

Research Roundup – December 2024

New this month in therapeutic carbohydrate reduction and metabolic health.

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



Metabolic Studies

1. Castaldo, G. *et al.* (2024) 'The Effectiveness of the Low-Glycemic and Insulinemic (LOGI) Regimen in Maintaining the Benefits of the VLCKD in Fibromyalgia Patients', *Nutrients*, 16(23), p. 4161. Available at: <https://doi.org/10.3390/nu16234161>.
2. Klonek, G. *et al.* (2024) 'Effects of a 12 Week Ketogenic Diet Intervention on Obese and Overweight Females with Glucose and Lipid Metabolism Disturbance', *Nutrients*, 16(23), p. 4218. Available at: <https://doi.org/10.3390/nu16234218>.
3. Li, M. *et al.* (2025) 'Impact of short-term ketogenic diet on sex hormones and glucose-lipid metabolism in overweight or obese patients with polycystic ovary syndrome', *The Journal of Obstetrics and Gynaecology Research*, 51(1), p. e16178. Available at: <https://doi.org/10.1111/jog.16178>.
4. Omar, S.I. *et al.* (2024) 'The effects of Ramadan fasting on acne vulgaris: clinical, immunological, and oxidative status considerations', *Archives of Dermatological Research*, 317(1), p. 97. Available at: <https://doi.org/10.1007/s00403-024-03561-5>.
5. Paskaleva, I.N. *et al.* (2024) 'Low-Carbohydrate (Ketogenic) Diet in Children with Obesity: Part 1 – Diet Impact on Anthropometric Indicators and Indicators of Metabolic Syndrome and Insulin Resistance'. Available at: <https://doi.org/10.20944/preprints202412.0921.v1>. (Preprint)
6. Pirola, L. *et al.* (2024) 'Nutritional Studies Evaluating Ketogenic Diets as a Treatment for Obesity and Obesity-Associated Morbidities: Underlying Mechanisms and Potential for Clinical Implementation', *Endocrines*, 5(4), pp. 585–599. Available at: <https://doi.org/10.3390/endocrines5040042>.
7. Rossetti, R. *et al.* (2024) 'A Ketogenic Diet Followed by Gradual Carbohydrate Reintroduction Restores Menstrual Cycles in Women with Polycystic Ovary Syndrome with Oligomenorrhea Independent of Body Weight Loss: Results from a Single-Center, One-Arm, Pilot Study', *Metabolites*, 14(12), p. 691. Available at: <https://doi.org/10.3390/metabo14120691>.

8. Sharifi, M. et al. (2024) 'The effects of portfolio moderate-carbohydrate and ketogenic diets on anthropometric indices, metabolic status, and hormonal levels in overweight or obese women with polycystic ovary syndrome: a randomized controlled trial', *Nutrition Journal*, 23(1), p. 152. Available at: <https://doi.org/10.1186/s12937-024-01056-7>.
9. Wiggins, A.M. et al. (2024) 'The effect of a low-carbohydrate diet on evoked pain and quality of life in Non-Hispanic black women with knee osteoarthritis: a pilot study', *BMC Musculoskeletal Disorders*, 25, p. 1043. Available at: <https://doi.org/10.1186/s12891-024-08170-x>.
10. Zdzieblik, D. et al. (2024) 'Effect of a Modern Palaeolithic Diet in Combination with a Sprint Interval Training on Metabolic and Performance-Related Parameters in Male Athletes: A Pilot Trial', *Nutrition and Metabolic Insights*, 17, p. 11786388241299896. Available at: <https://doi.org/10.1177/11786388241299896>.
11. Zinn, C. et al. (2024) 'Redefining Diabetes Care: Evaluating the Impact of a Carbohydrate-Reduction, Health Coach Approach Model in New Zealand', *Journal of Diabetes Research*, 2024(1), p. 4843889. Available at: <https://doi.org/10.1155/jdr/4843889>.

Neurology

1. Guerreiro, D., Almeida, A. and Ramalho, R. (2024) 'Ketogenic Diet and Neuroinflammation: Implications for Neuroimmunometabolism and Therapeutic Approaches to Refractory Epilepsy', *Nutrients*, 16(23), p. 3994. Available at: <https://doi.org/10.3390/nu16233994>.
2. Haridas, B., Testino, A. and Kossoff, E.H. (2024) 'Ketogenic diet therapy for the treatment of pediatric epilepsy', *Epileptic Disorders*, n/a(n/a). Available at: <https://doi.org/10.1002/epd2.20320>.
3. Lv, R. et al. (2024) 'Intermittent fasting and neurodegenerative diseases: Molecular mechanisms and therapeutic potential', *Metabolism: Clinical and Experimental*, p. 156104. Available at: <https://doi.org/10.1016/j.metabol.2024.156104>. ABSTRACT
4. Magdy, R. et al. (2024) 'Ramadan Fasting in Adolescents with Epilepsy: Seizure Control and Behavioral Outcome', *Seizure: European Journal of Epilepsy* [Preprint]. Available at: <https://doi.org/10.1016/j.seizure.2024.12.007>. ABSTRACT

Metabolic Psychiatry

1. Li, Y. et al. (2024) 'Omic characterizing and targeting gut dysbiosis in children with autism spectrum disorder: symptom alleviation through combined

probiotic and medium-carbohydrate diet intervention - a pilot study', *Gut Microbes*, 16(1), p. 2434675. Available at: <https://doi.org/10.1080/19490976.2024.2434675>.

2. Lounici, A. et al. (2025) 'Ketogenic Diet as a Nutritional Metabolic Intervention for Obsessive–Compulsive Disorder: A Narrative Review', *Nutrients*, 17(1), p. 31. Available at: <https://doi.org/10.3390/nu17010031>.
3. Omori, N.E. et al. (2024) 'Exogenous ketone bodies and the ketogenic diet as a treatment option for neurodevelopmental disorders', *Frontiers in Nutrition*, 11. Available at: <https://doi.org/10.3389/fnut.2024.1485280>.
4. Öztürk, E. et al. (2024) 'Ketogenic diet as a therapeutic approach in autism spectrum disorder: a narrative review', *Metabolic Brain Disease*, 40(1), p. 67. Available at: <https://doi.org/10.1007/s11011-024-01506-5>. ABSTRACT

Cancer

1. Bahrami, A. et al. (2024) 'Fasting mimicking diet during neo-adjuvant chemotherapy in breast cancer patients: a randomized controlled trial study', *Frontiers in Nutrition*, 11, p. 1483707. Available at: <https://doi.org/10.3389/fnut.2024.1483707>.
2. Duraj, T. et al. (2024a) 'Clinical research framework proposal for ketogenic metabolic therapy in glioblastoma', *BMC Medicine*, 22(1), p. 578. Available at: <https://doi.org/10.1186/s12916-024-03775-4>.

Case studies and preclinical studies

1. Goedeke, S. et al. (2024) 'Assessing the Nutrient Composition of a Carnivore Diet: A Case Study Model', *Nutrients*, 17(1), p. 140. Available at: <https://doi.org/10.3390/nu17010140>.
2. Remund, N.P. et al. (2024) 'The Role of Beta-Hydroxybutyrate in Mitigating the Inflammatory and Metabolic Consequences of Uric Acid', *Metabolites*, 14(12), p. 679. Available at: <https://doi.org/10.3390/metabo14120679>.

