## The Power of Protein in Diabetes & Weight Management

by Holly Moran, MS, RD, LD, CDCES Sponsored and accredited by Heartland Food Products Group #22971

## Reference List

- National Academy of Medicine (formerly Institute of Medicine). 2005. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids. Washington, DC: The National Academies Press. https://doi.org/10.17226/10490.
- Wolfe RR, Cifelli AM, Kostas G, Kim IY. Optimizing Protein Intake in Adults: Interpretation and Application of the Recommended Dietary Allowance Compared with the Acceptable Macronutrient Distribution Range. Adv Nutr. 2017;8(2):266-275. Published 2017 Mar 15. doi:10.3945/an.116.013821
- 3. U.S. Department of Agriculture and U.S. Department of Health and Human Services. Dietary Guidelines for Americans, 2020-2025. 9th Edition. December 2020. Available at DietaryGuidelines.gov.
- 4. ElSayed NA, Aleppo G, Aroda VR, et al. 5. Facilitating Positive Health Behaviors and Well-being to Improve Health Outcomes: Standards of Care in Diabetes-2023. Diabetes Care. 2023;46(Supplement 1):S68-S96. doi:10.2337/dc23-S005
- 5. Hamdy O, Ganda OP, Maryniuk M, Gabbay RA; Members of the Joslin Clinical Oversight Committee. CHAPTER 2. Clinical nutrition guideline for overweight and obese adults with type 2 diabetes (T2D) or prediabetes, or those at high risk for developing T2D. Am J Manag Care. 2018;24(7 Spec No.):SP226-SP231.
- 6. Fanelli SM, Kelly OJ, Krok-Schoen JL, Taylor CA. Low Protein Intakes and Poor Diet Quality Associate with Functional Limitations in US Adults with Diabetes: A 2005-2016 NHANES Analysis. Nutrients. 2021;13(8):2582. Published 2021 Jul 27. doi:10.3390/nu13082582
- 7. Sluik D, Brouwer-Brolsma EM, Berendsen AAM, et al. Protein intake and the incidence of prediabetes and diabetes in 4 population-based studies: the PREVIEW project. Am J Clin Nutr. 2019;109(5):1310-1318. doi:10.1093/ajcn/ngy388
- 8. Campbell AP, Rains TM. Dietary protein is important in the practical management of prediabetes and type 2 diabetes. J Nutr. 2015;145(1):164S-169S. doi:10.3945/jn.114.194878
- 9. Paterson MA, Smart CE, Lopez PE, et al. Influence of dietary protein on postprandial blood glucose levels in individuals with Type 1 diabetes mellitus using intensive insulin therapy. Diabet Med. 2016;33(5):592-598. doi:10.1111/dme.13011
- 10. Bell KJ, Toschi E, Steil GM, Wolpert HA. Optimized Mealtime Insulin Dosing for Fat and Protein in Type 1 Diabetes: Application of a Model-Based Approach to Derive Insulin Doses for Open-Loop Diabetes Management. Diabetes Care. 2016;39(9):1631-1634. doi:10.2337/dc15-2855
- 11. Morgan-Bathke M, Raynor HA, Baxter SD, et al. Medical Nutrition Therapy Interventions Provided by Dietitians for Adult Overweight and Obesity Management: An Academy of Nutrition and Dietetics Evidence-Based Practice Guideline. J Acad Nutr Diet. 2023;123(3):520-545.e10. doi:10.1016/j.jand.2022.11.014
- 12. Pesta DH, Samuel VT. A high-protein diet for reducing body fat: mechanisms and possible caveats. Nutr Metab (Lond). 2014;11(1):53. Published 2014 Nov 19. doi:10.1186/1743-7075-11-53
- 13. Diet Review: Ketogenic Diet for Weight Loss. Harvard T.H. Chan School of Public Health. Updated ND. Accessed February 24, 2023. <a href="https://www.hsph.harvard.edu/nutritionsource/healthy-">https://www.hsph.harvard.edu/nutritionsource/healthy-</a>

