Roundup - May 2023

New this month in therapeutic carbohydrate restriction and metabolic health.

Metabolic (TCR intervention)

1. Bolesławska, I., Kowalówka, M., Bolesławska-Król, N. and Przysławski, J. (2023) 'Ketogenic Diet and Ketone Bodies as Clinical Support for the Treatment of SARS-CoV-2—Review of the Evidence', *Viruses*, 15(6), p. 1262. Available at: https://doi.org/10.3390/v15061262.
2. Camajani, E., Proietti, S., Persichetti, A., Feraco, A., Armani, A., Lombardo, M., Basciani, S. and Caprio, M. (2023) 'Efficacy and durability of a very low calorie ketogenic diet protocol on metabolic parameters', in *Endocrine Abstracts*. *ECE 2023*, Bioscientifica. Available at: https://doi.org/10.1530/endoabs.90.EP378. ABSTRACT
3. Ciaffi, J., Lisi, L., Mari, A., Mancarella, L., Brusi, V., Quaranta, E., Ricci, S., Vitali, G., Stefanelli, N. and Ursini, F. (2023) 'Pos1339 Efficacy of Very Low-Calorie Ketogenic Diet in Obese Patients with Fibromyalgia: Preliminary Results from a Monocentric Interventional Study', *Annals of the Rheumatic Diseases*, 82(Suppl 1), pp. 1020–1021. Available at: https://doi.org/10.1136/annrheumdis-2023-eular.4704. ABSTRACT
4. Diamond, D.M., Leaverton, P.E., Diamond, D.M. and Leaverton, P.E. (2023) 'Historical Review of the Use of Relative Risk Statistics in the Portrayal of the Purported Hazards of High LDL Cholesterol and the Benefits of Lipid-Lowering Therapy', *Cureus*, 15(5). Available at: https://doi.org/10.7759/cureus.38391.
5. Lawford, B., Hinman, R.S., Jones, S., Keating, C., Brown, C. and Bennell, K.L. (2023) '"The fact that I know I can do it is quite a motivator now": a qualitative study exploring experiences maintaining weight loss 6 months after completing a weight loss programme for knee osteoarthritis', *BMJ Open*, 13(5), p. e068157. Available at: https://doi.org/10.1136/bmjopen-2022-068157.
6. Liu, T., Ye, Ziheng, Feng, J., Zhang, L., Chen, H., Chen, X., Cai, F., Zhang, G., Lai, J., Ye, Zhiyu, Cao, N., Mo, B., Li, Z., Wang, N., Lin, Y., Zhang, T., Yang, Y., Hu, J., Yan, L., Zheng, Z., Song, W., Liang, H. and Qin, J. (2023) 'Efficacy and safety of modified fasting therapy for weight loss in 2054 hospitalized patients', *Obesity (Silver Spring, Md.)*, 31(6), pp. 1514–1529. Available at: https://doi.org/10.1002/oby.23756. ABSTRACT
7. Paoli, A. and Cerullo, G. (2023) 'Investigating the Link between Ketogenic Diet, NAFLD, Mitochondria, and Oxidative Stress: A Narrative Review', *Antioxidants*, 12(5), p. 1065. Available at: https://doi.org/10.3390/antiox12051065.
8. Saslow, L.R., Jones, L.M., Sen, A., Wolfson, J.A., Diez, H.L., O'Brien, A., Leung, C.W., Bayandorian, H., Daubenmier, J., Missel, A.L. and Richardson, C. (2023) 'Comparing Very Low-Carbohydrate vs DASH Diets for Overweight or Obese Adults With Hypertension and Prediabetes or Type 2 Diabetes: A Randomized Trial', *Annals of Family Medicine*, 21(3), pp. 256–263. Available at: https://doi.org/10.1370/afm.2968.
9. Saslow, L.R., Missel, A.L., O'Brien, A., Kim, S., Hecht, F.M., Moskowitz, J.T., Bayandorian, H., Pietrucha, M., Raymond, K., Richards, B., Liestenfeltz, B., Mason, A.E., Daubenmier, J. and Aikens,

J.E. (2023) 'Psychological Support Strategies for Adults With Type 2 Diabetes in a Very Low-Carbohydrate Web-Based Program: Randomized Controlled Trial', *JMIR diabetes*, 8, p. e44295. Available at: https://doi.org/10.2196/44295.

