

## **Prevalence and risk factors of metabolic syndrome in Brazilian and Italian obese adolescents: a comparison study.**

D. A. Caranti, S. Lazzer, A. R. Damaso, F. Agosti, R. Zennaro, M. T. de Mello, S. Tufik, A. Sartorio

International Journal of Clinical Practice 62: 1526-1532, 2008.

Background: metabolic syndrome (MS) prevalence between different populations in obese adolescents is scanty to date.

Objective: to compare the MS prevalence and related risk factors in Brazilian and Italian obese adolescents.

Methods: a total of 509 adolescents (110 Brazilian, 399 Italian), aged 15-19 years. Anthropometric characteristics, triglycerides (TG), total, low-density lipoprotein (LDL)-, high density lipoprotein (HDL)-cholesterol, fasting plasma glucose (FPG), insulin, homeostasis model assessment of insulin resistance (HOMA-IR) and blood pressure were measured.

Results: age, body mass index (BMI) and BMI z-score were not significantly different between the two subgroups. BMI z-score, TG, FPG, HOMA-IR and systolic blood pressure (SBP) were significantly higher in boys than in girls both in Brazilian and Italian adolescents, while HDL-cholesterol levels were lower in boys than in girls. No significant differences were observed in BMI, LDL and total-cholesterol and DBP in two genders and groups. Insulin, FPG, HOMA-IR and TG were significantly higher, while LDL-cholesterol and SBP were significantly lower in Brazilian than in Italian subjects, both in males and females. HDL and total-cholesterol and diastolic blood pressure (DBP) were not significantly different between the two subgroups and genders. MS prevalence was higher in Brazilian than in Italian obese boys (34.8 vs. 23.6%,  $p < 0.001$ ) and girls (15.6 vs. 12.5%,  $p < 0.01$ ). The most frequently altered parameter was HOMA-IR both in subjects with MS (100% in Brazilian and 81.8% in Italian) and without MS (42.9% and 11.7%).

Conclusion: metabolic syndrome represents a worldwide emerging health problem in different ethnical populations, the alterations of the risk factors related to MS (different in their prevalence between different subgroups) being strictly linked to the degree of obesity.

Se desidera avere la fotocopia di questo lavoro, per esclusivo uso personale, può fare richiesta per mail a: [info@cresceresani.it](mailto:info@cresceresani.it) indicando il titolo, gli autori, la rivista e il proprio recapito lavorativo (nome, cognome, indirizzo, CAP, città).