

## Research Roundup – July 2025

New this month in therapeutic carbohydrate reduction and metabolic health.

Curated by

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### Metabolic studies

1. Khodarahmi, M., Seyedhosseini, H. and Askari, G. (2025) 'Effect of Low-Carbohydrate Diets on C-Reactive Protein Level in Adults: A Systematic Review and Meta-Analysis of Randomized Controlled Trials', *Food Science & Nutrition*, 13(7), p. e70566. Available at: <https://doi.org/10.1002/fsn3.70566>.
2. Martínez-Montoro, J.I. *et al.* (2025) 'Effect of a ketogenic diet, time-restricted eating, or alternate-day fasting on weight loss in adults with obesity: a randomized clinical trial', *BMC Medicine*, 23, p. 368. Available at: <https://doi.org/10.1186/s12916-025-04182-z>.
3. Pappe, C.L. *et al.* (2025) 'Effects of a 4-week free-sugar avoidance during periodontal therapy: An explorative randomized controlled clinical trial', *Journal of Periodontology*, 96(6), pp. 675–690. Available at: <https://doi.org/10.1002/JPER.24-0208>.
4. Yamada S, *et al.* (2025) 'Saturated Fat Restriction for Cardiovascular Disease Prevention: A Systematic Review and Meta-analysis of Randomized Controlled Trials' (2025) *JMA Journal*, 8(2). Available at: <https://doi.org/10.31662/jmaj.2024-0324>. ABSTRACT
5. Shirai, T. *et al.* (2025) 'Renal function trajectories of Japanese adults with diabetic kidney disease on different diet therapies including energy-restricted and low-carbohydrate diets: a retrospective cohort study', *Diabetology International*, 16(3), pp. 493–503. Available at: <https://doi.org/10.1007/s13340-025-00808-y>. ABSTRACT
6. Zeng, J. *et al.* (2025) 'Effects of different dietary patterns on glucose management in type 1 diabetes: a systematic review and meta-analysis of randomized controlled trials', *eClinicalMedicine*, 83, p. 103222. Available at: <https://doi.org/10.1016/j.eclinm.2025.103222>. [PDF](#)

### General reviews

1. Falkenhain, K. (2025) 'Ketones and Insulin: A Paradoxical Interplay With Implications for Glucose Metabolism', *Journal of the Endocrine Society*, 9(8), p. bvaf101. Available at: <https://doi.org/10.1210/jendso/bvaf101>.
2. Kelty, T.J., Krause, A. and Rector, R.S. (2025) 'Ketone metabolites in metabolic dysfunction-associated steatotic liver disease progression: optimizing keto-therapeutic strategies', *American Journal of Physiology-Endocrinology and Metabolism*, p. ajpendo.00178.2025. Available at: <https://doi.org/10.1152/ajpendo.00178.2025>.
3. Lima, M. et al. (2025) 'Effects of the Ketogenic Diet on Gonadal Hormones: A Systematic Review', *Nutrition Reviews*, p. nuaf105. Available at: <https://doi.org/10.1093/nutrit/nuaf105>. ABSTRACT
4. Mierzejewski, J., Rafałowicz, A. and Wojciechowska, U.J. (2025) 'High LDL Cholesterol, Low Risk? Lean Mass Hyper-responder phenotype – A literature review', *Quality in Sport*, 43, p. 61260. Available at: <https://doi.org/10.12775/QS.2025.43.61260>.
5. Rice, S.M. and Reynolds, D.B. (2025) 'Practical guidelines for addressing common questions and misconceptions about the ketogenic diet', *Journal of Metabolic Health*, 8(1), p. 10. Available at: <https://doi.org/10.4102/jmh.v8i1.113>.

