

# Large Europe-wide study confirms work stress linked to greater risk of heart disease

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People who have highly demanding jobs and little freedom to make decisions are 23% more likely to experience a heart attack compared with their counterparts without such work stress, according to a study of nearly 200 000 people from seven European countries, published Online First in *The Lancet*.

"The pooling of published and unpublished studies allowed us to investigate the association between [coronary heart disease](#) (CHD) and exposure to [job strain](#) [defined by high [work demands](#) and low decision control] with greater precision than has been previously possible", explains Mika Kivimäki from University College London who led the research. "Our findings indicate that job strain is associated with a small, but consistent, increased risk of experiencing a first CHD event such as a heart attack."

Previous studies examining the impact of job strain on CHD have been inconsistent in their findings, limited in scope, and plagued by methodological shortcomings including [publication bias](#) and reverse causation bias.

In this collaborative [meta-analysis](#), Kivimäki and colleagues analysed job strain in employees without CHD who participated in 13 European national cohorts conducted in Belgium, Denmark, Finland, France, Netherlands, Sweden, and the UK between 1985 and 2006. All participants completed questionnaires at the start of the studies to assess job demands, excessive workload, the level of time-pressure demands,

and freedom to make decisions.

The researchers recorded 2356 events of incident CHD (first non-fatal heart attack or coronary death) during the average 7.5 year course of follow-up.

The 23% higher risks for people who reported job strain remained the same even after taking into account factors such as lifestyle, age, gender, and socioeconomic status.

What is more says Kivimäki, "The overall population attributable risk (PAR) for CHD events was around 3.4%, suggesting that if the association were causal, then job strain would account for a notable proportion of CHD events in working populations. As such, reducing workplace stress might decrease disease incidence. However, this strategy would have a much smaller effect than tackling standard risk factors such as smoking (PAR 36%) and physical inactivity (PAR 12%)."

In a linked Comment Bo Netterstrøm from Bispebjerg Hospital, Copenhagen, Denmark notes, "Job strain is a measure of only part of a psychosocially damaging work environment, which implies that prevention of workplace stress could reduce incidence of coronary [heart disease](#) to a greater extent than stated in the authors' interpretation of the calculated population-attributable risk for job strain."

He adds, "Exposures such as job insecurity and factors related to social capital and emotions, are likely to be of major importance in the future. The present economic crisis will almost certainly increase this importance."

Provided by Lancet

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