10. Sheffler, J.L., Kiosses, D.N., He, Z., Arjmandi, B.H., Akhavan, N.S., Klejc, K. and Naar, S. (2023) 'Improving Adherence to a Mediterranean Ketogenic Nutrition Program for High-Risk Older Adults: A Pilot Randomized Trial', *Nutrients*, 15(10), p. 2329. Available at: https://doi.org/10.3390/nu15102329.
11. Sun, J., Ruan, Y., Xu, N., Wu, P., Lin, N., Yuan, K., An, S., Kang, P., Li, S., Huang, Q., Yingzhang, Li, Y., Su, J., Ma, W., Chen, B., Zhang, X., Chen, X., Liang, Y., Lu, Z., Deng, G., Zhang, Z., Wang, Y., Wen, W., Zhang, H. and Chen, H. (2023) 'The effect of dietary carbohydrate and calorie restriction on weight and metabolic health in overweight/obese individuals: a multi-center randomized controlled trial', *BMC Medicine*, 21, p. 192. Available at: https://doi.org/10.1186/s12916-023-02869-9.
12. Verde, L., Docimo, A., Chirico, G., Tecce, N., Colao, A., Barrea, L. and Muscogiuri, G. (2023) 'What role does the Very Low-Calorie Ketogenic Diet (VLCKD) in obesity-related kidney complications?', in *Endocrine Abstracts*. *ECE 2023*, Bioscientifica. Available at: https://doi.org/10.1530/endoabs.90.P355.

Women

1. Erta, G., Stradi, R., Gersone, G. and Stradi, R. (2023) 'The Quest for Triglyceride Control: Can a low-starch diet be the answer for Insulin-Resistant Overweight Women? Available at: https://doi.org/10.21203/rs.3.rs-2959215/v1.
2. Jinxia C., Qiaoan C. a. O., Chunhua M.A. and Xiaoyun S.U. (2023) 'Effects of a ketogenic diet combined with resistance training on body composition and glucolipid metabolism in the obese and female college students', 中国学校卫生, 44(4), pp. 512–516. Available at: https://doi.org/10.16835/j.cnki.1000-9817.2023.04.008. ABSTRACT
3. Maseroli, E., Alfaroli, C., Cipriani, S. and Vignozzi, L. (2023) '(055) Application of a Very Low Calorie Ketogenic Diet (VLCKD) Protocol in Women's Endocrinology: Psychosexual Correlates of Weight Loss', *The Journal of Sexual Medicine*, 20(Supplement_2), p. qdad061.051. Available at: https://doi.org/10.1093/jsxmed/qdad061.051.
4. Tekin-Guler, T., Koc, N., Kara-Uzun, A. and Fisunoglu, M. (2023) 'The Effect of Prepregnancy Obesity on Breast Milk Fatty Acids and the Relationship of Breast Milk Fatty Acids with Maternal Diet and Infant Growth', *Breastfeeding Medicine* [Preprint]. Available at: https://doi.org/10.1089/bfm.2023.0002.
5. Dwyer, G.G., Akers, L.H. and Akers, J. (2023) 'Experiences of Women Following a Low-Carbohydrate Diet While Breastfeeding', *Clinical Lactation*, 14(2), pp. 72–84. Available at: https://doi.org/10.1891/CL-2022-0015. ABSTRACT

Sleep

1. Brandão, L.E.M., Popa, A., Cedernaes, E., Cedernaes, C., Lampola, L. and Cedernaes, J. (05.2023) 'Exposure to a more unhealthy diet impacts sleep microstructure during normal sleep and recovery sleep: A randomized trial', *Obesity*, n/a(n/a). Available at: https://doi.org/10.1002/oby.23787.
2. Gangitano, E., Elena, S.M., Lenzi, A., Gnessi, L. and Ray, D. (2023) 'Comparison of the Effects of a Ketogenic Diet and an Isocaloric Balanced Diet administered to Obese patients on Quality of Life and Sleep: a Randomized Clinical Trial', in *Endocrine Abstracts*. *ECE 2023*, Bioscientifica. Available at: https://doi.org/10.1530/endoabs.90.P626. ABSTRACT
3. Merlino, G., Tereshko, Y., Pez, S., Dal Bello, S., Pittino, A., Di Lorenzo, C., Filippi, F., Lettieri, C., Belgrado, E., Gigli, G.L. and Valente, M. (2023) 'Sleep of migraine patients is ameliorated by ketogenic diet, independently of pain control', *Sleep Medicine* [Preprint]. Available at: https://doi.org/10.1016/j.sleep.2023.05.006. ABSTRACT
4. Osman, A., Gu, C., Kim, D.E., Duan, D., Barron, B., Pham, L.V., Polotsky, V.Y. and Jun, J.C. (2023) 'Ketogenic diet acutely improves gas exchange and sleep apnoea in obesity hypoventilation syndrome: A non-randomized crossover study', *Respirology (Carlton, Vic.)* [Preprint]. Available at: https://doi.org/10.1111/resp.14526. ABSTRACT
5. Robberechts, R., Albouy, G., Hespel, P. and Poffè, C. (2023) 'Exogenous Ketosis Improves Sleep Efficiency and Counteracts the Decline in REM Sleep Following Strenuous Exercise', *Medicine & Science in Sports & Exercise*, p. 10.1249/MSS.0000000000003231. Available at: https://doi.org/10.1249/MSS.0000000000003231.

