

Research Roundup – August 2025

New this month in therapeutic carbohydrate reduction and metabolic health.

Curated by

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Metabolic studies

1. Du, Y. *et al.* (2025) 'Digitally enhanced ketogenic diet versus low-fat diet for cardio-renal-metabolic health in a predominantly Hispanic adult population with overweight or obesity: Pilot randomised clinical trial', *Diabetes, Obesity and Metabolism*, n/a(n/a). Available at: <https://doi.org/10.1111/dom.70000>.
2. Lu, L. *et al.* (2025) 'The effect of intermittent fasting on insulin resistance, lipid profile, and inflammation on metabolic syndrome: a GRADE assessed systematic review and meta-analysis', *Journal of Health, Population, and Nutrition*, 44, p. 293. Available at: <https://doi.org/10.1186/s41043-025-01039-2>.
3. Neuman, V. *et al.* (2025) 'Short-term low-carbohydrate diet decreases body weight and fat mass but not muscle strength in children and young people with type 1 diabetes', *European Journal of Clinical Nutrition*, pp. 1–5. Available at: <https://doi.org/10.1038/s41430-025-01658-2>.
4. Ojo, O. *et al.* (2025) 'Current Advances and Future Prospects in the Use of a Low-Carbohydrate Diet in Managing People with Type 2 Diabetes: A Systematic Review of Randomised Controlled Trials', *International Journal of Environmental Research and Public Health*, 22(9), p. 1352. Available at: <https://doi.org/10.3390/ijerph22091352>.
5. Pi, S. *et al.* (2025) 'Low-carbohydrate diets reduce cardiovascular risk factor levels in patients with metabolic dysfunction-associated steatotic liver disease: a systematic review and meta-analysis of randomized controlled trials', *Frontiers in Nutrition*, 12. Available at: <https://doi.org/10.3389/fnut.2025.1626352>.
6. Stavres, J. *et al.* (2025) 'Influence of exogenous ketosis on spontaneous cardiovagal baroreflex gain and blood pressure responses to isometric handgrip in individuals with metabolic syndrome: a placebo-controlled pilot study', *European Journal of Applied Physiology* [Preprint]. Available at: <https://doi.org/10.1007/s00421-025-05921-z>.

7. Yan, Y. *et al.* (2025) 'The efficacy of low-carbohydrate diets on glycemic control in type 2 diabetes: a comprehensive overview of meta-analyses of controlled clinical trials', *Diabetology & Metabolic Syndrome*, 17, p. 341. Available at: <https://doi.org/10.1186/s13098-025-01890-7>.
8. Zhao, X. and Chen, K. (2025) 'Plasma metabolites mediate the causal effect of carbohydrate intake on bone mineral density', *Medicine*, 104(31), p. e43608. Available at: <https://doi.org/10.1097/MD.00000000000043608>.

General reviews

1. Crabtree, C.D. *et al.* (2025) 'Salutary Effects of Nutritional Ketosis for the Diseased Human Heart', *Current Atherosclerosis Reports*, 27(1), p. 85. Available at: <https://doi.org/10.1007/s11883-025-01333-8>.
2. Dawson, J., Rangan, A. and Rangan, G.K. (2025) 'Nutritional considerations for designing ketogenic dietary interventions for people with Autosomal Dominant Polycystic Kidney Disease', *Journal of Nephrology* [Preprint]. Available at: <https://doi.org/10.1007/s40620-025-02378-3>.
3. Mu, C., Rho, J.M. and Shearer, J. (2025) 'The Interplay between the Gut and Ketogenic Diets in Health and Disease', *Advanced Science*, n/a(n/a), p. e04249. Available at: <https://doi.org/10.1002/advs.202504249>.
4. Shkorfu, W. *et al.* (2025) 'Intermittent Fasting and Hormonal Regulation: Pathways to Improved Metabolic Health', *Food Science & Nutrition*, 13(8), p. e70586. Available at: <https://doi.org/10.1002/fsn3.70586>.
5. Vranjić, P. *et al.* (2025) 'Ketogenic Diet and Thyroid Function: A Delicate Metabolic Balancing Act', *Current Issues in Molecular Biology*, 47(9), p. 696. Available at: <https://doi.org/10.3390/cimb47090696>.

Neurology and Psychiatry

1. Bahr, L.S. *et al.* (2025) 'Fasting, ketogenic, and anti-inflammatory diets in multiple sclerosis: a randomized controlled trial with 18-month follow-up', *BMC Nutrition*, 11(1), p. 167. Available at: <https://doi.org/10.1186/s40795-025-011156-5>.
2. Campbell, I.H., Frye, M.A. and Campbell, H. (2025) 'Metabolic plasticity: an evolutionary perspective on metabolic and circadian dysregulation in bipolar disorder', *Molecular Psychiatry*, pp. 1–13. Available at: <https://doi.org/10.1038/s41380-025-03123-9>.
3. Chang, J., Schimpf, S. and Phitsanuwong, C. (2025) 'Impact of modified Atkins diet on growth in infants and children with epilepsy', *Epileptic Disorders: International Epilepsy Journal with Videotape*, 27(4), pp. 579–585. Available at: <https://doi.org/10.1002/epd2.70002>.

4. Grosu, C. *et al.* (2025) 'The Role of Nutrition and Physical Activity in Modulating Disease Progression and Quality of Life in Multiple Sclerosis', *Nutrients*, 17(16), p. 2713. Available at: <https://doi.org/10.3390/nu17162713>.
5. Opel, N. *et al.* (2025) 'Clinical management of major depressive disorder with comorbid obesity', *The Lancet Psychiatry*, 0(0). Available at: [https://doi.org/10.1016/S2215-0366\(25\)00193-2](https://doi.org/10.1016/S2215-0366(25)00193-2).
6. Pawłowska, M. *et al.* (2025) 'Ketogenic Metabolism in Neurodegenerative Diseases: Mechanisms of Action and Therapeutic Potential', *Metabolites*, 15(8), p. 508. Available at: <https://doi.org/10.3390/metabo15080508>.
7. Schlimme, J.E. (2025) 'Ketogenic Diet as Protection for Deprescribing Antipsychotics', *Schizophrenia Bulletin*, p. sbaf127. Available at: <https://doi.org/10.1093/schbul/sbaf127>.

Case studies

1. Knufinke, M., Lebbing, M. and Mesnage, R. (2025) 'Case Report: Sustained weight loss and glycemic control from repeated long-term fasting in type 2 diabetes', *Frontiers in Clinical Diabetes and Healthcare*, 6, p. 1572245. Available at: <https://doi.org/10.3389/fcdhc.2025.1572245>.