Research Roundup – February 2025

New this month in therapeutic carbohydrate reduction and metabolic health.

Curated by Sarah Rice BSc. (Hons), MCOptom (UK), MHP, NNP

Metabolic Studies

1. Buchanan, L. *et al.* (2025) 'TOWARD, a metabolic health intervention, demonstrates robust 1-year weight loss and cost-savings through deprescription', *Frontiers in Nutrition*, 12. Available at: https://doi.org/10.3389/fnut.2025.1548609.
2. Colledge, B.S. *et al.* (2025) 'Is the very low carbohydrate diet safe for individuals with chronic kidney disease?', *Journal of Metabolic Health*, 8(1), p. 10. Available at: https://doi.org/10.4102/jmh.v8i1.115.
3. Errigo, A. *et al.* (2025) 'The Cholesterol Paradox in Long-Livers from a Sardinia Longevity Hot Spot (Blue Zone)', *Nutrients*, 17(5), p. 765. Available at: https://doi.org/10.3390/nu17050765.
4. Katsuya, S. *et al.* (2025) 'Effect of D-β-hydroxybutyrate on sleep quality in healthy participants: a randomized, double-blind, placebo-controlled study', *Bioscience, Biotechnology, and Biochemistry*, p. zbaf017. Available at: https://doi.org/10.1093/bbb/zbaf017.
5. Lundanes, J. *et al.* (2025) 'Changes in cytokines and fibrotic growth factors after low-carbohydrate or low-fat low-energy diets in females with lipedema', *Current Developments in Nutrition*, p. 104571. Available at: https://doi.org/10.1016/j.cdnut.2025.104571.
6. Stephens, E.B. *et al.* (no date) 'A Randomized Open-Label, Observational Study of the Novel Ketone Ester, Bis Octanoyl (R)-1,3-Butanediol, and Its Acute Effect on ß-Hydroxybutyrate and Glucose Concentrations in Healthy Older Adults', *Journal of Nutrition in Gerontology and Geriatrics*, 0(0), pp. 1–20. Available at: https://doi.org/10.1080/21551197.2025.2466163.
7. Turetta, C. *et al.* (2025) 'Impact of Ketogenic Diet on Weight, Metabolic, and Endocrine Parameters in Women with Polycystic Ovary Syndrome: A

Systematic Review and Meta-Analysis', *Gynecologic and Obstetric Investigation*, pp. 1–22. Available at: https://doi.org/10.1159/000543941.
8. Verde, L. *et al.* (2025) 'Efficacy and Safety of Phase 1 of Very Low Energy Ketogenic Therapy (VLEKT) in Subjects with Obesity and Mild Renal Impairment', *Nutrients*, 17(4), p. 721. Available at: https://doi.org/10.3390/nu17040721.

General reviews

1. Athinarayanan, S.J. and Volek, J.S. (2025) 'Mitigating muscle loss during weight loss: can nutritional ketosis make a difference? A call for more research', *Obesity*, n/a(n/a). Available at: https://doi.org/10.1002/oby.24235.
2. Biesiekierska, M. *et al.* (2025) 'The Impact of Ketogenic Nutrition on Obesity and Metabolic Health: Mechanisms and Clinical Implications', *Nutrition Reviews*, p. nuaf010. Available at: https://doi.org/10.1093/nutrit/nuaf010.
3. Luo, C. *et al.* (2025) 'Ketogenic diet and β-hydroxybutyrate in osteoporosis: current progress and controversy', *Frontiers in Nutrition*, 12, p. 1508695. Available at: https://doi.org/10.3389/fnut.2025.1508695. (note: data against the KD from epilepsy studies is not fully generalisable due to population differences. Also see Chang et al. in neurology section below)
4. Paoli, A. (2025b) 'The Influence of Physical Exercise, Ketogenic Diet, and Time-Restricted Eating on De Novo Lipogenesis: A Narrative Review', *Nutrients*, 17(4), p. 663. Available at: https://doi.org/10.3390/nu17040663.
5. Roberts, C.G.P. *et al.* (2025) 'Illnesses associated with ketosis including diabetic ketoacidosis during very low carbohydrate and ketogenic diets', *Diabetes, Obesity and Metabolism*, n/a(n/a). Available at: https://doi.org/10.1111/dom.16252.

Neurology

1. Abrego-Guandique, D.M. *et al.* (2025) 'Ketogenic diet and microRNAs: focus on cognitive function', *Frontiers in Nutrition*, 12. Available at: https://doi.org/10.3389/fnut.2025.1545832.
2. 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 [Preprint]. Available at: https://doi.org/10.1002/epd2.70002.
3. Farrow, M. *et al.* (2025) 'The Effect of a Low-Glycemic Index Diet on Postprandial Hypotension in Individuals With Chronic Spinal Cord Injury: Results From a Pilot Study', *Topics in Spinal Cord Injury Rehabilitation*, 31(1), pp. 30–41. Available at: https://doi.org/10.46292/sci24-00044.
4. Ni, D. *et al.* (2025) 'High-Fat and Low-Carbohydrate Dietary Environments Are Linked to Reduced Idiopathic Epilepsy Incidence and Prevalence', *Annals of Clinical and Translational Neurology*, n/a(n/a). Available at: https://doi.org/10.1002/acn3.70017.
5. Qiao, X. *et al.* (2025) 'Exploring physiological beta-hydroxybutyrate level in children treated with the classical ketogenic diet for drug-resistant epilepsy', *Acta Epileptologica*, 7(1), p. 10. Available at: https://doi.org/10.1186/s42494-024-00199-8.

Metabolic Psychiatry

1. Boltri, M. *et al.* (2025) 'Keto-Therapy: Unveiling the Potential of Ketogenic Diet in Psychiatric Care - A Scoping Review', *Nutrition*, p. 112710. Available at: https://doi.org/10.1016/j.nut.2025.112710. ABSTRACT
2. Campbell, I.H. *et al.* (2025) 'A pilot study of a ketogenic diet in bipolar disorder: clinical, metabolic and magnetic resonance spectroscopy findings', *BJPsych Open*, 11(2), p. e34. Available at: https://doi.org/10.1192/bjo.2024.841.
3. Huizer, K. *et al.* (2025) 'Potential benefits of ketone therapy as a novel immunometabolic treatment for schizophrenia', *Psychiatry Research*, 345, p. 116379. Available at: https://doi.org/10.1016/j.psychres.2025.116379.
4. Laurent, N., Bellamy, E.L., Tague, K.A., *et al.* (2025) 'Ketogenic metabolic therapy for schizoaffective disorder: a retrospective case series of psychotic symptom remission and mood recovery', *Frontiers in Nutrition*, 12, p. 1506304. Available at: https://doi.org/10.3389/fnut.2025.1506304.
5. Laurent, N., Bellamy, E.L., Hristova, D., *et al.* (2025) 'Ketogenic metabolic therapy in the remission of chronic major depressive disorder: a retrospective case study', *Frontiers in Nutrition*, 12. Available at: https://doi.org/10.3389/fnut.2025.1549782.