

RISK FACTORS

Carotid plaque in adulthood after childhood exposure to parental smoking

“Exposure to parental smoking early in life has an irreversible effect on arterial health in adulthood,” state the investigators in the Cardiovascular Risk in Young Finns Study. However, “parents who are unable to give up smoking can nonetheless lessen their child’s risk of future cardiovascular burden by exercising good smoking hygiene” (such as not smoking near to their child).

Baseline data were collected from 2,448 children in 1980 or 1983, and follow-up was performed during adulthood in 2001 or 2007. In serum samples collected during childhood, cotinine (a biomarker of tobacco exposure) was associated with parental smoking: absence of cotinine was noted in 84%, 62%, and 43% of children in households in which neither, one, or both parents smoked.

In adulthood, 2.6% of participants had carotid plaque detected using ultrasonography. Children with one or two parents who smoked had a higher risk

of developing carotid plaque than those whose parents did not smoke (relative risk [RR] 1.7, 95% CI 1.0–2.8, $P=0.04$). Children whose parents exercised poor smoking hygiene had a substantially increased risk of carotid plaque (RR 4.0, 95% CI 1.7–9.8, $P=0.002$), whereas this risk seemed to be mitigated in those whose parents practised good smoking hygiene (RR 1.6, 95% CI 0.6–4.0, $P=0.34$). These data reinforce the long-term risks from passive exposure to smoking on premature onset of atherosclerosis, and the potentially substantial public-health benefits of smoking-cessation programmes.

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Original article West, H. W. *et al.* Exposure to parental smoking in childhood is associated with increased risk of carotid atherosclerotic plaque in adulthood: the Cardiovascular Risk in Young Finns Study. *Circulation* doi:10.1161/CIRCULATIONAHA.114.013485