

# How a cardiovascular prevention program in a Brazilian school reduced parent's CVD risk

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"A multidisciplinary educational programme in cardiovascular prevention directed to children of school age can reduce their parents' cardiovascular risk. Cardiovascular prevention could have more success focusing on children first, inducing healthier lifestyle habits in the whole family, "said investigator Luciana Fornari, from the University of Sao Paulo, Brazil. The inspiration for this study, presented today at the ESC Congress 2011 in Paris, came with her motherhood, and the perception that her children could efficiently modify the family's habits with concepts that they have learned at school.

For the study, 197 [children](#) aged 6 to 10 years from a private school in the city of Jundiai (located about 60 km from Sao Paulo), and their 323 [parents](#) were divided into two groups. Children in the [control group](#) (which assessed of 161 parents with a mean age of 39 years) were provided with written educational material at the beginning and middle 2010. The material included information about benefits of healthy life style, such as a fat and sugar free nutrition, more physical exercises and avoidance of tobacco. Children in the intervention group (which assessed 162 parents with a mean age of 38 years) were issued with the same material and also exposed to a weekly educational program about cardiovascular prevention that aimed to teach, in different ways adapted to their ages, concepts of healthy nutrition, tobacco avoidance and the importance of physical activity.

The programme included educational films and plays, and discussion about healthy lifestyles with the multidisciplinary team. The children

were encouraged to write stories, draw and paint about what they had learned. Children also participated in practical cooking sessions where they learned to make and tasted healthy juices and sandwiches and could discuss with the nutritionists about the contents of different kinds of foods and how to make [healthy choices](#). Parents and children could also take part in family bike rides and Olympic style events.

The programme was delivered by a multidisciplinary team from Anchieta University, and included nurses, physical education teachers, physiotherapists, nutritionists, psychologists and primary teachers.

In both groups, investigators collected data from parents and their children at the beginning and end of 2010, including nutritional and exercise survey, measures of weight, height, waist circumference, arterial blood pressure and laboratory exams. From this data, investigators calculated the risk of parents experiencing cardiovascular heart disease over the next 10 years, according to the National Heart, Lung and Blood Institute's (NHLBI) Framingham Heart study.

When the investigators analyzed the parents' Framingham cardiovascular risk, they found 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 the children's educational programme, the [intervention group](#) had a reduction of 91% in the intermediate/high Framingham CVD 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),  $p=0.0002$ .

So, prioritize children first seems to be the right way towards cardiovascular prevention today.

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