Research Roundup – October 2025

New this month in therapeutic carbohydrate reduction and metabolic health.

Curated by
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Metabolic studies

1. Chen, S. *et al.* (2025) 'Effects of time-restricted eating on body composition and metabolic parameters in overweight and obese women: a systematic review and meta-analysis', *Frontiers in Nutrition*, 12, p. 1664412. Available at: https://doi.org/10.3389/fnut.2025.1664412.
2. Cukoski, S. *et al.* (2025) '#3742 Ketogenic diet as a therapeutic approach in ADPKD', *Nephrology Dialysis Transplantation*, 40(Supplement_3). Available at: https://doi.org/10.1093/ndt/gfaf116.0434.
3. Kawano, H. *et al.* (2025) 'Three-Month Interim Analysis of Ketogenic Metabolic Therapy in Japanese Patients with ADPKD: SA-PO0579', *Journal of the American Society of Nephrology*, 36(10S), p. 10.1681/ASN.2025zqnnmtrv. Available at: https://doi.org/10.1681/ASN.2025zqnnmtrv.
4. Klein, R.J. (no date) 'SAT-274 Ketone Bodies Impact Immune Cell Metabolism'. Available at: https://dx.doi.org/10.1210/jendso/bvaf149.829 (Accessed: 1 November 2025).
5. Lee, K. *et al.* (2025) 'Abstract B094: Ketogenic Diet Modulates Gut Microbiome Composition and Enhances Treatment Response in Patients with Advanced Pancreatic Cancer: A Phase II Study', *Cancer Research*, 85(18_Supplement_3), p. B094. Available at: https://doi.org/10.1158/1538-7445.PANCREATIC25-B094.
6. Mongkolsucharitkul, P. *et al.* (2025) 'Effectiveness of low-carbohydrate diets on type 2 diabetes: A systematic review and meta-analysis of randomized controlled trials in Eastern vs. Western populations', *Diabetes Research and Clinical Practice*, 229. Available at: https://doi.org/10.1016/j.diabres.2025.112464.
7. Pala, B. *et al.* (2025) 'Very low-calorie ketogenic diet reduces left ventricular mass and epicardial adipose tissue in post-menopausal women with essential hypertension and obesity: A single-center, prospective, open-label, clinical study', *Nutrition, Metabolism and Cardiovascular Diseases*, p. 104368. Available at: https://doi.org/10.1016/j.numecd.2025.104368.

8. Seto, E. *et al.* (2025) 'Effects of acute ketone monoester ingestion on heart rate, blood pressure and muscle sympathetic nerve activity at rest and stress in healthy adults', *Physiological Reports*, 13(19), p. e70584. Available at: https://doi.org/10.14814/phy2.70584.
9. Wang, S. *et al.* (2025) 'The impact of very-low-calorie ketogenic diets on gut microbiota in individuals with obesity: a systematic review and meta-analysis', *Gut Microbes*, 17(1), p. 2566305. Available at: https://doi.org/10.1080/19490976.2025.2566305.

Exercise

1. Noakes, T. *et al.* (2025) 'Identification of a reverse crossover point during moderate-intensity exercise (>6 h; 69% VO2max) in a world-class triathlete—A secondary analysis', *Frontiers in Nutrition*, 12, p. 1627404. Available at: https://doi.org/10.3389/fnut.2025.1627404.
2. Wang, Y. *et al.* (2025) 'Effects of ketogenic diet on muscle mass, strength, aerobic metabolic capacity, and endurance in adults: a systematic review and meta-analysis', *Journal of Health, Population, and Nutrition*, 44, p. 346. Available at: https://doi.org/10.1186/s41043-025-01090-z.

