The global epidemic of childhood obesity is regarded as a major risk factor for atherosclerosis and cardiovascular diseases in adult life. The aim of this work has been to determine the body mass index (BMI kg/m$^2$) and to evaluate the prevalence of obesity and overweight in school children in Serbia.

A representative sample of 2842 boys and 2725 girls, aged 10 and 15 years from 13 centers in Serbia were examined in 1998 and 2003 in the Yugoslav Study of Atherosclerosis Precursors in Schoolchildren. Body weight and body height which determine a child’s BMI status were evaluated according to NHANES I and the IOTF* reference cut-off points for children equivalent to adult BMIs of 25 and 30.

Overweight and obesity with BMI NHANES I over P85 was found in 14.3% boys and 13.5% girls age 10 in 1998, while at age 15 the prevalence was 12% in 2003. Overweight (BMI P85-95) was registered in 8.9-9.4% of the girls and boys age 10 and 8.3-8.9% in the older group, while obesity (BMI > P95) occurred in 4.5-4.8% and 3.7-3.9%, respectively in school children age 10 and 15.

The prevalence of overweight (including obesity, equivalent to BMI > 25 kg/m$^2$ in adults) was 18.8% in boys and 17.8% in girls age 10 in 1998, while at age 15 the prevalence rate was 18.9% in boys and 19.2% in girls, respectively, in 2003. The prevalence of obesity (equivalent to BMI > 30 kg/m$^2$ for adults) was 3% in boys and 2.4% in girls age 10, while at age 15 they were 2.5% in boys and 2.4% in girls.

Similar trends towards excess weight gain among children are being found in other parts of Europe and North America. Further studies of the links between high-energy, low-nutrient diets and reduced physical activity levels and changes in the child’s immediate social environment are required. Development and implementation of the national strategy of childhood obesity prevention with population-health promotion for high risk groups are needed.