

Research Roundup – September 2025

New this month in therapeutic carbohydrate reduction and metabolic health.

Curated by

[Sarah Rice](#) BSc. (Hons), MCOptom (UK), MHP, NNP



Metabolic studies

1. Cai, Y. *et al.* (2025) 'Associations between daily dietary carbohydrate intake and TIR in adults with type 1 diabetes', *Frontiers in Nutrition*, 12, p. 1638849. Available at: <https://doi.org/10.3389/fnut.2025.1638849>.
2. Das, R. *et al.* (no date) 'Long-Term Efficacy and Safety of a Low-Carbohydrate Diet in Type 2 Diabetes Remission: A Systematic Review', *Cureus*, 17(9), p. e93340. Available at: <https://doi.org/10.7759/cureus.93340>.
3. Feng, S., Liu, R., Colwell, B., *et al.* (2025) 'Carbohydrate-restricted diet types and macronutrient replacements for metabolic health in adults: A meta-analysis of randomized trials', *Clinical Nutrition*, p. S0261561425002535. Available at: <https://doi.org/10.1016/j.clnu.2025.09.005>.
4. Lin, A.S. *et al.* (2025) 'Capillary Ketone Monitoring–Guided Adaptation of Automated Insulin Delivery to Accommodate a Ketogenic Diet in an Individual With Type 1 Diabetes: Case Study and Literature Review'. *Clin Diabetes* 2025; cd250068. Available at: <https://doi.org/10.2337/cd25-0068>
5. Wicha, K.A. *et al.* (2025) 'The impact of a low-carbohydrate diet on metabolic parameters in patients with type 1 and type 2 diabetes mellitus', *Lekarz Wojskowy*, 103(2), pp. 115–120. Available at: <https://doi.org/10.53301/lw/200605>.
6. Willis, H.J. *et al.* (2025) 'Effects of Continuous Glucose Monitoring Versus Blood Glucose Monitoring During a Carbohydrate-Restricted Nutrition Intervention in People With Type 2 Diabetes: 6-Month Follow-up Outcomes From a Randomized Clinical Trial', *Endocrine Practice*, 31(9), pp. 1116–1126. Available at: <https://doi.org/10.1016/j.eprac.2025.05.746>.

Heart function

1. Kjærulff, M.L.G. *et al.* (2025) 'Three-week alternate day fasting improves myocardial flow reserve and reduces oxygen use in individuals with overweight',

- The Journal of Clinical Endocrinology & Metabolism*, p. dgaf484. Available at: <https://doi.org/10.1210/clinem/dgaf484>. ABSTRACT
- Liao, L.P. et al. (2025a) 'Effect of ketone supplementation, a low-carbohydrate diet and a ketogenic diet on heart failure measures and outcomes: a systematic review and meta-analysis', *Heart (British Cardiac Society)*, p. heartjnl-2025-326082. Available at: <https://doi.org/10.1136/heartjnl-2025-326082>.
 - Moseley, G.A. et al. (2025) 'Retrospective Review of the Safety and Effectiveness of a Low Carbohydrate Ketogenic Diet Intervention in Patients with Overweight or Obesity and Heart Failure', *Journal of Cardiac Failure - Intersections* [Preprint]. Available at: <https://doi.org/10.1016/j.jcafi.2025.07.004>. ABSTRACT

General reviews

- Churchward-Venne, T.A. (2025) 'Anabolic and anticatabolic actions of ketone bodies on skeletal muscle: potential relevance in the management of skeletal muscle wasting', *Current Opinion in Clinical Nutrition & Metabolic Care* [Preprint]. Available at: <https://doi.org/10.1097/MCO.0000000000001164>.
- Fante, C. et al. (2025) 'The role of β -hydroxybutyrate testing in ketogenic metabolic therapies', *Frontiers in Nutrition*, 12, p. 1629921. Available at: <https://doi.org/10.3389/fnut.2025.1629921>.
- Hancock, S. and Harvey, C. (2025) 'Healthy mouth, healthy body: Are dental caries the harbinger of metabolic disease?', *Journal of Metabolic Health*, 8(1), p. 6. Available at: <https://doi.org/10.4102/jmh.v8i1.121>.
- Mu, C., Rho, J.M. and Shearer, J. (2025) 'The Interplay between the Gut and Ketogenic Diets in Health and Disease', *Advanced Science*, 12(36), p. e04249. Available at: <https://doi.org/10.1002/advs.202504249>.

