

Choosing a Diet

"If you have formed the habit of checking on every new diet that comes along, you will find that, mercifully, they all blur together, leaving you with only one definite piece of information: french-fried potatoes are out."

-Jean Kerr

Through social media, newspapers, magazines, and friends and coworkers, we are bombarded daily with advice on how to eat. A new fad diet always gains momentum, promising a solution to all of our health problems. Not surprisingly, our patients often have specific questions about these popular diets. This tool for your practice offers basic information about a number of noteworthy diets, along with relevant research.

Anti-Inflammatory Diet

Like other healthy diets, the anti-inflammatory diet encourages eating whole foods, healthy fats (particularly omega-3 fats), and whole grains. The diet also recommends minimizing pro-inflammatory foods such as red meats, processed/boxed foods, and dairy fats. Evidence suggests that an anti-inflammatory diet reduces the risk of disease, such as cancer, cardiovascular disease, and asthma. Studies also show positive results for chronic pain, fill inflammatory bowel disease, and osteoporosis. Future research is expected to show improvement for autoimmune diseases as well. For more information see "The Anti-Inflammatory Lifestyle" handout.

Summary: This diet is a useful adjunct treatment for chronic diseases but can also be used as a general dietary recommendation due to reduction in cancer and cardiovascular risk.

Elimination Diet

The elimination diet involves journaling food intake, watching for a correlation between foods and unwanted symptoms, and then removing possible culprits from the diet for a set period of time, usually 2-3 weeks. Foods are then reintroduced into the diet systematically to see if symptoms recur. For example, one food may be added back every three days to see if it triggers symptoms. This information is then used to create a new eating pattern. There has been positive research for the elimination diet for rheumatoid arthritis, irritable bowel syndrome (IBS), migraines, atopic dermatitis, ADHD, and other diagnoses. For more information, see the "Elimination Diets" handout.

Summary: This diet can be used to treat specific chronic diseases, especially when triggers are unknown. It is worth a try when other causes of symptoms are not clear.

Department of Family Medicine and Community Health



Mediterranean Diet

The Mediterranean diet draws from traditional eating patterns in countries surrounding the Mediterranean Sea. It emphasizes fruits, vegetables, legumes, and whole grains. Dairy and meats are limited, with most animal protein coming from fish. Olive oil is used for cooking. An important aspect of the Mediterranean approach to eating is enjoying meals in the company of others. When compared to low-fat diets, Mediterranean diets are more effective in sustaining long-term improvements in inflammatory markers and cardiovascular risk factors like blood pressure and weight. Further studies have shown similar outcomes, including improved fasting glucose and markers for metabolic syndrome. In essence, the Mediterranean diet is in fact also an anti-inflammatory diet.

A study in the *Annals of Internal Medicine* showed that women who followed a Mediterranean-type diet were less likely to develop many types of cancer, diabetes, and Parkinson's disease. They were also less likely to experience physical and cognitive decline ¹⁵ and brain atrophy. Furthermore, the diet was associated with reduced telomere shortening, which suggests that it can increase longevity. ¹⁷

Summary: This diet may be the best-studied diet for overall longevity and reduction of chronic diseases. Like the anti-inflammatory diet, it has also been studied for specific diagnoses. Overall, the diet is very similar to the anti-inflammatory diet

Paleolithic Diet

The Paleolithic, or "Paleo," diet is designed to be similar to the diet of our Paleolithic hunter-gatherer ancestors, based on the logic that our genes are evolutionarily adapted to this diet. 18 Critics of the diet emphasize that the Paleo diet's assumptions about the types of foods eaten in the "old stone age" are incorrect. Specifically, animals were significantly different from their modern ancestors (notably, less plump). Vegetables were smaller and unpalatable until farming during the Neolithic period. And grains such as corn were wild grasses with tough kernels. Additionally, the average lifespan was less than 30 years, so we cannot conclusively say that the diet promoted longevity.

Overall, this eating pattern allows more animal protein than the Mediterranean diet, in the form of lean meats, but it also emphasizes fruits, nonstarchy vegetables, fish, nuts, and seeds. The diet discourages eating grain, dairy, legumes, processed foods, refined oils, and sugars. There is a lot of hype surrounding this diet, and research has been limited until recently. A 2020 meta-analysis concluded that the Paleolithic diet concluded it was comparable to the Mediterranean and two other diets in terms of its effects on blood glucose and insulin balance. Another meta-analysis concluded that there is some suggestion of favorable effects on cardiovascular disease risk factors, but more well-designed trials are still needed.