- weight/diet-reviews/ketogenic-diet/#:~:text=Generally%2C%20popular%20ketogenic%20resources%20suggest,carbohydrate%2C%20and%2075%20grams%20protein.
- 14. Atkins vs Keto: Low Carb Diet Approaches. Atkins. Updated September 26, 2018. Accessed February 24, 2023. https://www.atkins.com/how-it-works/blog/is-atkins-the-better-keto-diet#:~:text=Atkins%2040%3A%20Fat%3A%2055%25,Carbs%3A%2010%25%20to%2015%25
- 15. Kim JY. Optimal Diet Strategies for Weight Loss and Weight Loss Maintenance. J Obes Metab Syndr. 2021;30(1):20-31. doi:10.7570/jomes20065
- 16. Cuenca-Sánchez M, Navas-Carrillo D, Orenes-Piñero E. Controversies surrounding high-protein diet intake: satiating effect and kidney and bone health. Adv Nutr. 2015;6(3):260-266. Published 2015 May 15. doi:10.3945/an.114.007716
- 17. Duyff RL. Protein Power. In: Academy of Nutrition & Dietetics Complete Food & Nutrition Guide. 5th ed. Academy of Nutrition & Dietetics; 2017:373-384.
- 18. Institute of Medicine (US) Committee on Examination of Front-of-Package Nutrition Rating Systems and Symbols; Wartella EA, Lichtenstein AH, Boon CS, editors. Front-of-Package Nutrition Rating Systems and Symbols: Phase I Report. Washington (DC): National Academies Press (US); 2010. Appendix B, FDA Regulatory Requirements for Nutrient Content Claims.
- 19. International Food Information Council. 2022 Food & Health Survey. 18 May 2022. https://foodinsight.org/2022-food-health-survey/
- 20. International Food Information Council. Plant and Animal Protein Choices: Consumer Viewpoints and Purchasing Behaviors. 26 January 2021. https://foodinsight.org/plant-and-animal-protein-consumer-survey/
- 21. Shan Z, Rehm CD, Rogers G, et al. Trends in Dietary Carbohydrate, Protein, and Fat Intake and Diet Quality Among US Adults, 1999-2016. JAMA. 2019;322(12):1178-1187. doi:10.1001/jama.2019.13771
- 22. Noronha JC, Nishi SK, Braunstein CR, et al. The Effect of Liquid Meal Replacements on Cardiometabolic Risk Factors in Overweight/Obese Individuals With Type 2 Diabetes: A Systematic Review and Meta-analysis of Randomized Controlled Trials. Diabetes Care. 2019;42(5):767-776. doi:10.2337/dc18-2270
- 23. Elia M, Ceriello A, Laube H, Sinclair AJ, Engfer M, Stratton RJ. Enteral nutritional support and use of diabetes-specific formulas for patients with diabetes: a systematic review and meta-analysis. Diabetes Care. 2005;28(9):2267-2279. doi:10.2337/diacare.28.9.2267
- 24. Mustad VA, Hegazi RA, Hustead DS, et al. Use of a diabetes-specific nutritional shake to replace a daily breakfast and afternoon snack improves glycemic responses assessed by continuous glucose monitoring in people with type 2 diabetes: a randomized clinical pilot study. BMJ Open Diabetes Res Care. 2020;8(1):e001258. doi:10.1136/bmjdrc-2020-001258
- 25. Ma X, Chen Q, Pu Y, et al. Skipping breakfast is associated with overweight and obesity: A systematic review and meta-analysis. Obes Res Clin Pract. 2020;14(1):1-8. doi:10.1016/j.orcp.2019.12.002
- 26. Zeballos E, Todd JE. The effects of skipping a meal on daily energy intake and diet quality. Public Health Nutr. 2020;23(18):3346-3355. doi:10.1017/S1368980020000683