CLIPPINGS

Dietary intakes and eating behavior between metabolically healthy and unhealthy obesity phenotypes in Asian children and adolescents (Nutrients. 2022;14:4796)

This study aimed to evaluate the dietary food groups, nutrient intakes and eating behaviors of metabolically healthy and unhealthy obesity phenotypes in an Asian cohort of children and adolescents. Participants (n=52) were asked to record their diet using a 3-day food diary and intakes were analyzed using a nutrient software. Eating behavior was assessed using a validated questionnaire. Metabolically healthy obesity (MHO) or metabolically unhealthy obesity (MUO) were defined based on criteria of metabolic syndrome. Children/adolescents with MUO consumed fewer whole grains [median: 0.00 (IQR: 0.00-0.00 g) vs 18.5 g (0.00-69.8 g)] and less polyunsaturated fat [6.26% kcal (5.17-7.45% kcal) vs 6.92% kcal (5.85-9.02% kcal)], and had lower cognitive dietary restraint [15 (13-17) vs. 16 (14-19)] compared to children/adolescents with MHO. Deep fried food, fast food and processed convenience food were positively associated with both systolic (β: 2.84, 95%CI: 0.95-6.62) and diastolic blood pressure (β: 4.83, 95%CI: 0.61-9.04). Higher polyunsaturated fat intake (OR: 0.529, 95% CI: 0.284-0.986) and cognitive dietary restraint (OR: 0.681, 95%CI: 0.472-0.984) were associated with a lower risk of the MUO phenotype. The authors concluded that a healthier diet composition and positive eating behavior may contribute to favorable metabolic outcomes in children and adolescents with obesity.

Serum 25-OH vitamin D and fatty acids in relation to the risk of microbial infections in children: The TRIGR Divia study (Clin Nutr. 2022 2022;41:2729-39)

Nutrient status may affect the risk of microbial infections and play a role in modulating the immune response against such infections. This study was conducted with the aim to determine whether serum 25(OH)D and serum fatty acids in infancy are associated with microbial infections by the age of 18 months. 576 newborn infants from Trial to Reduce IDDM in the Genetically at Risk (TRIGR), born between 2002 and 2007 were included. Concentration of 25(OH)D vitamin and proportions of 26 fatty acids were analyzed in cord blood serum and in sera at 6, 12, and 18 months of age. The cord blood samples and mean of 6-18 month values were used as exposures. Infections were detected by screening IgG antibodies against 10 microbes using enzyme immunoassay and antibodies against 6 Coxsackievirus B serotypes at 18 months of age. A higher proportion of n-3 polyunsaturated fatty acids (PUFAs) and especially long-chain n-3 PUFAs at birth and at the age of 6-18 months was associated with decreased risk of coxsackievirus B2 infection. Higher proportion of docosapentaenoic acid (DPA, 22:5 n-3) at birth was associated with a decreased risk of respiratory syncytial virus infection. 25(OH)D vitamin concen-tration was not consistently associated with the risk of infections. The authors concluded that in young children with increased susceptibility to type 1 diabetes, long-chain n-3 PUFAs may influence the risk of viral infections and immune response against the infections.

Anemia in Indians aged 10-19 years: Prevalence, burden and associated factors at National and regional levels (Matern Child Nutr. 2022;18:e13391)

The aim of this study was to describe the national and subnational prevalence, severity and burden of anemia among Indian adolescents; and to examine factors associated with anemia at national and regional levels. Data (n=14,673 individuals aged 10-19 years) were from India's Comprehensive National Nutrition Survey (CNNS, 2016-2018). Anemia was present in 40% of girls and 18% of boys, equivalent to 72 million adolescents in 2018, and varied by region (girls 29%-46%; boys 11%-28%) and state (girls 7%-62%; boys 4%-32%). Iron deficiency (ferritin < 15 µg/L) was the strongest predictor of anemia [odds ratio (OR): 4.68, 95% CI: 3.21,6.83], followed by hemoglobinopathies (HbA2 >3.5% or any HbS) (OR: 2.81, 95% CI: (1.66,4.74), vitamin A deficiency (serum retinol <20 ng/mL) [(OR: 1.86, 95% CI: 1.23,2.80] and zinc deficiency [(serum zinc <70 µg/L) (OR: 1.32, 95% CI: 1.02,1.72). The authors concluded that adolescent anemia control programs in India should continue to address iron deficiency and strengthen strategies to identify hemoglobinopathies and other micro-nutrient deficiencies.

Serum ferritin, zinc, and copper levels in children with _H. pylori_ gastritis and the effect of the treatment (J Pediatr Gastroenterol Nutr. 2022;75:e88-93)

This study aimed to assess the serum levels of iron, zinc, and copper in symptomatic children with _H. pylori_ infection, and to evaluate the effect of _H. pylori_ treatment on their levels. Seventy children were with upper gastrointestinal tract symptoms. _H. pylori_ infection was diagnosed by the H. pylori antigen test in the stool and histopathologic findings during upper gastrointestinal endoscopy. Hemoglobin, serum ferritin, transferrin (sTfR), zinc, and copper were assessed. _H. pylori_-infected children had low serum ferritin and zinc levels, high sTfR level and no effect on serum copper levels. After treatment, the hemoglobin, serum ferritin and zinc significantly increased in _H. pylori_-positive patients, especially in those who responded to treatment. The authors concluded that _H. pylori_-infected children had low serum ferritin and zinc levels but high sTfR level with no effect on serum copper levels. Gastric histologic findings correlated significantly with hemoglobin, serum ferritin, zinc, and sTfR levels.

PRACHI KARNIK
dr.prachi.sk@gmail.com