



IT'S ALL ABOUT IRON

Iron plays a crucial role in the development of hemoglobin & myoglobin: proteins found in red blood cells that helps carry oxygen throughout the body to your muscles

DAILY RECOMMENDED AMOUNTS

(Health Canada, 2023)

MALE

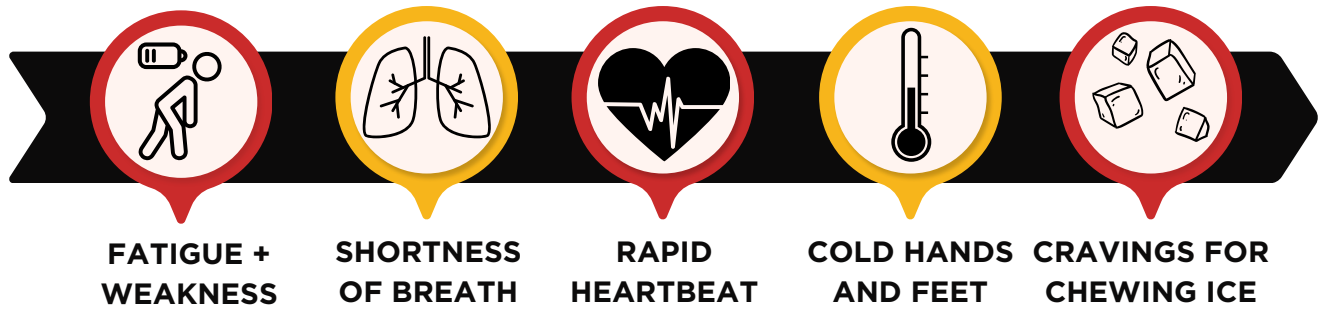
14-18 Yrs: 11mg per day
19+ Yrs: 8mg per day

FEMALE

14-18 Yrs: 15mg per day
19-50 Yrs: 18mg per day

(National Health Service, 2021)

SIGNS & SYMPTOMS OF DEFICIENCY



FATIGUE + WEAKNESS

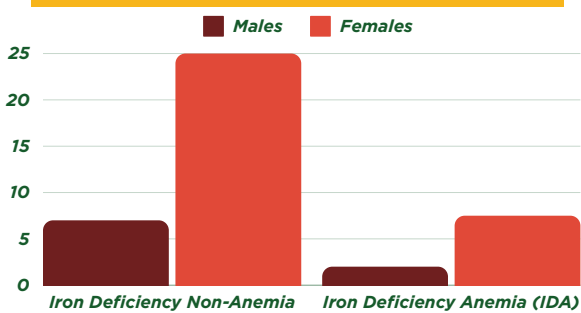
SHORTNESS OF BREATH

RAPID HEARTBEAT

COLD HANDS AND FEET

CRAVINGS FOR CHEWING ICE

DEFICIENCY STATS



Percentage of endurance athletes with iron deficiency non-anemia and iron deficiency anemia

(Sports Medicine Review, n.d.)

HEME VS. NON-HEME

Heme



- Found only in meat products
- Better absorbed by the body
 - Between 15-35% is absorbed

Non-Heme

- Found in plant foods
- Less absorbed by the body
 - Between 2-20% is absorbed
- Recommended to consume 1.8x more iron if vegetarian/vegan



While heme iron is better absorbed by the body, vegetarians & vegans can still meet their daily iron needs by consuming more than the recommended amount

See bottom for dietary sources

(Beck, 2016)

IRON TOXICITY?*



Minor iron toxicity occurs after ingestion of around 20mg/kg of body weight per day

That's eating around 10kg of liver per day for someone who weighs 130lbs!



(Holstege, 2020)

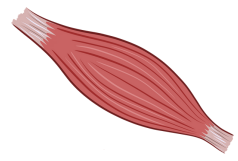
WHY DO SWIMMERS NEED IRON?



The body uses iron to make proteins called hemoglobin & myoglobin

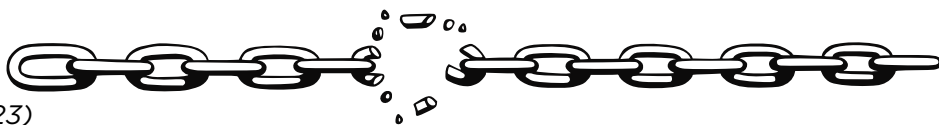


Hemoglobin transports oxygen from your lungs to your muscles (and CO₂ back to your lungs)



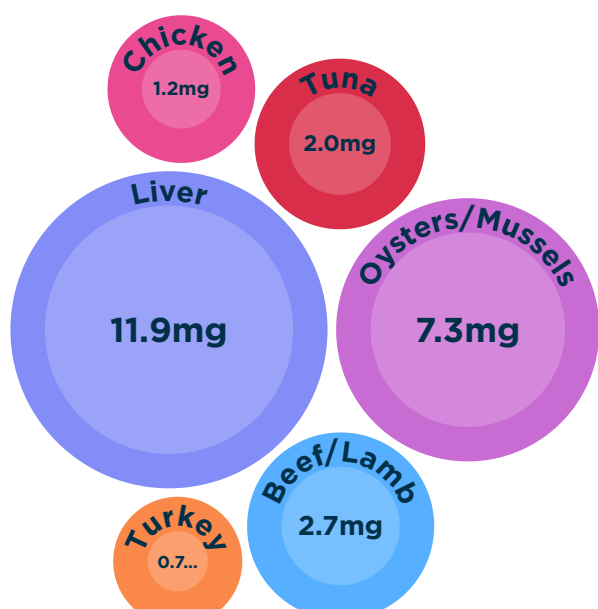
Myoglobin acts as oxygen storage in your muscles, which is used to break down glucose into usable energy called ATP

Without adequate iron levels, your muscles won't receive enough oxygen to produce sufficient amounts of energy, leading to rapid fatigue, shortness of breath and more!



(Rhodes, et. al, 2023)

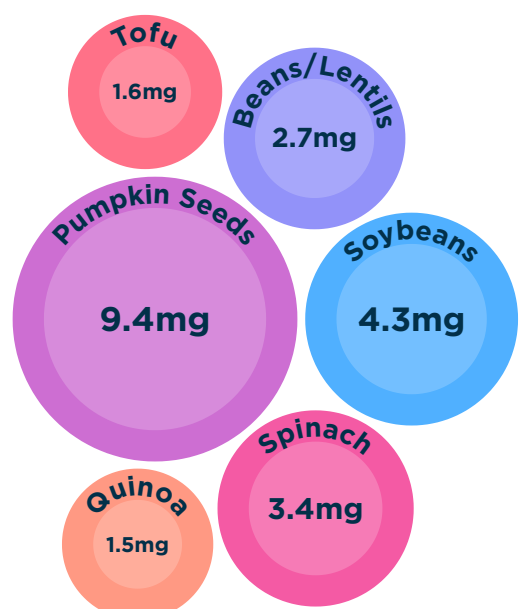
SOURCES OF HEME IRON



(HealthLinkBC, 2022)

per 100g serving

SOURCES OF NON-HEME IRON



per 1/2 cup serving

*Long-term iron supplementation is not recommended for most people, and can cause serious health issues. Always talk to your doctor before starting any new medication or supplement, including iron supplementation.