

Roundup - February 2023

New this month in therapeutic carbohydrate restriction and metabolic health.

Metabolic (Diabetes/Obesity/CVD and other)

1. Barrea, L., Cacciapuoti, S., Megna, M., Verde, L., Marasca, C., Vono, R., Camajani, E., Colao, A., Savastano, S., Fabbrocini, G. and Muscogiuri, G. (2023) 'The effect of the ketogenic diet on Acne: Could it be a therapeutic tool?', *Critical Reviews in Food Science and Nutrition*, 0(0), pp. 1–20. Available at: <https://doi.org/10.1080/10408398.2023.2176813>. ABSTRACT
2. Barrea, L., Verde, L., Santangeli, P., Lucà, S., Docimo, A., Savastano, S., Colao, A. and Muscogiuri, G. (2023) 'Very low-calorie ketogenic diet (VLCKD): an antihypertensive nutritional approach', *Journal of Translational Medicine*, 21(1), p. 128. Available at: <https://doi.org/10.1186/s12967-023-03956-4>.
3. Binobead, M.A., Aldakhilallah, A.H., Alsedairy, S.A., Al-Harbi, L.N., Al-Qahtani, W.H. and Alshammari, G.M. (2023) 'Effect of Low-Carbohydrate Diet on Beta-Hydroxybutyrate Ketogenesis Metabolic Stimulation and Regulation of NLRP3 Ubiquitination in Obese Saudi Women', *Nutrients*, 15(4), p. 820. Available at: <https://doi.org/10.3390/nu15040820>.
4. Černelič-Bizjak, M., Kenig, S., Petelin, A., Jenko-Pražnikar, Z. and Mohorko, N. (2023) 'Link between emotional and external eating behaviors, peripheral neuropeptide Y, and β-hydroxybutyrate in participants with obesity on 12-week ketogenic diet', *Nutrition and Health*, p. 02601060231154464. Available at: <https://doi.org/10.1177/02601060231154464>.
5. da Silva Schmitt, C., da Costa, C.M., Souto, J.C.S., Chiogna, L.M., de Albuquerque Santos, Z.E., Rhoden, E.L. and Neto, B.S. (2023) 'The effects of a low carbohydrate diet on erectile function and serum testosterone levels in hypogonadal men with metabolic syndrome: a randomized clinical trial', *BMC Endocrine Disorders*, 23, p. 30. Available at: <https://doi.org/10.1186/s12902-023-01278-6>.
6. Dyńka, D., Kowalcze, K., Ambrozkiwicz, F. and Paziewska, A. (2023) 'Effect of the Ketogenic Diet on the Prophylaxis and Treatment of Diabetes Mellitus: A Review of the Meta-Analyses and Clinical Trials', *Nutrients*, 15(3), p. 500. Available at: <https://doi.org/10.3390/nu15030500>.
7. Kweh, F.A., Sulsona, C.R., Miller, J.L. and Driscoll, D.J. (2023) 'Hyperinsulinemia is a probable trigger for weight gain and hyperphagia in individuals with Prader-Willi syndrome', *Obesity Science & Practice*, p. osp4.663. Available at: <https://doi.org/10.1002/osp4.663>.
8. Løkken, N., Voermans, N.C., Andersen, L.K., Karazi, W., Reason, S.L., Zweers, H., Wilms, G., Santalla, A., Susanibar, E., Lucia, A. and Vissing, J. (2023) 'Patient-Reported Experiences with a Low-Carbohydrate Ketogenic Diet: An International Survey in Patients with McArdle Disease', *Nutrients*, 15(4), p. 843. Available at: <https://doi.org/10.3390/nu15040843>.
9. Manolis, A.S., Manolis, T.A. and Manolis, A.A. (2023) 'Ketone Bodies and Cardiovascular Disease: An Alternate Fuel Source to the Rescue', *International Journal of Molecular Sciences*, 24(4), p. 3534. Available at: <https://doi.org/10.3390/ijms24043534>.

10. Musa, E., Salazar-Petres, E., Arowolo, A., Levitt, N., Matjila, M. and Sferruzzi-Perri, A.N. (2023) 'Obesity and gestational diabetes independently and collectively induce specific effects on placental structure, inflammation and endocrine function in a cohort of South African women', *The Journal of Physiology*, n/a(n/a). Available at: <https://doi.org/10.1113/JP284139>.
11. Rinaldi, R., De Nucci, S., Castellana, F., Di Chito, M., Giannuzzi, V., Shahini, E., Zupo, R., Lampignano, L., Piazzolla, G., Triggiani, V., Cozzolongo, R., Giannelli, G. and De Pergola, G. (2023) 'The Effects of Eight Weeks' Very Low-Calorie Ketogenic Diet (VLCKD) on Liver Health in Subjects Affected by Overweight and Obesity', *Nutrients*, 15(4), p. 825. Available at: <https://doi.org/10.3390/nu15040825>.
12. Solianik, R., Židonienė, K., Eimantas, N. and Brazaitis, M. (2023) 'Prolonged fasting outperforms short-term fasting in terms of glucose tolerance and insulin release: A randomized controlled trial', *The British Journal of Nutrition*, pp. 1–23. Available at: <https://doi.org/10.1017/S0007114523000557>.
13. Witkowski, M., Nemet, I., Alamri, H., Wilcox, J., Gupta, N., Nimer, N., Haghikia, A., Li, X.S., Wu, Y., Saha, P.P., Demuth, I., König, M., Steinhagen-Thiessen, E., Cajka, T., Fiehn, O., Landmesser, U., Tang, W.H.W. and Hazen, S.L. (2023) 'The artificial sweetener erythritol and cardiovascular event risk', *Nature Medicine*, pp. 1–9. Available at: <https://doi.org/10.1038/s41591-023-02223-9>.
(Discussed on Low Carb MD podcast: [Episode 266: Erythritol Study with Drs. Adrian Soto Mota and Nick Norwitz](#))

