

Is the prevalence of coronary heart disease falling in British men?

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The prevalence and trends of coronary heart disease in British men are discussed.

In Britain, approximately 150 000 deaths each year are attributed to coronary heart disease (CHD).¹ CHD has been estimated to cost around £10 billion per annum, much of this through lost earnings.¹ For some time, CHD has been a national priority, with targets set for reducing CHD mortality.² Mortality rates from CHD have declined steadily in Britain over the past two decades.³ However, the reduction in CHD mortality has been more dramatic in other countries including the USA and Australia.

The prevalence of CHD in the community is determined by a number of factors including the incidence of new disease, survival thereafter, and demographic trends. A fall in CHD incidence would reduce prevalence, while improved survival and an aging population would increase it. Therefore, the net effect will depend on the balance of these influences. Until now, data on population prevalence trends have been sparse. Inferences have been drawn from health service utilisation. However, this is affected by factors other than prevalence, such as the introduction of new investigations and treatments, and changes in the threshold for existing investigations and treatments. Attempts to measure the prevalence have been further hindered by different definitions of CHD including self reported angina or chest pain, electrocardiographic changes, angiographic findings, and postmortem results.

The study reported by Lampe and colleagues is an interesting and valuable addition to the existing literature. The authors examined trends in the prevalence of CHD in men participating in the British Regional Heart Study.⁴ This study involved a random sample of 7735 men

who were aged 40–59 at entry between 1978 and 1980. The men were followed up over a period of 15 years during which time the prevalence of CHD was determined on three subsequent occasions using two different questionnaire measures. The Rose Angina Questionnaire was used to ascertain the point prevalence of current angina symptoms, while a history of diagnosed CHD (angina or heart attack) on subject recall was used to estimate cumulative prevalence. The authors demonstrated a decrease over time in the former of 1.8% between 1978–80 and 1996 but no decrease in the latter.

A major limitation of the study in determining overall population prevalence was their use of a series of cross sectional studies “nested” within a longitudinal cohort study. Because patients were recruited from an ongoing longitudinal study rather than the general population, none of the subjects used in the calculations of the prevalence of angina were aged over 60 years in their first estimate of prevalence (1978–1980) and none were less than 60 years in their last (1996). Therefore, although age adjustment was used, caution needs to be applied in interpreting the observed trends in overall prevalence. Their conclusions about a decline in age specific prevalence of angina were more robust among the men aged between 55 and 64 years who contributed to at least three of the cross sectional studies. The observed decline in angina was in contrast with the prevalence of reported CHD diagnosis, which remained constant. There are a number of possible reasons for this difference. The severity of prevalent CHD may have declined either naturally or, more probably, because of more effective and widespread medical and lifestyle interventions. In addition, the thresholds for investigating and diagnosing CHD may have fallen.

The Health Survey for England used similar measures to estimate prevalence,

and also provides trend data.⁵ In 1998 the prevalence of a self reported history of CHD was 13.6% in English men aged 55–64 years. There was no evidence of any significant change in the prevalence of CHD between 1991 and 1994. Between 1994 and 1998 there was an increase in the prevalence of CHD, which was not significant after adjusting for age. In contrast with the study by Lampe *et al*, the prevalence of self reported symptoms as assessed by the Rose Questionnaire showed no change between 1991 and 1994 and only a small, non-significant decline in men between 1994 and 1998. Necropsy studies on people who die from all causes include asymptomatic individuals and offer an alternative method for measuring the prevalence of CHD. An American study by Roger *et al* reported a reduction in the prevalence of anatomic CHD between 1979 and 1994, which was greater in younger age groups.⁶

Measuring the population prevalence of CHD is a prerequisite of estimating the public health burden of this important disease and planning services accordingly. In particular, determining the prevalence of undiagnosed and untreated disease is essential to enable better targeting of secondary prevention. Despite the improvements made to date, a reduction in CHD mortality justifiably remains a national priority.

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