

## RISK FACTORS

## Childhood exposure to parental smoking confers lifelong increase in cardiovascular risk

Exposure to parental smoking during childhood correlates with increased carotid intima-media thickness (IMT) in later life. Carotid IMT is a well-established marker of atherosclerosis and is a predictor of future cardiovascular events. The data come from a new analysis of the participants in the Cardiovascular Risk in Young Finns study and the Childhood Determinants of Adult Health Study. Seana Gall, lead author on the report of the new analysis, emphasizes that the finding is important because “although smoking is decreasing in prevalence around the world, we know that the group most likely to smoke are those of childbearing age”.

The two study cohorts contained a total of 3,776 individuals. Exposure to smoking from neither, one, or both parents was determined at baseline. Carotid IMT, measured using B-mode ultrasonography in adulthood, was found to be greater in those exposed to both parents smoking during childhood

(0.652 mm) than in those whose parents did not smoke (0.637 mm;  $P=0.003$ ). Having one parent who smoked was not associated with increased carotid IMT in adulthood (0.638 mm). The effect of having two parents who smoked was consistent in both populations and was largely independent of cardiovascular risk factors. The investigators estimate that the increase in carotid IMT was equivalent to a 3.3-year increase in vascular age.

According to Dr Gall, the study results highlight “the need to remove all children from exposure to passive smoking. Ideally, this would be through adults quitting smoking, as this would have the greatest benefits to the health of everyone—the parents themselves and their children”.

In an editorial that accompanied the study report, Edmund Lau and David Celermajer comment that the WHO has introduced six tobacco control measures to combat tobacco use. These strategies are to monitor tobacco use and prevention

policy; protect people from second-hand smoke; offer help to quit tobacco use; warn about the dangers of tobacco; enforce bans on tobacco advertising, promotion, and sponsorship; and raise taxes on tobacco. Lau and Celermajer conclude that “end[ing] the tobacco epidemic ... is one of our greatest health-care priorities”.

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**Original article** Gall, S. *et al.* Exposure to parental smoking in childhood or adolescence is associated with increased carotid intima-media thickness in young adults: evidence from the Cardiovascular Risk in Young Finns study and the Childhood Determinants of Adult Health Study. *Eur. Heart J.* doi:10.1093/eurheartj/ehu049