CARDIOVASCULAR ENDOCRINOLOGY

OBESITY-ASSOCIATED RISK IS REVERSIBLE

Does childhood obesity irreversibly affect adult cardiovascular health? The answer, encouragingly, seems to be negative, according to a study published in *The New England Journal of Medicine*.

Markus Juonala and colleagues analyzed data from four prospective cohort studies from the USA (the Bogalusa Heart Study and the Muscatine Study), Australia (the Childhood Determinants of Adult Health Study) and Finland (the Cardiovascular Risk in Young Finns Study). The researchers pooled data on established predictors of adverse cardiovascular events from 6,328 individuals who were followed up from childhood (mean age 11.4 years at baseline) to adulthood for a mean period of 23.1 years. Among children, age-specific and sex-specific international BMI percentiles corresponding to an adult BMI of 25 kg/m² were used to define overweight, and BMI percentiles corresponding to an adult BMI of 30 kg/m² were used to define obesity. Obesity in adults was defined as a BMI >30 kg/m².

The participants were classified into four groups: 4,742 had a normal BMI in childhood and no obesity as adults (group 1), 274 had overweight or obesity as children but no obesity in adulthood (group 2), 500 had obesity both as children and as adults (group 3) and 812 had a normal BMI throughout their childhood but developed obesity in adult life (group 4).

Obesity in adulthood (groups 3 and 4) was associated with a significantly increased risk of all adverse cardiovascular factors analyzed, independently of childhood BMI status. However, the risks of type 2 diabetes mellitus, hypertension, dyslipidemia and carotid-artery atherosclerosis were similar in groups 1 and 2. These findings, which corroborate and expand earlier reports focused on diabetes risk, indicate that children with overweight or obesity who manage to achieve normal weight by adulthood will not be at increased risk of cardiovascular disease when compared with people who never had obesity in their lifetime. Therefore, “every effort should be done to prevent and intervene against adult obesity, especially among overweight and obese children,” concludes Juonala.

Joana Osório

Original article Juonala, M. *et al.* Childhood adiposity, adult adiposity, and cardiovascular risk factors. *N. Engl. J. Med.* **365**, 1876–1885 (2011)