General reviews

1. Mohib, O. *et al.* (2025) 'Clinical Benefits of Exogenous Ketosis in Adults with Disease: A Systematic Review', *Nutrients*, 17(19), p. 3125. Available at: https://doi.org/10.3390/nu17193125.
2. Smith, R. *et al.* (2025) 'Potential therapeutic benefit of exogenous ketone ester administration in delirium: a narrative review', *Critical Care*, 29(1), p. 424. Available at: https://doi.org/10.1186/s13054-025-05680-5.
3. Spinosa, J.P. *et al.* (2025) 'The planetary diet: a nutritional utopia in conflict with human evolution', *Nutrition & Metabolism*, 22, p. 123. Available at: https://doi.org/10.1186/s12986-025-01019-7.
4. Yang, W., Pang, N. and He, X. (2025) 'Breaking the metabolic–inflammatory vicious cycle in polycystic ovary syndrome: a comparative review of ketogenic and high-fat diets', *Lipids in Health and Disease*, 24, p. 310. Available at: https://doi.org/10.1186/s12944-025-02693-5.

Neurology and Psychiatry

1. Basu, S., Manokaran, R.K. and Hemamalini, A.J. (2025) 'Does the Ketogenic Diet Improve Seizure, Nutritional Status, and Quality of Life of Children with Rare Epilepsy?', in *International Journal of Epilepsy*. Thieme Medical and Scientific Publishers Pvt. Ltd., p. A-39. Available at: https://doi.org/10.1055/s-0045-1813080.
2. Hu, W. *et al.* (2025) 'Add-on ketogenic diet versus antiseizure medications alone in children with developmental and epileptic encephalopathies: a prospective comparative cohort study', *Frontiers in Neurology*, 16, p. 1677046. Available at: https://doi.org/10.3389/fneur.2025.1677046.

3. Micali, N. *et al.* (2025) 'Providing alternative fuel for the brain in anorexia nervosa: a review of the literature on ketones and their effects on metabolism and the brain', *Translational Psychiatry*, 15(1), p. 412. Available at: https://doi.org/10.1038/s41398-025-03591-1.
4. Reddy, N.J. *et al.* (2025) 'The role and benefits of ketogenic diet in modulating inflammation in multiple sclerosis: A systematic review and meta-analysis', *Disease-a-Month*, p. 102013. Available at: https://doi.org/10.1016/j.disamonth.2025.102013.
5. Schoeler, N.E. *et al.* (2025) 'Classical and Modified Ketogenic Diets for Children and Young People With Drug-Resistant Epilepsy: A Reflection of International Dietetic Practice and Best Practice Recommendations for Dietitians', *Journal of Human Nutrition and Dietetics*, 38(5), p. e70129. Available at: https://doi.org/10.1111/jhn.70129.

Association studies

1. Lv, W., Zhao, X. and Liu, L. (2025) 'Low-carbohydrate diet, overweight/obesity and female urinary incontinence: results from the National Health and Nutrition Examination Survey', *BMC Women's Health*, 25(1), p. 462. Available at: https://doi.org/10.1186/s12905-025-04012-7.
2. Mateu-Fabregat, J. *et al.* (2025) 'Associations of maternal dietary carbohydrate intake, glycemic index, and glycemic load during pregnancy with offspring neurodevelopment', *European Journal of Pediatrics*, 184(11), p. 721. Available at: https://doi.org/10.1007/s00431-025-06519-5.

Case studies, preclinical studies, and protocols

1. Schmidt, M.A. *et al.* (2025) 'Ketone Therapy Prevents Semaglutide-induced Loss of Cardiac Mass', *European Journal of Preventive Cardiology*, p. zwaf605. Available at: https://doi.org/10.1093/eurjpc/zwaf605. (Preclinical)
2. Schreel, L. *et al.* (2025) 'Case series: Effects of a ketogenic diet on cardiometabolic health in seven outpatients with bipolar disorder', *Frontiers in Nutrition*, 12. Available at: https://doi.org/10.3389/fnut.2025.1635489.
3. Wang, J. *et al.* (2025) 'Ketogenic diet strategy in patients with sepsis: a multicentre prospective randomised interventional trial protocol', *BMJ Open*, 15(10), p. e098718. Available at: https://doi.org/10.1136/bmjopen-2024-098718.(protocol)
4. Yang, Y. *et al.* (2025) 'Ketogenic diet for alternating hemiplegia of childhood: Case report and literature review', *Medicine*, 104(40), p. e44993. Available at: https://doi.org/10.1097/MD.0000000000044993.