Roundup - January 2024

New this month in therapeutic carbohydrate restriction and metabolic health.

Metabolic (TCR intervention)

1. Buga, A. *et al.* (2024) 'Feasibility and metabolic outcomes of a well-formulated ketogenic diet as an adjuvant therapeutic intervention for women with stage IV metastatic breast cancer: The Keto-CARE trial', *PLOS ONE*, 19(1), p. e0296523. Available at: https://doi.org/10.1371/journal.pone.0296523.
2. Deru, L.S. *et al.* (2024) 'The Effects of a High-Carbohydrate versus a High-Fat Shake on Biomarkers of Metabolism and Glycemic Control When Used to Interrupt a 38-h Fast: A Randomized Crossover Study', *Nutrients*, 16(1), p. 164. Available at: https://doi.org/10.3390/nu16010164.
3. Glandt, M. *et al.* (2024) 'Use of a very low carbohydrate diet for prediabetes and type 2 diabetes: An audit', *Journal of Metabolic Health*. 2023rd-12th–21st edn. Available at: https://journalofmetabolichealth.org/index.php/jmh/article/view/87.
4. Hooshiar, S.H., Yazdani, A. and Jafarnejad, S. (2024) 'Does an alternate-day modified fasting diet improve premenstrual syndrome symptoms and health-related quality of life in obese or overweight women with premenstrual syndrome? A randomized, controlled trial', *Frontiers in Nutrition*, 10. Available at: https://www.frontiersin.org/articles/10.3389/fnut.2023.1298831.
5. Luong, T.V. *et al.* (2024) 'A ketogenic diet lowers myocardial fatty acid oxidation but does not affect oxygen consumption: a study in overweight humans', *Obesity*, n/a(n/a). Available at: https://doi.org/10.1002/oby.23967.
6. Li, L. *et al.* (2024) 'Gut microbiota changes associated with low-carbohydrate diet intervention for obesity', *Open Life Sciences*, 19(1), p. 20220803. Available at: https://doi.org/10.1515/biol-2022-0803.
7. Soto-Mota, A. *et al.* (2024b) 'Increased LDL-cholesterol on a low-carbohydrate diet in adults with normal but not high body weight: a meta-analysis', *The American Journal of Clinical Nutrition* [Preprint]. Available at: https://doi.org/10.1016/j.ajcnut.2024.01.009.
8. Vargas-Molina, S. *et al.* (2024) 'The effect of the ketogenic diet on resistance training load management: a repeated-measures clinical trial in trained participants', *Journal of the International Society of Sports Nutrition*, 21(1), p. 2306308. Available at: https://doi.org/10.1080/15502783.2024.2306308.
9. Walaszek, M., Kachlik, Z. and Cubała, W.J. (2024) 'Low-carbohydrate diet as a nutritional intervention in a major depression disorder: focus on relapse prevention', *Nutritional Neuroscience*, pp. 1–14. Available at: https://doi.org/10.1080/1028415X.2024.2303218. ABSTRACT

Reviews

1. Chacón, V. *et al.* (2024) 'Defining "low-carb" in the scientific literature: A scoping review of clinical studies', *Critical Reviews in Food Science and Nutrition*, 0(0), pp. 1–10. Available at: https://doi.org/10.1080/10408398.2023.2300705.
2. Galali, Y. *et al.* (2024) 'The impact of ketogenic diet on some metabolic and non-metabolic diseases: Evidence from human and animal model experiments', *Food Science & Nutrition*, n/a(n/a). Available at: https://doi.org/10.1002/fsn3.3873.

