Iron:

an inorganic nutrient known as a mineral. Also called "Ferrum" in latin. It can be found on the periodic table with the letters "Fe"

***Inorganic nutrients are ones that don't have carbon in their structural makeup**

Food Sources:

Iron can be found in animal and non-animal products. Although, the iron found in non-animal products is non-haem iron which is harder to absorb than the one found in animal products which is haem iron. To digest non-haem iron you need to have a food source for vitamin C. Haem iron can be found in: red meat, liver, eggs, fish, while foods like: broccoli, fortified breakfast cereals, whole grains all contain non-haem iron

Recommended Dose:

Life Stag	Recommended Amount
Birth to 6 months	0.27 mg
Infants 7–12 months	11 mg
Children 1–3 years	7 mg
Children 4–8 years	10 mg
Children 9–13 years	8 mg
Teens boys 14–18 years	11 mg
Teens girls 14–18 years	15 mg
Adult men 19–50 years	8 mg
Adult women 19–50 years	18 mg
Adults 51 years and older	8 mg
Pregnant teens	27 mg
Pregnant women	27 mg
Breastfeeding teens	10 mg
Breastfeeding women	9 mg

Excretion:

According to, Biochemistry, Iron Absorption by Thomas Ems, Kayla St Lucia and Martin R. Huecker, "*The mechanism of iron excretion is an unregulated process arrived at through loss in sweat, menstruation, shedding of hair and skin cells, and rapid turnover and excretion of enterocytes*". This means that there are multiple ways that iron could be excreted, one of which is through shedding of hair and skin cells.

***Enterocytes are the cells that absorb nutrients in the intestine**

Functions:

Iron is one of the most important minerals needed for the growth and development of the body. It is used for making haemoglobin which carries oxygen in the blood which then goes throughout the body supplying each part with oxygen.

Deficiency:

When your body doesn't get enough iron it starts using the iron it has stored. Once the body has run out of it, anemia is caused. Due to this condition, you get tired very quickly, your body doesn't get enough oxygen, you have shortness of breath as well as a shorter memory and the body is weaker. Anemia can be caused by vegan diets, pregnancy, menstruation, growth spurts, and bad absorption of iron. Firstly, in vegan diets, the consumed non-haem iron is harder to absorb than haem iron and this could cause iron deficiency. Secondly, in pregnancy, the female has to share iron with the fetus and this amount increases as time goes by, and there may not be enough for the female. Thirdly, in menstruation, anemia could be caused due to the loss of iron. Fourthly, growth spurts can use up a lot of iron, so keep . Finally, bad absorption of iron could be another cause for anemia as you could have intestinal diseases that cause you to not be able to absorb as much iron as you could without the disease. Another reason for iron deficiency could be high intake of coffee or tea as they include a nutrient known as phytate that can bond with iron and instead of the iron getting absorbed, it is excreted through faeces. To get rid of iron deficiency, first off, you want to start eating foods that contain iron. If you are a vegan, you want to start eating foods that contain iron and some other foods that contain vitamin C so that it is easier to absorb the non-haem iron from vegan food sources. If you drink a lot of coffee and tea, decrease the amount of coffee and tea that you drink.

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"*Iron - Micronutrients – CCEA - GCSE Home Economics: Food and Nutrition (CCEA) Revision - BBC Bitesize.*" BBC News, BBC, **https://www.bbc.co.uk/bitesize/guides/zpt33k7/revision/8**

"*Iron Deficiency Anaemia - Priority Health Issues – CCEA - GCSE Home Economics: Food and Nutrition (CCEA) Revision - BBC Bitesize.*" BBC News, BBC, **https://www.bbc.co.uk/bitesize/guides/zk92msg/revision/7**

"*Iron - Fact Sheet For Consumers.*" NIH Office of Dietary Supplements, U.S. Department of Health and Human Services, **https://ods.od.nih.gov/factsheets/Iron-Consumer/**

Ems, Thomas. "*Biochemistry, Iron Absorption.*" StatPearls [Internet]., U.S. National Library of Medicine, 26 Apr. 2021, **https://www.ncbi.nlm.nih.gov/books/NBK448204/**

Fleming, Esther. "*What Nutrients Are Organic And Inorganic?*" Sidmartinbio.org, 21 Mar. 2021, **https://www.sidmartinbio.org/what-nutrients-are-organic-and-inorganic/**

"*Iron Deficiency Anaemia Symptoms and Treatments*." Illnesses & Conditions | NHS Inform, **https://www.nhsinform.scot/illnesses-and-conditions/nutritional/iron-deficiency-anaemia**

"*Iron.*" National Center for Biotechnology Information. PubChem Compound Database, U.S. National Library of Medicine, **https://pubchem.ncbi.nlm.nih.gov/element/Iron**

"*Enterocytes.*" ScienceDirect, **https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/enterocyte**

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