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Anthropometric Nutritional Status and Arterial Blood Pressure in 7-10 Years Old Children

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The aim is to evaluate the associations of anthropometric nutritional status and abdominal obesity with arterial blood pressure (ABP) among 7-10 years old Bulgarian children. A total of 820 children (410 boys and 410 girls) aged 7-10 years were studied during the period 1993-2002. Body mass index (BMI) was calculated. Waist circumference (WC) and ABP were measured. Boys were heavier and had a higher mean BMI, WC and ABP than girls. The frequency of overweight boys and girls was 12.4% and 13.7%, respectively. Overall, 13.7% of the boys and 13.2% of the girls were abdominally obese (WC ≥ 90th percentile). The prevalence rates of prehypertension and hypertension were 4.5% and 0.45%, respectively in both genders. The correlations between BMI, WC and ABP in both sexes were positive and statistically significant. They were higher and highly significant in boys than in girls. BMI and WC values influenced the ABP values in schoolchildren.

Key words: body mass index, waist circumference, overweight, blood pressure, schoolchildren.