Women

- Athar, F. et al. (2025) 'Insulin levels early in perimenopause inform vasomotor symptom incidence across the menopausal transition', *medRxiv*, p. 2025.09.05.25334479. Available at: <https://doi.org/10.1101/2025.09.05.25334479>.
- Barrea, L. et al. (2025) 'Effectiveness of Medical Nutrition Therapy in the Management of Patients with Obesity and Endometriosis: from the Mediterranean Diet To the Ketogenic Diet, Through Supplementation. The Role of the Nutritionist in Clinical Management', *Current Obesity Reports*, 14(1), p. 68. Available at: <https://doi.org/10.1007/s13679-025-00662-8>.
- Casalechi, M. et al. (2025) 'Prospective Observational Case Series in Infertile Women with Overweight or Obesity Treated with a Very-Low Calorie Ketogenic Diet (VLCKD) Prior to an In Vitro Fertilization (IVF) Treatment', *Nutrients*, 17(18), p. 2930. Available at: <https://doi.org/10.3390/nu17182930>.

4. Cooper, I.D. *et al.* (2025) 'Ketosis Suppression and Ageing (KetoSAge): The Effect of Suppressing Ketosis on GKI and Liver Biomarkers in Healthy Females', *Livers*, 5(3), p. 41. Available at: <https://doi.org/10.3390/livers5030041>.
5. Fleigle, D. *et al.* (2025) 'Polycystic Ovary Syndrome and the Effects of a Ketogenic Diet: A Scoping Review', *Nutrients*, 17(17), p. 2893. Available at: <https://doi.org/10.3390/nu17172893>.
6. Jeziorek, M. *et al.* (2025) 'Exploring the Anti-Inflammatory Potential of a Mediterranean-Style Ketogenic Diet in Women with Lipedema', *Nutrients*, 17(18), p. 3014. Available at: <https://doi.org/10.3390/nu17183014>.
7. Lopez Torres, S.Y. *et al.* (2025) 'Adaptive Thermogenesis After Hypocaloric Low-Carbohydrate Versus Low-Fat Diets in African American Women: A Secondary Analysis', *Obesity*, p. oby.70020. Available at: <https://doi.org/10.1002/oby.70020>.
8. Reedy, C., Huggins, S. and Keith, L. (2025a) 'Therapeutic Carbohydrate Reduction for Lipedema: Guidelines for a Patient-Centered, Holistic Approach', *Recent Progress in Nutrition*, 5. Available at: <https://doi.org/10.21926/rpn.2503019>.

Neurology and Psychiatry

1. Decker, D.D. *et al.* (2025) 'A pilot study examining a ketogenic diet as an adjunct therapy in college students with major depressive disorder', *Translational Psychiatry*, 15(1), p. 322. Available at: <https://doi.org/10.1038/s41398-025-03544-8>.
2. Gunasekera, L. *et al.* (2025) 'The Hypometabolic State of the Migraine Brain: Is a Ketogenic Diet the Answer?', *Brain and Behavior*, 15(9), p. e70860. Available at: <https://doi.org/10.1002/brb3.70860>.
3. (ISMRRM 2025) Long-Term Benefits of Ketogenic/Modified Atkins Diet Following Moderate-Severe Traumatic Brain Injury. (2025). Available at: https://archive.ismrm.org/2025/2084_8IFi0LRFW.html (Accessed: 9 September 2025).
4. Kakde, S.P. *et al.* (no date) 'Safety and Efficacy of Ketogenic Diet in the Management of Multiple Sclerosis: A Systematic Review', *Cureus*, 17(8), p. e89965. Available at: <https://doi.org/10.7759/cureus.89965>.

Case studies

1. Einama, T. *et al.* (2025) 'Postoperative recurrence of pancreatic cancer controlled for 9 months solely by severe carbohydrate restriction: ketogenic diet', *Clinical Journal of Gastroenterology* [Preprint]. Available at: <https://doi.org/10.1007/s12328-025-02221-z>.
2. Russell, K.J. and Schwartz, S.E.O. (2025) 'Targeting differential energy substrate metabolism on a therapeutic ketogenic diet: a case report', *Frontiers in Nutrition*, 12, p. 1623217. Available at: <https://doi.org/10.3389/fnut.2025.1623217>. (Glioblastoma)