

TURUN YLIOPISTO  
Lääketieteellinen tiedekunta

NUPPONEN MARI: Metabolic Syndrome from  
Adolescence to Early Adulthood: Effect of Infancy-Onset  
Dietary Counseling of Low-Saturated-Fat: The Special Turku  
Coronary Risk Factor Intervention Project (STRIP)

Syventävien opintojen kirjallinen työ, 33 s.  
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**Background**—Adolescent metabolic syndrome (MetS) predicts type 2 diabetes and subclinical atherosclerosis in adulthood. Our aim was to establish the relation of an infancy-onset dietary intervention on the risk of having MetS between ages 15 and 20 years.

**Methods and Results**—The STRIP study (Special Turku Coronary Risk Factor Intervention Project for Children) is a longitudinal, randomized atherosclerosis prevention trial, where repeated dietary counseling aiming at reducing intake of saturated fat took place from infancy to early adulthood. Participants who had complete data on the MetS components (waist circumference, blood pressure, triglycerides, glucose, HDL-cholesterol) at the age of 15 (n=512), 16 (n=485), 17 (n=475), 18 (n=459), 19 (n=439) and 20 (n=407) years were included in the study. Modified International Diabetes Foundation criteria with 80th/20th percentile cut-off points for the components was primarily applied in statistical analyses, and the results were replicated using other pediatric MetS definitions. Between ages 15 and 20, the prevalence of MetS varied (RR=0.59, 95%CI=0.40–0.88, p=0.009). Of the individual MetS components, the intervention decreased risk of high blood pressure in both sexes (RR=0.83, 95%CI=0.70–0.99) and high triglycerides 95%CI=0.59–1.03).

**Conclusions**—Repeated infancy-onset dietary intervention is effective in the prevention of MetS in adolescence.

**Key words:** atherosclerosis, diabetes mellitus, diet, metabolic syndrome