nutrition network

Roundup - August 2024

New this month in therapeutic carbohydrate restriction and metabolic health.

Metabolic Studies

1. Balestra, F. *et al.* (2024) 'Extracellular Vesicles Modulate Liver Cells Viability and Reactive Oxygen Species in Patients Following a Very Low-Calorie Ketogenic Diet', *Nutrients*, 16(15), p. 2386. Available at: https://doi.org/10.3390/nu16152386.
2. Bellanti, F. *et al.* (2024) 'A multiphase very-low calorie ketogenic diet improves serum redox balance by reducing oxidative status in obese patients', *Free Radical Biology and Medicine*, 223, pp. 109–117. Available at: https://doi.org/10.1016/j.freeradbiomed.2024.07.038.
3. Bhandarkar, N.S. *et al.* (2024) 'Comprehensive analysis of systemic, metabolic, and molecular changes following prospective change to low-carbohydrate diet in adults with type 2 diabetes mellitus in India', *Frontiers in Nutrition*, 11. Available at: https://doi.org/10.3389/fnut.2024.1394298.
4. Gopalasingam, N. *et al.* (2024) 'Randomized Crossover Trial of 2-Week Ketone Ester Treatment in Patients With Type 2 Diabetes and Heart Failure With Preserved Ejection Fraction', *Circulation* [Preprint]. Available at: https://doi.org/10.1161/CIRCULATIONAHA.124.069732. ABSTRACT
5. Kackley, M.L. *et al.* (2024) 'Self-reported menses physiology is positively modulated by a well-formulated, energy-controlled ketogenic diet vs. low fat diet in women of reproductive age with overweight/obesity', *PLOS ONE*. Edited by L. Yanes Cardozo, 19(8), p. e0293670. Available at: https://doi.org/10.1371/journal.pone.0293670.
6. McClure, T.S. *et al.* (2024) 'Ketone monoester attenuates oxygen desaturation during weighted ruck exercise under acute hypoxic exposure but does not impact cognitive performance', *Experimental Physiology*, n/a(n/a). Available at: https://doi.org/10.1113/EP091789.
7. Stubbs, B.J. *et al.* (2024) 'Daily consumption of ketone ester, bis-octanoyl (R)-1,3-butanediol, is safe and tolerable in healthy older adults in a randomized, parallel arm, double-blind, placebo-controlled, pilot study', *The Journal of nutrition, health and aging*, 28(9), p. 100329. Available at: https://doi.org/10.1016/j.jnha.2024.100329.

General Reviews

1. Anil, A. *et al.* (2024) 'Uncovering the Links Between Dietary Sugar and Cancer: A Narrative Review Exploring the Impact of Dietary Sugar and Fasting on Cancer Risk and Prevention', *Cureus* [Preprint]. Available at: https://doi.org/10.7759/cureus.67434.
2. Bhartiya, S. (2024) 'The Metabolic Shift: Unraveling the Potential of the Ketogenic Diet in Glaucoma Management', *Journal of Current Glaucoma Practice*, 18(2), p. 43. Available at: https://doi.org/10.5005/jp-journals-10078-1435.
3. O'Hearn, L.A. (2024) 'Signals of energy availability in sleep: consequences of a fat-based metabolism', *Frontiers in Nutrition*, 11, p. 1397185. Available at: https://doi.org/10.3389/fnut.2024.1397185.

4. Valerio, J. *et al.* (2024) 'Systematic Review and Clinical Insights: The Role of the Ketogenic Diet in Managing Glioblastoma in Cancer Neuroscience', *Journal of Personalized Medicine*, 14(9), p. 929. Available at: https://doi.org/10.3390/jpm14090929.
5. Vo, N., Zhang, Q. and Sung, H.-K. (2024) 'From fasting to fat reshaping: exploring the molecular pathways of intermittent fasting-induced adipose tissue remodeling', *Journal of Pharmacy & Pharmaceutical Sciences*, 27, p. 13062. Available at: https://doi.org/10.3389/jpps.2024.13062.

