OMEGA-3

Polynusaturated fatty acids (PUFAs)

DHA and EPA fats

- Docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA) are long-chained omega-3 fats found in sea-water fatty fish.
- DHA is an essential structural component of brain, found in high levels in nerve cells.
- Low levels of DHA have been linked to memory loss and Alzheimer's disease.
- DHA up-regulates antioxidant enzymes – important for brain health.
- EPA is beneficial in treatment of depression, it decreases TNFa, IL1b, and PGL-E2, molecules usually elevated in depression.
- Fish high in omega-3: salmon, mackerel, sardines, anchovies, herring, krill oil.

Omega-3 index

- Percent of all fatty acids in the red blood cell membrane.
- Ideal levels: 8-12%

Benefits of Omega-3 Fatty Acids

- Structural element of cells, helps with tissue & cell repair
- Promote skeletal health - fish contains minerals, such as calcium, magnesium, and phosphorus
- Promote ❤️ health - ↑ DHA blood levels were found to:
  - Lower the risk of a fatal heart attack
  - Reduce risk for death, nonfatal heart attack, stroke and cardiac arrhythmias. Omega-3 fats taken after heart attack improved odds of survival.
  - ↓ blood pressure, improve endothelial function
  - Lower triacylglycerides (TAGs), improve lipid profile
  - Lower inflammation

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