



## Cardiovascular Risk Factors Affect Learning, Memory



Exposure to cardiovascular risk factors – such as high blood pressure, elevated serum LDL-cholesterol and smoking – in childhood and adolescence is associated with poorer learning ability and memory in middle age, according to a study published in Journal of the American College of Cardiology.

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The longitudinal Finnish study illustrates that the effects of cardiovascular risk factors on the brain begin already long before the occurrence of visible changes in cognitive performance. While previous studies have focused on adulthood and old age, this study provides new information on the associations between cardiovascular risk factors and cognitive performance throughout the whole lifespan, explains Senior Researcher Suvi Rovio from the Research Centre of Applied and Preventive Cardiovascular Medicine at the University of Turku.

In this study, the cognitive performance of over 2,000 participants was measured at the age of 34–49 years. Results showed that high blood pressure and serum LDL-cholesterol level measured in childhood and adolescence, as well as smoking in adolescence, were associated with poorer cognitive performance in midlife. This association, the researchers noted, remained regardless of the presence of such risk factors in adulthood. The difference in cognitive performance between those participants whose risk factor levels often exceeded the guideline values for cardiovascular risk factors and those always remaining within the guideline values was equivalent to the difference caused by six years of ageing.

The findings highlight the importance of turning the focus of prevention of the cardiovascular risk factors to children and adolescence in order to promote brain health in adulthood. High blood pressure, elevated serum cholesterol levels and smoking can be controlled through healthy lifestyle choices, the researchers emphasised.

This study is part of the ongoing national Cardiovascular Risk in Young Finns Study coordinated by the Research Centre of Applied and Preventive Cardiovascular Medicine at the University of Turku. Initially, 3,596 participants have been followed up repeatedly for 31 years for their cardiovascular risk factors from childhood to adulthood.

Source: [University of Turku](#)

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