Neurology

1. Bohnen, J.L.B., Albin, R.L. and Bohnen, N.I. (2023) 'Ketogenic interventions in mild cognitive impairment, Alzheimer's disease, and Parkinson's disease: A systematic review and critical appraisal', *Frontiers in Neurology*, 14, p. 1123290. Available at: <https://doi.org/10.3389/fneur.2023.1123290>.
2. El-Rashidy, O.F., Nassar, M.F., Shokair, W.A. and El Gendy, Y.G.A. (2023) 'Ketogenic diet for epilepsy control and enhancement in adaptive behavior', *Scientific Reports*, 13, p. 2102. Available at: <https://doi.org/10.1038/s41598-023-27373-1>.
3. Horowitz, T., Doche, E., Philip, M., Cammilleri, S., Suissa, L. and Guedj, E. (2023) 'Regional brain glucose metabolism is differentially affected by ketogenic diet: a human semiquantitative positron emission tomography', *European Journal of Nuclear Medicine and Molecular Imaging* [Preprint]. Available at: <https://doi.org/10.21203/rs.3.rs-1905069/v1>. PREPRINT
4. Jayashankar, S.S., Arifin, K.T. and Nasaruddin, M.L. (2023) 'β-Hydroxybutyrate Regulates Activated Microglia to Alleviate Neurodegenerative Processes in Neurological Diseases: A Scoping Review', *Nutrients*, 15(3), p. 524. Available at: <https://doi.org/10.3390/nu15030524>.
5. Johnson, R.J., Tolan, D.R., Bredesen, D., Nagel, M., Sánchez-Lozada, L.G., Fini, M., Burtis, S., Lanaspá, M.A. and Perlmutter, D. (2023) 'Could Alzheimer's disease be a maladaptation of an evolutionary survival pathway mediated by intracerebral fructose and uric acid metabolism?'

The American Journal of Clinical Nutrition [Preprint]. Available at:
<https://doi.org/10.1016/j.ajcnut.2023.01.002>. PREPRINT

Case studies

1. Al-Rebdi, M. and Rabbani, U. (2023) 'Alleviation of Asthma Symptoms After Ketogenic Diet: A Case Report', *Cureus* [Preprint]. Available at: <https://doi.org/10.7759/cureus.34526>.
2. Houttu, V., Grefhorst, A., Cohn, D.M., Levels, J.H.M., Roeters van Lennep, J., Stroes, E.S.G., Groen, A.K. and Tromp, T.R. (2023) 'Severe Dyslipidemia Mimicking Familial Hypercholesterolemia Induced by High-Fat, Low-Carbohydrate Diets: A Critical Review', *Nutrients*, 15(4), p. 962. Available at: <https://doi.org/10.3390/nu15040962>.
3. Scolnick, B. and Beckwith, C. (2023) 'Synergy between ketamine and ketogenic diet in anorexia nervosa, and other neurobehavioral disorders', *Eating and Weight Disorders*, 28(1), p. 8. Available at: <https://doi.org/10.1007/s40519-023-01528-5>.

Preclinical studies showing promise

1. Castro, R., Kalecký, K., Huang, N., Petersen, K., Singh, V., Ross, A., Neuberger, T. and Bottiglieri, T. (2023) *A very-low carbohydrate content in a high-fat diet modifies the plasma metabolome and alleviates experimental atherosclerosis*. preprint. *Biochemistry*. Available at: <https://doi.org/10.1101/2023.02.07.527515>. PDF. PREPRINT
2. Sastriques-Dunlop, S., Elizondo-Benedetto, S., Arif, B., Meade, R., Zaghloul, M.S., English, S.J., Liu, Y. and Zayed, M.A. (2023) 'Ketosis Prevents Abdominal Aortic Aneurysm Rupture Through CCR2 Downregulation and Enhanced MMP Balance', *bioRxiv: The Preprint Server for Biology*, p. 2023.02.21.529460. Available at: <https://doi.org/10.1101/2023.02.21.529460>. PDF. PREPRINT