Summary: Positive aspects of this diet include a focus on fruits and vegetables and reduction of processed foods. However, research, while showing some initial promise, is limited.

Vegetarian/Vegan Diets

Vegetarians do not eat meat, fish, or poultry. Vegans avoid meat and all other animal products such as cheese, dairy, honey, and eggs. People generally become vegetarian or vegan for

Department of Family Medicine and Community Health



health, environmental, economic, or ethical concerns. A well-balanced vegetarian diet meets all known nutrient needs (including daily protein intake).²¹ Observational studies suggest that vegetarians enjoy better health, but this finding can be attributed to a multitude of confounding factors related to healthy lifestyles. More rigorous studies have found that vegetarians have decreased incidence of cardiac disease,²² and vegans with type 2 diabetes have better glycemic control than diabetics who eat meat.²³ Research also supports a vegetarian or vegan diet for weight loss,²⁴ reduction of systolic and diastolic blood pressure,²⁵ and prevention and treatment of diabetes.²⁶ A small study also reported improvements in neuropathic pain in type 2 diabetics following a vegan diet.²⁷. One common nutritional deficiency among vegans is vitamin B12 deficiency. Vegans can either take supplemental Vitamin B12 or cook with nutritional yeast, which is rich in B12.

Summary: Both vegetarian and vegan diets prevent cardiac and metabolic disease and can result in weight loss. If balanced and low in processed foods, a vegetarian and vegan diet can meet all of a person's nutritional needs.

Blood Type Diet

The blood type diet outlined in the book *Eat Right 4 Your Type* by Peter D'Adamo, ²⁸ suggests that one's blood type is the main determinant of a person's dietary needs. The book suggests different approaches to eating for each blood type. Vegetables and legumes are encouraged for most of the blood types and certain foods are excluded for each blood type. Minimal research has been conducted to assess the validity of this diet. A 2014 study with 1,455 participants showed modest improvement in cardiometabolic markers in patients following the diet, but these improvements were not specific to particular blood types.

Summary: Elements of this diet support healthy evidence-based dietary recommendations such as consumption of vegetables, seeds, and legumes, but there is no evidence suggesting benefit from adhering to the recommendations for each specific blood type.

DASH Diet

DASH stands for dietary approaches to stop hypertension. It was initially recommended for those with hypertension or at risk for it, but subsequent studies have found that this diet is also helpful for improving cholesterol levels and insulin sensitivity.²⁹ The diet encourages high intake of fruits, vegetables, nuts, and seeds, with minimal consumption of animal meats, dairy, saturated fats, and sweets. The goal is to consume 2,000 calories per day. In hypertensive patients, following the DASH diet resulted in a drop in systolic pressure of 11.6 mm Hg and a drop in diastolic pressure of 5.8 mm Hg.²⁹

Summary: Like the anti-inflammatory and Mediterranean diets, this diet encourages high intake of fruits, vegetables, nuts, and seeds along with low intake of meat and dairy. This could be used as both a general dietary recommendation and in the setting of specific diagnoses, such as hypertension and dyslipidemia.

Diets for Weight Loss

When patients look for guidance regarding weight loss, it is beneficial to look at their current health issues for guidance about focusing on a low-fat versus a low-carbohydrate approach.

Department of Family Medicine and Community Health



Decreasing overall calories is, of course, necessary for sustained weight loss, but for patients with diabetes or insulin resistance (an estimated 23% of the U.S. population), a low-carbohydrate diet like the Atkin's diet may prove to be the most effective for them.³⁰ For those with normal insulin sensitivity, high-carbohydrate, low-fat diets may prove more effective.³¹

Those on low-carbohydrate diets have greater success when eating leaner proteins and avoiding saturated fats. Likewise, those on high-carbohydrate, low-fat diets find increased success when their carbohydrates are primarily fruits, vegetables, whole grains, and multigrain. In this way, the foods we use to replace carbohydrates or fats in low-carb and low-fat diets seem to matter more than the diet choice itself. In fact, studies have shown that over time, low-fat and low-carb diets have similar weight loss outcomes.³²

Summary: The best strategy for long-term weight loss is a sustainable diet. The success of low-carbohydrate and low-fat diets depends on the types of nutrients we use to replace the carbohydrates and fats.

