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Title: Mitochondrial nutrient utilization underlying the association between metabolites and insulin resistance in adolescents.

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Abbreviations: AC, acylcarnitine; BCAA, branched chain amino acid; BMIz, BMI z-score; Cer, ceramide; CI, confidence interval; DBP, diastolic blood pressure; DG, diglyceride; DHEA, dehydroepiandrosterone; DiC, dicarboxylic group; diOH, di-hydroxyl group; ELEMENT, Early Life Exposure in Mexico to ENvironmental Toxicants; FA, fatty acid; FAO, fatty acid oxidation; FDR, false discovery rate; FFQ, food frequency questionnaire; HDL; high density lipoprotein; HOMA-CP, homeostatic model assessment of insulin resistance using C-peptide; HOMA-IR, homeostatic model assessment of insulin resistance; IGF-1, insulin-like growth factor 1; IR, insulin resistance; keto, ketone; LC, long-chain; LDL, low density lipoprotein; LysoPA, lysophosphatidic acid; LysoPC, lysophosphatidylcholine; LysoPE, lysophosphatidylethanolamine; MC, medium-chain; MS, mass spectrometry; MUAFA, mid-upper arm fat area; MUAMA, mid-upper arm muscle area; N, negative ionization mode; OH, hydroxyl group; P, positive ionization mode; PA, phosphatidic acid; PC, phosphatidylcholine; PE, phosphatidylethanolamine; PG, phosphatidylglycerol; PI, phosphatidylinositol; PS, phosphatidylserine; SBP, systolic blood pressure; SM, sphingomyelin; SP, suprailiac skinfold; SS, subscapular skinfold; StdErr, standard error; T2D, type 2 diabetes; TG, triglyceride; TR, triceps skinfold; TR+SS, total subcutaneous adiposity; SS/TR, central subcutaneous adiposity; WC, waist circumference; WHtR, waist to height ratio.