

Anti-inflammatory diet

Many foods and nutrients can affect inflammatory pathways and, therefore, impact levels of inflammation in the body. The anti-inflammatory diet targets chronic inflammation by incorporating an abundance of anti-inflammatory foods and nutrients while moderating or restricting the intake of potentially pro-inflammatory foods.

What is inflammation?

Inflammation, a crucial biological process regulated by our innate immune system, involves a balance between pro-inflammatory and anti-inflammatory mechanisms that allow our bodies to repair and recover. Chronic or “silent” inflammation, in which the pro-inflammatory response persists at a low level below the pain threshold, has been associated with several chronic health conditions, such as cardiovascular disease, inflammatory bowel conditions, arthritis, cancer, and diabetes.

How the anti-inflammatory diet works

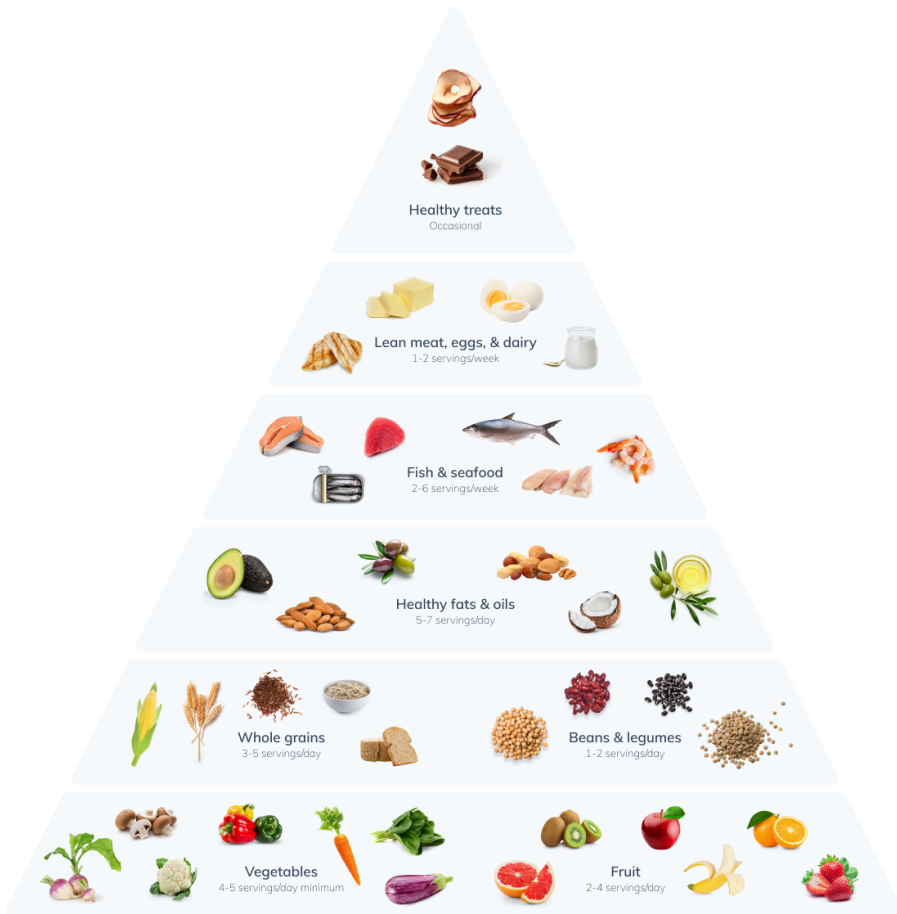
- Balancing levels of omega-3 to omega-6 fatty acids
- Increasing anti-inflammatory foods and nutrients, including omega-3 fatty acids and phytonutrient-rich plant-based foods such as vegetables, fruits, nuts, and whole grains
- Maintaining a stable glycemic (blood sugar) response
- Restricting pro-inflammatory foods, including processed foods, refined carbohydrates, trans fats, and excess saturated fat and vegetable oils
- Supporting gut microbiota health and, thereby, regulating immune function



Health benefits of the anti-inflammatory diet

- Risk reduction and management of chronic diseases (e.g., cardiovascular disease, metabolic syndrome, diabetes, obesity)
- Reduction in inflammatory markers (e.g., C-reactive protein (CRP), tumor necrosis factor- α (TNF- α))

Following the anti-inflammatory diet



Anti-inflammatory food pyramid

References

1. Bordoni, A., Danesi, F., Dardevet, D., Dupont, D., Fernandez, A.S., Gille, D., ... Vergères, G. (2017). Dairy products and inflammation: A review of the clinical evidence. *Critical Reviews in Food Science and Nutrition*, 57(12), 2497-2525.
2. Calder, P.C. (2013). Omega-3 polyunsaturated fatty acids and inflammatory processes: Nutrition or pharmacology? *British Journal of Clinical Pharmacology*, 75(3), 645-62.
3. Chen, L., Deng, H., Cui, H., Fang, J., Zuo, Z., Deng, J., ... Zhao, L. (2018). Inflammatory responses and inflammation-associated diseases in organs. *Oncotarget*, 9(6), 7204–7218.
4. Dennis, E.A., & Norris, P.C. (2015). Eicosanoid storm in infection and inflammation. *Nature Reviews Immunology*, 15(8), 511–523.
5. Galland, L. (2010). Diet and inflammation. *Nutrition in Clinical Practice*, 25, 634-640.
6. Giugliano, D., Ceriello, A., & Esposito, K. (2006). The effects of diet on inflammation: Emphasis on the metabolic syndrome. *Journal of the American College of Cardiology*, 48(4).
7. Gomes, J.M.G., Fabrini, S.P., & Alfenas, R.C.G. (2017). Low glycemic index diet reduces body fat and attenuates inflammatory and metabolic responses in patients with type 2 diabetes. *The Archives of Endocrinology and Metabolism*, 61(2),137-144.
8. Kim, Y., Chen, J., Wirth, M.D., Shivappa, N., & Hebert, J.R. (2018). Lower dietary inflammatory index scores are associated with lower glycemic index scores among college students. *Nutrients*, 10(2), 182.
9. Miniñane, A.M., Vinoy, S., Russell, W.R., Baka, A., Roche, H.M., Tuohy, K.M., ... Calder, P.C. (2015). Low-grade inflammation, diet composition and health: current research evidence and its translation. *British Journal of Nutrition*, 114(7), 999–1012.
10. National Institutes of Health. (2020). Omega-3 fatty acids. <https://ods.od.nih.gov/factsheets/Omega3FattyAcids-Consumer/>
11. Ricker, M. A., & Haas, W. C. (2017). Anti-inflammatory diet in clinical practice: A review. *Nutrition in Clinical Practice*, 32(3), 318-325.
12. Sanders, T.A.B. (2016). Introduction: The role of fats in human diet. *Functional Dietary Lipids*, 2016, 1-20.
13. Sears, B. (2010). Anti-inflammatory diets. *Journal of the American College of Nutrition*, 34(Suppl 1),14-21.
14. Sears, B., & Ricordi, C. (2011). Anti-inflammatory nutrition as a pharmacological approach to treat obesity. *Journal of Obesity*, 2011, 1-14.
15. Taber, L., Chiu, C.H., & Whelan, J. (1998). Assessment of the arachidonic acid content in foods commonly consumed in the American diet. *Lipids*, 33(12), 1151-7.
16. Watzl, B. (2008). Anti-inflammatory effects of plant-based foods and of their constituents. *International Journal for Vitamin and Nutrition Research*, 78(6), 293-8.



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This handout was developed and medically reviewed by Fullscript's Integrative Medical Advisory team.

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Updated: September 2021