There are a number of websites that give additional information about other popular diets.

- WebMD
- Medical News Today
- <u>UK National Health Service (NHS)</u>
- Everyday Health

WebMD, Medical News Today, and the NHS provide lists of diets with supporting data, if available. EveryDayHealth provides a list of 600 different diets, but it links each diet to marketing materials.

Resource Links

- <u>Elimination Diets</u>: https://www.fammed.wisc.edu/files/webfm-uploads/documents/outreach/im/handout elimination diet patient.pdf
- https://www.everydayhealth.com/: https://www.everydayhealth.com/
- Medical News Today: https://www.medicalnewstoday.com/articles/5847
- Passport to Whole Health: https://www.va.gov/WHOLEHEALTHLIBRARY/docs/Passport to WholeHealth FY2020 508.pdf
- <u>UK National Health Service (NHS)</u>: https://www.nhs.uk/live-well/healthy-weight/top-diets-review/
- WebMD: http://www.webmd.com/diet/evaluate-latest-diets

Author(s)

"Choosing a Diet" was adapted for the University of Wisconsin Integrative Health Program from the original written by Samantha Sharp, MD and updated by Sagar Shah, MD. (2014, updated 2020). Modified for UW Integrative Health in 2020 by Adam Rindfleisch, MD.

Department of Family Medicine and Community Health



This tool was made possible through a collaborative effort between the University of Wisconsin Integrative Health Program, VA Office of Patient Centered Care and Cultural Transformation, and Pacific Institute for Research and Evaluation

References

- 1. Hardman WE. (n-3) fatty acids and cancer therapy. J Nutr. 2004;134(12):3427S-3430S.
- 2. Hu FB, Willett WC. Optimal diets for prevention of coronary heart disease. *JAMA*. 2002;288(20):2569-2578.
- 3. Mickleborough T, Rundell K. Dietary polyunsaturated fatty acids in asthma-and exercise-induced bronchoconstriction. *Eur J Clin Nutr.* 2005;59(12):1335-1346.
- 4. Tennant F. A diet for patients with chronic pain. Pract Pain Manag. 2011;11(6):22-30.
- 5. Olendzki BC, Silverstein TD, Persuitte GM, Ma Y, Baldwin KR, Cave D. An anti-inflammatory diet as treatment for inflammatory bowel disease: a case series report. *Nutr J.* 2014;13:5.
- 6. Orchard T, Yildiz V, Steck SE, et al. Dietary inflammatory index, bone mineral density, and risk of fracture in postmenopausal women: results from the Women's Health Initiative. *J Bone Miner Res.* 2017;32(5):1136-1146.
- 7. Darlington LG. Dietary therapy for arthritis. Rheum Dis Clin North Am. 1991;17(2):273-285.
- 8. Lea R, Whorwell PJ. The role of food intolerance in irritable bowel syndrome. *Gastroenterol Clin North Am.* 2005;34(2):247-255.
- 9. Sun-Edelstein C, Mauskop A. Foods and supplements in the management of migraine headaches. *Clin J Pain.* 2009;25(5):446-452.
- 10. Lee SS, Lee KY, Noh G. The necessity of diet therapy for successful interferon-γ therapy in atopic dermatitis. *Yonsei Med J.* 2001;42(2):161-171.
- 11. Nigg JT, Holton K. Restriction and elimination diets in ADHD treatment. *Child Adolesc Psychiatr Clin N Am.* 2014;23(4):937-953.
- 12. Nordmann AJ, Suter-Zimmermann K, Bucher HC, et al. Meta-analysis comparing Mediterranean to low-fat diets for modification of cardiovascular risk factors. *Am J Med.* 2011;124(9):841-851. e842.
- 13. Esposito K, Kastorini C-M, Panagiotakos DB, Giugliano D. Mediterranean diet and weight loss: meta-analysis of randomized controlled trials. *Metab Syndr Relat Disord*. 2011;9(1):1-12.
- 14. Estruch R, Ros E, Salas-Salvado J, et al. Primary prevention of cardiovascular disease with a Mediterranean diet. *N Engl J Med.* 2013;368(14):1279-1290.
- 15. Samieri C, Sun Q, Townsend MK, et al. The association between dietary patterns at midlife and health in aging: an observational study. *Ann Intern Med.* 2013;159(9):584-591.
- 16. Luciano M, Corley J, Cox SR, et al. Mediterranean-type diet and brain structural change from 73 to 76 years in a Scottish cohort. *Neurology*. 2017;88(5):449-455.
- 17. Crous-Bou M, Fung TT, Prescott J, et al. Mediterranean diet and telomere length in Nurses' Health Study: population based cohort study. *BMJ*. 2014:349:q6674.
- 18. O'Keefe Jr JH, Cordain L. Cardiovascular disease resulting from a diet and lifestyle at odds with our Paleolithic genome: how to become a 21st-century hunter-gatherer. *Mayo Clin Proc.* 2004;79:101-108
- 19. Jamka M, Kulczyński B, Juruć A, Gramza-Michałowska A, Stokes CS, Walkowiak J. The effect of the paleolithic diet vs. healthy diets on glucose and insulin homeostasis: a systematic review and meta-analysis of randomized controlled trials. *J Clin Med.* 2020;9(2).
- 20. Ghaedi E, Mohammadi M, Mohammadi H, et al. Effects of a paleolithic diet on cardiovascular disease risk factors: a systematic review and meta-analysis of randomized controlled trials. *Adv Nutr.* 2019;10(4):634-646.
- 21. Craig WJ, Mangels AR. Position of the American Dietetic Association: vegetarian diets. *J Am Diet Assoc.* 2009;109(7):1266-1282.
- 22. Ginter E. Vegetarian diets, chronic diseases and longevity. Bratisl Lek Listy. 2008;109(10):463-466.

