The cardiovascular benefits of daily exercise in school children are evident even after one year

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School children as young as 11 can benefit from a daily exercise programme in reducing their levels of several known risk factors for cardiovascular disease. An ongoing study, which began four years ago in the German city of Leipzig, shows already that children assigned to daily exercise lessons reduced their overall prevalence of obesity, improved their exercise capacity, increased their levels of HDL-cholesterol, and reduced their systolic blood pressure.

"It's clear that children today have different lifestyles from the past," says investigator Dr Claudia Walther from the Heart Centre of the University of Leipzig. "They're less active, and it was our hypothesis that an increase in their exercise activity would result in fewer risks of cardiovascular disease later in life."

The study, whose first-year results are reported at EuroPRevent 2009, randomised 188 school children with a mean age of 11.1 years (from seven classes at three different high schools) to either an active exercise programme in their school routine, or to a conventional curriculum of just two sports lessons a week. The exercise programme comprised daily supervised exercise which included at least 15 minutes of endurance training. "So it was well controlled," says Dr Walther, "with the teachers making sure that the programme was followed."

The first results presented here in Stockholm already show significant

benefits for those in the daily exercise groups: in just one year the proportion of overweight and obese children decreased from 13% to 9%, but increased in the control group from 11% to 13%. These were statistically significant changes. Moreover, exercise capacity (as measured by VO2max) also improved significantly in the exercise groups by 29%. Similarly, levels of HDL-cholesterol and of triglycerides, and systolic blood pressure all improved in the exercise group.

"Even from these first-year results we can say that regular physical activity has a significant beneficial effect on body composition, exercise capacity and cardiovascular risk markers in children," says Dr Walther, who adds that follow-up over the next 10-20 years will give some idea of how risk modification at this young age translates into benefit later in life.

The "most surprising" result, she says, was the effect of daily exercise on body weight, an effect not found so marked or so soon in other studies. "These are normal children," explains Dr Walther, "so we didn't expect such a significant reduction in the overall prevalence of obesity or excess weight."

Such findings have also raised local interest in Germany, where the investigators hope to extend the study to other neighbouring towns, and eventually to a daily exercise programme incorporated into the basic school curriculum.

"It's so easy," says Dr Walther. "All it needs is a little more time allocated to exercise lessons. The teachers are there, they supervise, and they all seem enthusiastic. If we can include daily exercise in the school curriculum, I'm sure we'll see an effect."

Source: European Society of Cardiology (news : web)

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