3. Gonzatti, M.B. and Goldberg, E. (2024) 'Ketone bodies as chemical signals for the immune system', *American Journal of Physiology. Cell Physiology* [Preprint]. Available at: https://doi.org/10.1152/ajpcell.00478.2023. PDF
4. Ji, J. *et al.* (2024) 'The effect of a ketogenic diet on inflammation-related markers: a systematic review and meta-analysis of randomized controlled trials', *Nutrition Reviews*, p. nuad175. Available at: https://doi.org/10.1093/nutrit/nuad175. ABSTRACT
5. Oh, R.C. and Murphy (2024) 'Low-Carbohydrate and Ketogenic Dietary Patterns for Type 2 Diabetes Management', *Federal Practitioner*, 41(1). Available at: https://doi.org/10.12788/fp.0429. PDF (nice overview)
6. Taher, H.A. *et al.* (2024) 'Role of ketogenic diet and its effect on the periodontium. A scoping review', *Frontiers in Oral Health*, 5. Available at: https://www.frontiersin.org/articles/10.3389/froh.2024.1364578.
7. Thompson, S., Madsen, L.T. and Bazzell, A. (2023) 'Impact of Fasting on Patients With Cancer: An Integrative Review', *Journal of the Advanced Practitioner in Oncology*, 14(7), pp. 608–619. Available at: https://doi.org/10.6004/jadpro.2023.14.7.5.
8. Unwin, D. (2024) 'Reducing overweight and obesity; so how are we doing?', *BMJ Nutrition, Prevention & Health*, p. e000836. Available at: https://doi.org/10.1136/bmjnph-2023-000836.
9. Yamahara, K. *et al.* (2024) 'Ketone Body Metabolism in Diabetic Kidney Disease', *Kidney360* [Preprint]. Available at: https://doi.org/10.34067/KID.0000000000000359.

Neurology

1. Ansari, U. *et al.* (2023) 'Exploring dietary approaches in the prevention and management of Amyotrophic Lateral Sclerosis: A literature review', *AIMS Neuroscience*, 10(4), pp. 376–387. Available at: https://doi.org/10.3934/Neuroscience.2023028.
2. Arora, N. *et al.* (2024) 'Modulation of beta-hydroxybutyrate in traumatic brain injury', *Current Opinion in Clinical Nutrition and Metabolic Care* [Preprint]. Available at: https://doi.org/10.1097/MCO.0000000000001008. ABSTRACT
3. Chu, D.Y. *et al.* (2024) 'Hypocarnitinemia and its effect on seizure control in adult patients with intractable epilepsy on the modified Atkins diet', *Frontiers in Nutrition*, 10, p. 1304209. Available at: https://doi.org/10.3389/fnut.2023.1304209.
4. Finelli, F. *et al.* (2024) 'CGRP Antagonism and Ketogenic Diet in the Treatment of Migraine', *Medicina*, 60(1), p. 163. Available at: https://doi.org/10.3390/medicina60010163.
5. Jang, J. *et al.* (2023) 'Molecular Mechanisms of Neuroprotection by Ketone Bodies and Ketogenic Diet in Cerebral Ischemia and Neurodegenerative Diseases', *International Journal of Molecular Sciences*, 25(1), p. 124. Available at: https://doi.org/10.3390/ijms25010124.
6. Lin, X., Wang, S. and Gao, Y. (2024) 'The effects of intermittent fasting for patients with multiple sclerosis (MS): a systematic review', *Frontiers in Nutrition*, 10, p. 1328426. Available at: https://doi.org/10.3389/fnut.2023.1328426.
7. Oliveira, T.P.D. *et al.* (2024) 'A Potential Role for the Ketogenic Diet in Alzheimer's Disease Treatment: Exploring Pre-Clinical and Clinical Evidence', *Metabolites*, 14(1), p. 25. Available at: https://doi.org/10.3390/metabo14010025.
8. Simeone, T. and Simeone, K. (2024) 'The Unconventional Effects of the Ketogenic Diet (KD) in Preclinical Epilepsy', *Epilepsy Currents*, p. 15357597231216916. Available at: https://doi.org/10.1177/15357597231216916.

Case Studies

1. Norwitz, N.G. and Cromwell, W.C. (2024) 'Oreo Cookie Treatment Lowers LDL Cholesterol More Than High-Intensity Statin therapy in a Lean Mass Hyper-Responder on a Ketogenic Diet: A Curious Crossover Experiment', *Metabolites*, 14(1), p. 73. Available at: https://doi.org/10.3390/metabo14010073.
2. Phillips, M.C.L. *et al.* (2024) 'Time-restricted ketogenic diet in amyotrophic lateral sclerosis: a case study', *Frontiers in Neurology*, 14. Available at: https://www.frontiersin.org/articles/10.3389/fneur.2023.1329541.