Department of Family Medicine and Community Health



- 23. Barnard ND, Cohen J, Jenkins DJ, et al. A low-fat vegan diet improves glycemic control and cardiovascular risk factors in a randomized clinical trial in individuals with type 2 diabetes. *Diabetes Care*. 2006;29(8):1777-1783.
- 24. Berkow SE, Barnard N. Vegetarian diets and weight status. Nutr Rev. 2006;64(4):175-188.
- 25. U.S. Department of Agriculture, U.S. Department of Health and Human Services. Dietary guidelines for Americans 2015-2020. U.S. Department of Health and Human Services website. Available at: https://health.gov/dietaryguidelines/2015/resources/2015-2020_Dietary_Guidelines.pdf. Published December 2015. Accessed May 21, 2018.
- 26. Tonstad S, Butler T, Yan R, Fraser GE. Type of vegetarian diet, body weight, and prevalence of type 2 diabetes. *Diabetes Care*. 2009;32(5):791-796.
- 27. McCarty MF. Favorable impact of a vegan diet with exercise on hemorheology: implications for control of diabetic neuropathy. *Med Hypotheses*. 2002;58(6):476-486.
- 28. D'Adamo PJ, Whitney C. Eat Right 4 Your Type: The Individualized Diet Solution to Staying Healthy, Living Longer & Achieving Your Ideal Weight. New York, NY: Penguin; 1997.
- 29. Appel LJ, Moore TJ, Obarzanek E, et al. A clinical trial of the effects of dietary patterns on blood pressure. DASH Collaborative Research Group. *N Engl J Med.* 1997;336(16):1117-1124.
- 30. Gardner CD, Kiazand A, Alhassan S, et al. Comparison of the Atkins, Zone, Ornish, and LEARN diets for change in weight and related risk factors among overweight premenopausal women: the A TO Z Weight Loss Study: a randomized trial. *JAMA*. 2007;297(9):969-977.
- 31. Cornier MA, Donahoo WT, Pereira R, et al. Insulin sensitivity determines the effectiveness of dietary macronutrient composition on weight loss in obese women. *Obes Res.* 2005;13(4):703-709.
- 32. Gardner CD. Tailoring dietary approaches for weight loss. *Int J Obes Suppl.* 2012;2(Suppl 1):S11-s15.