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Beyond childhood obesity: Risk factors for cardiovascular diseases

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The effect of obesity on lipids profile is known. However, few studies investigated risk factors for cardiovascular diseases in groups of low income children. Population in Brazil is going through a transitional nutrition process where undernutrition has been largely eradicated and the rate of overweight among children is about 30%. In 2001 the Center of Research in Nutrition carried out a randomized trial study with low income mothers after their babies birth to evaluate the impact of a dietary counseling on feeding practices and nutritional condition of children, during the first year of life. Besides the positive effect of the intervention on breastfeeding and complementary feeding practices, still 75% of the children had eaten foods not recommended for this age as table sugar, cookies, candies, salty snacks, jelly, sausages at 12 months old. The follow-up to 7-8 years allowed us to investigate the early feeding practices and their effects on nutritional condition and lipid profile at preschool and school age groups. The results showed that at 3-4 years, 10% of children presented at least two risk factors for cardiovascular diseases. A multivariate regression showed that lower income, maternal smoking, higher birth weight and risk of being overweight at 12-16 months of age predicted lower HDL-cholesterol levels at 3-4 years and higher consumption of sodium was associated with a higher systolic blood pressure. Stunting early in life (12-16 mo) was associated with impairment in the lipid profile at preschool age, even in children who were not overweight and who had adequate birth weights. At 7-8 years we did not observe any impact of the intervention in the prevalence of overweight but a favorable lipid profile among girls in the intervention group. Therefore we believe that harsh environmental conditions related to social and economic patterns as income, smoking, education and early food habits have a strong effect on the development of cardiovascular risk factors.

Biography

Marcia R Vitolo is professor of Nutrition in Brazil completed her DSc from Federal University of São Paulo in Brazil and postdoctoral studies from Department of Nutritional Science at Rutgers University, NJ, USA. Marcia Vitolo is the coordinator of the Center of Research in Nutrition at Federal University of Health Sciences of Porto Alegre, Brazil and she is a consultant for Brazilian Ministry of health maternal and child nutritional guidelines.