

Body composition and obesity in European adolescents

by

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Objective: To obtain reliable and comparable data on anthropometric parameters of a representative sample of European adolescents.

Methods: The methodology and harmonization of anthropometric measurements was previously published (1). Within the framework of the multicenter cross-sectional HELENA study (Healthy Lifestyle in Europe by Nutrition in Adolescence) 3546 adolescents were selected by random cluster sampling in 10 European cities. The characteristics of the investigated population are shown in the table.

TABLE 1. Basic characteristics of the population

	Age (year)	Weight (kg)	Height (cm)	BMI (kg/m ²)	BMI category (Cole cut-off ¹)				Body fat %	
					Under weight %	Normal %	Over weight %	Obese %	Skinfold (Slaughter ²)	BIA (Sun ³)
Boys N 1670	14,82 ±1,23	62,37 ±14,17	169,83 ±9,67	21,49 ±3,92	4,8	68,1	19,5	7,6	20,46 ±10,75	15,18 ±8,77
Girls N 1838	14,76 ±1,21	56,018 ±10,22	161,98 ±6,92	21,32 ±3,54	6,4	72,9	16,3	4,4	26,21 ±6,99	24,53 ±8,50
Total N 3508	14,78 ±1,23	59,052 ±12,66	165,73 ±9,22	21,40 ±3,72	5,6	70,6	17,8	6,0	23,59 ±9,35	20,09 ±9,81

¹ Cole et al. BMJ 2000 May 6;320(7244):1240-3

² Slaughter et al. Hum Biol 1988; 60;5:709-23

³ Sun et al. Am J Clin Nutr 2003; 77;331-40

Results: The prevalence of overweight and obesity is considerable (higher in boys than in girls) among European adolescents (table). The prevalence of overweight and obesity was the highest in both genders (boys: 30.4%, girls: 25.4%) in the lowest age category (12.5-13.99 years).

Conclusion: Previous estimations of the prevalence of childhood and adolescent obesity in Europe were based on studies with incomparable methodology and definitions. This is the first study that provides a real picture about the prevalence of overweight and obesity and body composition in European adolescents.

References

1. Nagy E, et al. Int J Obes 32(Suppl 5): S58-S65, 2008

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