

Dietary patterns in European adolescents

by

Mathilde Kersting¹, Wolfgang Sichert-Hellert¹

Objective: To describe food and meal pattern and nutrient intake in European adolescents for the first time using a harmonized dietary assessment instrument.

Methods: Data were collected as part of the HELENA Cross Sectional Study carried out in 10 cities in 9 countries across Europe. A sample of 2678 adolescents (53 % girls), aged 12.5 to 17.49 y, was included in the dietary assessments. As recommended for European dietary monitoring, 2 repeated 24h-dietary recalls were collected. A validated, self-administered computer based assessment tool was used asking for food consumption of 50 food groups (aggregated to 12 main food groups) for a total of 6 meal occasions during the last 24 hours. To calculate energy and nutrient intake, the country specific food and nutrient database was linked to the food codes. Here, an overview is presented for selected variables of food and meal pattern as well as energy intake and macronutrient pattern considering age and gender.

Results: Mean total energy intake (MJ/d) increased significantly with age in boys but not in girls and was higher in boys (200 to 500 kcal/d) than in girls of the same age group. Proportion of fat/carbohydrates in energy intake (E%) was stable throughout the age and gender groups with about 35/49 E%, however protein (E%) decreased significantly. Among the plant food groups, the cereal group (including, bread, pasta, cakes) was the most important regarding amount (g/d) and proportion in energy intake (approximately 25 E%). Consumed amounts of fruit and vegetables (including potatoes) each ranged around 100 g/d (3-5 E%) across the age and gender groups, that is less than 1 apple and 1 carrot per day. Among the foods of animal origin, boys (girls) consumed around 250 (180) g/d of dairy products and 130 (90) g meat products.

Regarding meal pattern, supper (evening snack) was less (most) often skipped compared to other meals of the day. Meal skipping increased significantly with age for breakfast (no respective meal/2d: from 6 to 10 % of adolescents), lunch (from 1 to 3 %) and for afternoon snack in boys (from 6 to 11 %).

Conclusion: These findings point to obvious deviations from the recommendations for a preventive diet in European adolescents that should include ample amounts of fruit and vegetables and moderate amounts of food of animal origin. Gender specific dietary habits and some trends by age were found that should be considered for future preventive nutrition programs addressed to adolescents.

¹ Research Institute of Child Nutrition (FKE), Rheinische Friedrich-Wilhelms-Universität Bonn, Dortmund, Germany
Correspondence: kersting@fke-do.de