



Life-course influences on occurrence and outcome for stroke
and coronary heart disease

av

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Abstract

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Although typical clinical onset does not occur until adulthood, cardiovascular disease (CVD) may have a long natural history with accumulation of risks beginning in early life and continuing through childhood and into adolescence and adulthood. Therefore, it is important to adopt a life-course approach to explore accumulation of risks, as well as identifying age-defined windows of susceptibility, from early life to disease onset. This thesis examines characteristics in adolescence and adulthood linked with subsequent risk of CVD. One area is concerned with physical and psychological characteristics in adolescence, which reflects inherited and acquired elements from childhood, and their association with occurrence and outcome of subsequent stroke and coronary heart disease many years later. The second area focuses on severe infections and subsequent delayed risk of CVD. Data from several Swedish registers were used to provide information on a general population-based cohort of men. Some 284 198 males, born in Sweden from 1952 to 1956 and included in the Swedish Military Conscription Register, form the basis of the study cohort for this thesis. Our results indicate that characteristics already present in adolescence may have an important role in determining long-term cardiovascular health. Stress resilience in adolescence was associated with an increased risk of stroke and CHD, working in part through other CVD factors, in particular physical fitness. Stress resilience, unhealthy BMI and elevated blood pressure in adolescence were also associated with aspects of stroke severity among survivors of a first stroke. We demonstrated an association for severe infections (hospital admission for sepsis and pneumonia) in adulthood with subsequent delayed risk of CVD, independent of risk factors from adolescence. Persistent systemic inflammatory activity which could follow infection, and that might persist long after infections resolve, represents a possible mechanism. Interventions to protect against CVD should begin by adolescence; and there may be a period of heightened susceptibility in the years following severe infection when additional monitoring and interventions for CVD may be of value.

Keywords: cardiovascular disease, stroke, risk factors, adolescence, stress resilience, adult infections, life-course epidemiology, cohort study

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