Shift work and the risk of ischemic heart disease:
A systematic review of the epidemiologic evidence
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Abstract
Shift work may be related to unfavourable changes in cardiovascular risk factors and increased risk of ischemic heart disease. A systematic review was undertaken to evaluate the epidemiologic evidence for a causal relation between shift work at night and ischemic heart disease.

A systematic search until the end of March 2008 was conducted for studies providing information on the relative risk of ischemic heart disease in relation to nightshift work. The quality of included papers was discussed with respect to design, exposure and outcome information, bias, and exposure response assessments.

Fourteen studies provided relevant information. Seven analyzed fatal events, six combined fatal and non fatal events, while one study reported separately on both types. Relative risks ranged from 0.6 to 1.4 in twelve papers while two papers reported relative risks around 2. It was characteristic that most studies based on fatal events showed no or weak associations while studies based on combined fatal and nonfatal events mostly showed modest positive associations. Negative or positive bias due to the quality of outcome or exposure information, or confounder control could not be reasonably ruled out in most studies. Five studies used years in shift work for exposure response analysis and no consistent pattern was seen.

There is limited epidemiologic evidence for a causal relation between nightshift work and ischemic heart disease. The presentation will conclude with a summary of the limitations of research published to date and will propose key research priorities for the future.