

Inequalities in cardiovascular risk factors at age 10 years

Amongst older generations, obesity was more concentrated in the advantaged groups of society, who could afford luxury food items and who were less active in their work and everyday lives. In contemporary populations in high-income countries this has reversed, and obesity is now more common in disadvantaged groups. This is true equally for adults and children. We know that children from deprived backgrounds tend to be more overweight than children from wealthier backgrounds. What we do not know is whether children from deprived backgrounds already have raised levels of risk factors for cardiovascular disease and diabetes, which are all related to obesity.

Using information from 7772 children aged 10-years from the Avon Longitudinal Study of Parents and Children, we examined the association between maternal education and a large number of risk factors for cardiovascular disease and diabetes (cholesterol, triglycerides, high-density lipoprotein, apolipoprotein, adiponectin, leptin, C-reactive protein (CRP), interleukin-6 (IL-6) and systolic and diastolic blood pressure). We then looked to see whether any differences in these risk factors between children from different social backgrounds were due to differences in obesity.

There were inequalities between children from different social groups in terms of several of the cardiovascular risk factors (apolipoprotein B, systolic and diastolic blood pressure, CRP, leptin and IL-6). Inequalities were greater in girls than boys. Inequalities in CRP and leptin were completely due to by obesity. Inequalities in other cardiovascular risk factors were partially due to by obesity.

This study showed important socio-economic inequalities in cardiovascular risk factors in a contemporary UK population of 10-year-old children. Differences between contemporary children and previous generations in the social patterning of cardiovascular risk factors suggest future adults may have greater inequalities in diabetes and CHD than current adults. These findings highlight the importance of interventions aimed at preventing obesity in childhood, particularly among disadvantaged groups of society.

<http://www.nature.com/ijo/journal/vaop/ncurrent/full/ijo201052a.html>