### Oncology

1. Amaral, L.J. et al. (2025) 'A phase 1 safety and feasibility trial of a ketogenic diet plus standard of care for patients with recently diagnosed glioblastoma', *Scientific Reports*, 15, p. 21064. Available at: <https://doi.org/10.1038/s41598-025-06675-6>.
2. Xue, M. et al. (2025) 'The feasibility and safety of fasting-mimicking diet in breast cancer patients with chemotherapy in China', *Breast Cancer Research and Treatment* [Preprint]. Available at: <https://doi.org/10.1007/s10549-025-07756-w>.
3. Zhang, M. et al. (2025) 'Impact of ketogenic diets on cancer patient outcomes: a systematic review and meta-analysis', *Frontiers in Nutrition*, 12. Available at: <https://doi.org/10.3389/fnut.2025.1535921>.

### Neurology and Psychiatry

1. Finney, C. et al. (2025) 'Cross-tissue immune profiling of APOE ε4 reveals early dysregulation in Alzheimer's disease', *Research Square*, p. rs.3.rs. Available at: <https://doi.org/10.21203/rs.3.rs-7089423/v1>.
2. Huo, L. et al. (2025) 'Effects of Intermittent Fasting on Anxiety and the Functional Connectivity of the Amygdala in Healthy Adults', *Alpha Psychiatry*, 26(3), p. 44384. Available at: <https://doi.org/10.31083/AP44384>.

3. Ifland, J. and Brewerton, T.D. (2025) 'Binge-type eating disorders and ultra-processed food addiction: phenomenology, pathophysiology and treatment implications', *Frontiers in Psychiatry*, 16. Available at: <https://doi.org/10.3389/fpsy.2025.1584891>.
4. Klimczak, K. *et al.* (2025) 'The impact of the ketogenic diet on the course of schizophrenia and bipolar disorder', *Quality in Sport*, 43, pp. 61285–61285. Available at: <https://doi.org/10.12775/QS.2025.43.61285>.
5. Pereyra, F. *et al.* (2025) 'Gut-Brain Axis and Migraine: Rates of Improvement and Predictors of Response After a Low-FODMAP, Low-Starch and Low-Sucrose Dietary Intervention', *Journal of Human Nutrition and Dietetics: The Official Journal of the British Dietetic Association*, 38(4), p. e70104. Available at: <https://doi.org/10.1111/jhn.70104>. ABSTRACT
6. Saner, E. *et al.* (2025) 'TOWARD: a metabolic health intervention that improves food addiction and binge eating symptoms', *Frontiers in Psychiatry*, 16. Available at: <https://doi.org/10.3389/fpsy.2025.1612551>.
7. Tsang, E. *et al.* (2025) 'The nutritional adequacy of the ketogenic diet in paediatric epilepsy: detailed nutrient analysis and dietary recommendations', *Clinical nutrition ESPEN*, pp. S2405-4577(25)01775–9. Available at: <https://doi.org/10.1016/j.clnesp.2025.07.023>.
8. Vail, E., Turner, Z. and Kossoff, E.H. (2025) 'The Role of Carnitine Monitoring and Supplementation in Children With Epilepsy on a Ketogenic Diet', *Journal of Child Neurology*, p. 8830738251356537. Available at: <https://doi.org/10.1177/08830738251356537>.
9. Worster, K. *et al.* (2025) 'A mixed methods feasibility study of a ketogenic diet as treatment for Parkinson's disease', *Frontiers in Nutrition*, 12. Available at: <https://doi.org/10.3389/fnut.2025.1601446>.

### Case studies

1. Caissutti, S. *et al.* (2025) 'Ketogenic diet as rescue therapy to access transplantation in obese and advanced stage IV-CKD patients: a case report and literature review', *Journal of Nephrology* [Preprint]. Available at: <https://doi.org/10.1007/s40620-025-02335-0>.
2. Yang, F., Hou, D. and Wen, J. (2025) 'Perioperative management of scoliosis surgery in child with epilepsy on the ketogenic diet: Case report', *Medicine*, 104(26), p. e43125. Available at: <https://doi.org/10.1097/MD.00000000000043125>.
3. Zhao, F. *et al.* (2025) 'A novel mutation in the DYNC1H1 gene causing developmental and epileptic encephalopathy treated with ketogenic diet: A case report', *Medicine*, 104(28), p. e43277. Available at: <https://doi.org/10.1097/MD.00000000000043277>.