RESUMO

Children first: how an educational program in cardiovascular prevention at school can improve parent's cardiovascular risk

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**Purpose:** Evaluate if a multidisciplinary educational program in primary cardiovascular prevention for children could improve the Framingham cardiovascular risk of their parents after one year. **Methods:** Students aging 6 to 10 years old were exposed to two different approaches in the city of Sao Paulo, Brazil. For the students of the morning period (control group) we delivered written educational material for their parents in the beginning and middle of the year 2010 about healthy lifestyle (nutrition, exercise and smoke quitting). The students of the afternoon period (intervention group) received the same educational material for their parents and the children were exposed to a weekly educational program in cardiovascular prevention with a multidisciplinary health team during the year 2010. This intervention tried to teach to these children, in different manners appropriate for their age, concepts of healthy nutrition, avoidance of tobacco and physical activity. Both at the inclusion in the study and one year later we collect data of parents and their children of the two groups, in a single weekend, including nutritional and exercise survey, measures of weight, height, waist circumference, arterial blood pressure, and laboratory exams. **Results:** We studied 197 children and 323 parents. The control group had 161 parents (mean age of 39 years, 53.4% female), and the intervention group had 162 parents (mean age of 38 years, 55.5% female). When we analyzed the parents' Framingham cardiovascular risk we find that 9.3% of the control group (15 parents) and 6.8% (11 parents) of the intervention group had more than 10% year risk of cardiovascular heart disease (CHD) in the next 10 years. After one year, the intervention group showed a reduction of 91% in the intermediate/high Framingham cardiovascular risk group (1 parent with >10% year risk of CHD) compared with 13% reduction in the control group (13 patients with >10% year risk of CHD).
year risk of CHD), p=0.0002 (95% CI:0.001-0.195).

**Conclusion:** An educational program in cardiovascular prevention directed to children at school age can reduce the Framingham CHD risk of their parents especially in the intermediate/high risk categories. Cardiovascular prevention programs could be more effective if children were involved in the awareness/changing process. This strategy could incorporate more efficiently healthy lifestyle habits to the whole family.