Children and Adolescents

1. Maass, A. *et al.* (2024) 'Nurture growth: Ketogenic diet therapy and growth velocity in infants under 12 months with epilepsy – A systematic review and infant data study', *Epilepsy & Behavior*, 159, p. 110011. Available at: https://doi.org/10.1016/j.yebeh.2024.110011.
2. Rohani, P. *et al.* (2024) 'Effect of a carbohydrate-restricted diet on weight loss in overweight and obese pediatric population: a meta-analysis of randomized controlled trials', *Diabetology & Metabolic Syndrome*, 16(1), p. 210. Available at: https://doi.org/10.1186/s13098-024-01458-x.
3. Zhang, Y. *et al.* (2024) 'Low-Carbohydrate Diet is More Helpful for Weight Loss Than Low-Fat Diet in Adolescents with Overweight and Obesity: A Systematic Review and Meta-Analysis', *Diabetes, Metabolic Syndrome and Obesity*, Volume 17, pp. 2997–3007. Available at: https://doi.org/10.2147/DMSO.S467719.

Neurology

1. Monda, A. *et al.* (2024) 'Exploring the ketogenic diet's potential in reducing neuroinflammation and modulating immune responses', *Frontiers in Immunology*, 15. Available at: https://doi.org/10.3389/fimmu.2024.1425816.
2. Perlman, J. *et al.* (2024) 'Impact of a ketogenic diet on sleep quality in people with relapsing multiple sclerosis', *Sleep Medicine*, 122, pp. 213–220. Available at: https://doi.org/10.1016/j.sleep.2024.08.020.
3. Zhang, X. and Liu, Q. (2024) 'Ketogenic Diet as a Therapeutic Intervention in Cerebral Hemorrhage Recovery', *Current Topics in Nutraceutical Research*, 22(3), pp. 993–999. Available at: https://doi.org/10.37290/ctnr2641-452X.22:993-999.

Metabolic Psychiatry

1. Laurent, N. (2024) 'Retrospective case study: ketogenic metabolic therapy in the effective management of treatment-resistant depressive symptoms in bipolar disorder', *Frontiers in Nutrition*, 11. Available at: https://doi.org/10.3389/fnut.2024.1394679.
2. Nikdasti, A. *et al.* (2024) 'Nutritional Strategies in Major Depression Disorder: From Ketogenic Diet to Modulation of the Microbiota-Gut-Brain Axis', *Molecular Neurobiology* [Preprint]. Available at: https://doi.org/10.1007/s12035-024-04446-4. ABSTRACT
3. Sahay, S. *et al.* (2024) 'Metabolic Insights into Neuropsychiatric Illnesses and Ketogenic Therapies: A Transcriptomic View', *International Journal of Molecular Sciences*, 25(15), p. 8266. Available at: https://doi.org/10.3390/ijms25158266.

Case Studies and Preclinical studies

1. Hajihassani, O. *et al.* (2024) 'A Ketogenic Diet Sensitizes Pancreatic Cancer to Inhibition of Glutamine Metabolism'. bioRxiv, p. 2024.07.19.604377. Available at: https://doi.org/10.1101/2024.07.19.604377.
2. Norwitz, N.G. and Soto-Mota, A. (2024) 'Case report: Carnivore–ketogenic diet for the treatment of inflammatory bowel disease: a case series of 10 patients', *Frontiers in Nutrition*, 11. Available at: https://doi.org/10.3389/fnut.2024.1467475.
3. Torres, J.A. *et al.* (2024) '"β-Hydroxybutyrate Recapitulates the Beneficial Effects of Ketogenic Metabolic Therapy in Polycystic Kidney Disease"', *iScience*, p. 110773. Available at: https://doi.org/10.1016/j.isci.2024.110773.