁰
- **Transferrin saturation (TSAT):** measures how much of your stored iron is available and can be used to make new red blood cells.¹¹

Awareness

Despite the serious consequences and high prevalence of iron deficiency,¹² it is still an under-recognised condition. As a result, many people are unaware that their health and well-being are being compromised.^{13,14} Even among those people who are aware of iron deficiency, some cannot recognise its symptoms.¹⁵

It is because of this lack of awareness that we are focused on education around the symptoms and impact of iron deficiency and recommending that people speak to a healthcare professional if they recognise any of the symptoms.



Meet the symptoms of iron deficiency and iron deficiency anaemia

Iron deficiency and iron deficiency anaemia can affect anyone – it is widespread; affecting men, women, the young and the elderly, throughout the world.¹¹ Recognising the symptoms of iron deficiency and iron deficiency anaemia is often the biggest hurdle to getting a diagnosis.⁵ The symptoms can manifest in different ways, they are hard to pinpoint and can be associated with a number of other health conditions.⁵

This Iron Deficiency Day, we are looking to highlight the symptoms of iron deficiency and raise awareness of the significant impact that this condition can have on the lives of those living with it.

Our Symptom Checker lists the main symptoms associated with iron deficiency and iron deficiency anaemia and brings them to life with an animated character, to further explain each symptom. Meet the symptoms at irondeficiencyday.com.



Vifor Pharma, a company of the Vifor Pharma Group, is a world leader in the discovery, development, manufacturing and marketing of pharmaceutical products for the treatment of iron deficiency. The company also offers a diversified portfolio of prescription and non-prescription medicines. Vifor Pharma's operational headquarters are in Zurich, Switzerland, and the company has an increasingly global presence and a broad network of affiliates and partners around the world. For more information about Vifor Pharma, please visit www.viforpharma.com

IronDeficiencyDay.com and IronDeficiency.com are intended to provide educational information to an international audience, at the exclusion of US residents. All information contained herein is intended for educational purposes only and should not be used to replace a discussion with a healthcare professional. All decisions regarding patient care must be handled by a healthcare professional, and be made based on the unique needs of each patient.

References

1. Hasan TH, et al. Impact of Iron Deficiency Anemia on the Function of the Immune System in Children. *Medicine* 95.47 (2016): e5395. PMC.
2. Camaschella C. Iron-deficiency anemia. *N Engl J Med*. 2015; 372:1832–1843.
3. Beard JL. Iron biology in immune function, muscle metabolism and neuronal functioning. *J Nutr*. 2001;568-580.
4. Pinero DJ, Connor JR. Iron in the Brain: An Important Contributor in Normal and Diseased States. *Neurosci*. 2000;6(6):435-453.
5. Cappellini MD et al. Iron deficiency across chronic inflammatory conditions: International expert opinion on definition, diagnosis, and management. *Am J Hematol*. 2017 Oct;92(10):1068-1078.
6. Fernando B, et al. A guide to diagnosis of iron deficiency and iron deficiency anemia in digestive diseases. *World J Gastroenterol*. 2009 Oct 7; 15(37): 4638-4643.
7. PubMed Health. Erythrocytes (red blood cells). Available at URL: <https://www.ncbi.nlm.nih.gov/pubmedhealth/PMHT0022014/> Last accessed: June 2018.
8. World Health Organisation. Nutritional anaemias: tools for effective prevention and control. 2017. Available at URL: <http://www.who.int/nutrition/publications/micronutrients/anaemias-tools-prevention-control/en/>. Last accessed: June 2018.
9. World Health Organization. Haemoglobin concentrations for the diagnosis of anaemia and assessment of severity. Vitamin and Mineral Nutrition Information System. Available at URL: <http://www.who.int/vmnis/indicators/haemoglobin.pdf>. Last accessed: June 2018.
10. National Heart Lung and Blood Institute. How is Iron Deficiency Anemia Diagnosed. Available at URL: <https://www.nhlbi.nih.gov/health/health-topics/topics/ida/diagnosis>. Last accessed: June 2018.
11. Elsayed M et al. Transferrin Saturation: A Body Iron Biomarker. *Adv Clin Chem*. 2016;75:71-97.
12. World Health Organisation. Worldwide prevalence of anaemia 1993-2005. 2008. Available at URL: http://apps.who.int/iris/bitstream/handle/10665/43894/9789241596657_eng.pdf;jsessionid=9C613E2F4D481EDEB9DE07986AFCE0C7?sequence=1. Last accessed: June 2018.
13. Thachil J. Iron deficiency: still under-diagnosed? *Br J Hosp Med*. 2015;76(9):528-532.
14. Miller JL. Anemia: a common and curable disease. *Cold Spring Harb Perspect Med*. 2013 Jul; 3(7).
15. Caramelo L, Mezzacasa A and Kassebaum NJ. Iron Deficiency. Understanding perceptions of sufferers and the general public. EHA 21st Annual Congress, 9-12 June 2016, Copenhagen, Denmark