

# Iron Deficiency / Iron Deficiency Anemia

## WHAT IS IRON DEFICIENCY?

Iron is a building block of hemoglobin which is a vital component of our body's natural oxygen delivery system. A person with Iron Deficiency (ID) has a reduction in their body's iron stores and a person with Iron Deficiency Anemia (IDA) has a reduction in the number of hemoglobin-carrying red blood cells in the body due to a lack of iron. A number of factors can influence why the body is lacking iron, but it is fundamentally a result of the body needing more iron than it is consuming or the body losing iron in a larger than usual amount.<sup>1</sup>

## CAUSES:

- Insufficient nutritional iron intake
- Blood loss due to menstruation
- Internal bleeding (i.e. ulcers)
- Blood volume increase (during pregnancy)<sup>2</sup>
- Dietary iron absorption interference
- Certain diseases or disorders (i.e. Celiac and kidney failure)

## SYMPTOMS:

- Chronic fatigue
- Inability to concentrate
- General weakness
- Pale skin
- Shortness of breath
- Dizziness
- Fast or irregular heartbeat
- Headaches

The symptoms vary in severity according to the level of deficiency and duration of onset of deficiency. Those who are chronically deficient develop iron deficiency anemia - a dangerous, and possibly fatal condition - especially in the presence of cardiac, respiratory or other underlying problems.

## TREATMENT:

If you are concerned about being iron deficient, it is imperative to get medical treatment as soon as possible. Your doctor will look to determine the underlying cause of your iron deficiency and may order blood tests. They may recommend a combination of dietary adjustments and/or iron supplements to help manage your condition.

The Canadian Anemia Guidelines suggest 2-3 mg/kg of elemental iron per day to help reach therapeutic iron levels required to address this deficiency.<sup>3</sup> For an average 70 kg women, this means approximately 150 mg of elemental iron per day.<sup>4</sup>



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## IRON SUPPLEMENTS:

To achieve the maximum benefit from your iron supplement:

- Take with food if you experience any stomach upset
- Take with vitamin C rich food or beverages, or ascorbic acid (250-500 mg twice a day)<sup>3</sup>
- Use for 3-6 months after hemoglobin levels have returned to normal

Do not take your iron supplements<sup>5</sup>:

- Within 2 hours of taking antacids or certain medications (such as antibiotics, drugs for Parkinson's disease, seizure medications, and levothyroxine (Synthroid®)).<sup>6</sup> Always check with your pharmacist
- With certain foods and beverages including:
  - Tea, coffee, chocolate, and other food or beverages high in caffeine
  - Milk and other calcium-rich foods or supplements<sup>7</sup>
  - High-fiber foods, such as bran, whole grains, nuts, and raw green vegetables

## FOODS WITH HIGH CONTENT OF IRON<sup>8</sup>:

Animal (Heme)			Plant (Non-Heme)		
Food	Food Serving Guide	Iron in milligrams (mg)	Food	Food Serving Guide	Iron in milligrams (mg)
Beef	75g, cooked	1.5-3	Pumpkin seed kernels	60 mL	8.5
Shrimp	75g, cooked	2	Tofu, medium or firm	150 g	2-7
Sardines	75g, cooked	2	Legumes (such as beans, lentils, chickpeas)	175 mL	2-6.5
Lamb	75g, cooked	1.5-1.8	Instant hot cereal (enriched with iron)	175 mL	3-6
Chicken	75g, cooked	1	Cold cereals (enriched with iron)	30 g	4
Pork	75g, cooked	0.5-1	Vegetables (such as pumpkin, artichoke hearts, peas, potatoes, spinach)	125 mL	1-2
Fish (such as salmon, trout, halibut, haddock, perch)	75g, cooked	0.5-1	Nuts, peanuts, and sunflower seeds	60 mL	0.5-2
Seal	75g, cooked	13.5-21	Eggs	2	1.8
Wild duck	75g, cooked	7.5	Pasta (enriched with iron)	125 mL	1-1.5
Heart, kidney	75g, cooked	4-9	Prune juice	125 mL	1.5
Oysters, mussels	75g, cooked	5-7	Peanut butter and nut butters, such as almond butter	30 mL	0.5-1.5
Blood pudding	75g, cooked	5	Bread (enriched with iron)	1 slice	1
Moose	75g, cooked	4			

### References

- 1 [www.healthline.com/health/irondeficiencyanemia](http://www.healthline.com/health/irondeficiencyanemia). October 15, 2015. 2 [www.hematology.org/Patients/Anemia/Pregnancy.aspx](http://www.hematology.org/Patients/Anemia/Pregnancy.aspx) October 6, 2016. 3 Anemia Guidelines for Family Medicine (Toronto: MUMS Guidelines, 2014); 8. 4 [www.statcan.gc.ca/pub/82-003-x/2011003/article/11533/tbl/tbl-eng.htm](http://www.statcan.gc.ca/pub/82-003-x/2011003/article/11533/tbl/tbl-eng.htm) Mean height, weight, body mass index (BMI) and prevalence of obesity, by collection method and sex, household population aged 18 to 79. Canada, 2008, 2007 to 2009, and 2005. November 7, 2016. 5 <https://medlineplus.gov/ency/article/007478.htm>. September 28, 2015. 6 <https://www.synthroid.com/isi>. December 9, 2016. 7 <http://www.nap.edu/catalog/10026.html>. October 25, 2016. Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc. 8 [www.hc-sc.gc.ca/fn-an/pubs/nutrition/iron-fer-eng.php](http://www.hc-sc.gc.ca/fn-an/pubs/nutrition/iron-fer-eng.php). November 8, 2016.

<sup>†</sup> Pharmacy Practice+ and Profession Santé 2021 Survey on OTC Counselling and Recommendations / The Medical Post and Profession Santé 2021 Survey on OTC Counselling and Recommendations