Cancer

1. Amaral, L., Gresham, G., Kim, S., Tighiouart, M., Nelson, T., Welborn, A., Lockshon, L., Noorvash, B., Rudnick, J.D., Irwin, S.A., Freedland, S.J. and Hu, J.L. (2023) 'The ketogenic diet plus standard of care for adults with recently diagnosed glioblastoma: Results from a phase 1 trial.', *Journal of Clinical Oncology*, 41(16_suppl), pp. 2076–2076. Available at: https://doi.org/10.1200/JCO.2023.41.16_suppl.2076.
2. Egashira, R., Matsunaga, M., Miyake, A., Hotta, S., Nagai, N., Yamaguchi, C., Takeuchi, M., Moriguchi, M., Tonari, S., Nakano, M., Saito, H. and Hagihara, K. (2023) 'Long-Term Effects of a Ketogenic Diet for Cancer', *Nutrients*, 15(10), p. 2334. Available at: https://doi.org/10.3390/nu15102334.

Neurology

1. Dai, C., Tan, C., Zhao, L., Liang, Y., Liu, G., Liu, H., Zhong, Y., Liu, Z., Mo, L., Liu, X. and Chen, L. (2023) 'Glucose metabolism impairment in Parkinson's disease', *Brain Research Bulletin*, 199, p. 110672. Available at: https://doi.org/10.1016/j.brainresbull.2023.110672.
2. Mentzelou, M., Dakanalis, A., Vasios, G.K., Gialeli, M., Papadopoulou, S.K. and Giaginis, C. (2023) 'The Relationship of Ketogenic Diet with Neurodegenerative and Psychiatric Diseases: A Scoping

Review from Basic Research to Clinical Practice', *Nutrients*, 15(10), p. 2270. Available at: https://doi.org/10.3390/nu15102270.
3. Merlino, G., Tereshko, Y., Pez, S., Dal Bello, S., Pittino, A., Di Lorenzo, C., Filippi, F., Lettieri, C., Belgrado, E., Gigli, G.L. and Valente, M. (2023) 'Sleep of migraine patients is ameliorated by ketogenic diet, independently of pain control', *Sleep Medicine* [Preprint]. Available at: https://doi.org/10.1016/j.sleep.2023.05.006.
4. Omori, N.E., Malys, M.K., Woo, G. and Mansor, L. (2023) 'Exploring the role of ketone bodies in the diagnosis and treatment of psychiatric disorders', *Frontiers in Psychiatry*, 14, p. 1142682. Available at: https://doi.org/10.3389/fpsyt.2023.1142682.

Case studies

1. Altıntaş, M., Yıldırım, M., Uçar, Ç.İ., Köse, E., Bektaş, Ö. and Teber, S. (2023) 'Ketogenic diet-responsive drug-resistant epilepsy in a case of asparagine synthetase deficiency with a novel compound heterozygous missense variant', *Clinical Neurology and Neurosurgery*, 230, p. 107772. Available at: https://doi.org/10.1016/j.clineuro.2023.107772.
2. He, F., Ye, L., Miao, P., Zhou, J., Ding, Y. and Wang, S. (no date) 'Long-term ketogenic diet therapy improves mitochondrial encephalopathy with lactic acidosis and stroke-like episodes (MELAS): A case report', *CNS Neuroscience & Therapeutics*, n/a(n/a). Available at: https://doi.org/10.1111/cns.14274.
3. Massimino, E., Amoroso, A.P., Lupoli, R., Rossi, A. and Capaldo, B. (2023) 'Nutritional management of glycogen storage disease type III: a case report and a critical appraisal of the literature', *Frontiers in Nutrition*, 10, p. 1178348. Available at: https://doi.org/10.3389/fnut.2023.1178348.

Preclinical studies showing promise

1. Jiang, Z., Wang, X., Zhang, H., Yin, J., Zhao, P., Yin, Q. and Wang, Z. (2023) 'Ketogenic diet protects MPTP-induced mouse model of Parkinson's disease via altering gut microbiota and metabolites', *MedComm*, 4(3), p. e268. Available at: https://doi.org/10.1002/mco2.268.
2. Olivito, I., Avolio, E., Minervini, D., Soda, T., Rocca, C., Angelone, T., Iaquinta, F.S., Bellizzi, D., De Rango, F., Bruno, R., De Bartolo, L., Alò, R., Canonaco, M. and Facciolo, R.M. (2023) 'Ketogenic diet ameliorates autism spectrum disorders-like behaviors via reduced inflammatory factors and microbiota remodeling in BTBR mice', *Experimental Neurology*, p. 114432. Available at: https://doi.org/10.1016/j.expneurol.2023.114432.
3. Venanzi, A.W., Carmy-Bennun, T., Marino, F.S., Ribeiro, M. and Hackam, A.S. (2023) 'Context-Dependent Effects of the Ketogenic Diet on Retinal Ganglion Cell Survival and Axonal Regeneration After Optic Nerve Injury', *Journal of Ocular Pharmacology and Therapeutics: The Official Journal of the Association for Ocular Pharmacology and Therapeutics* [Preprint]. Available at: https://doi.org/10.1089/jop.2023.0001.