

Objectives Stroke is the third most common cause of death in developed countries, exceeded only by coronary heart disease and cancer, but there is still little knowledge on occupational risk factors. A systematic critical review was performed to assess the strength of evidence for causal associations between work-related psychosocial risk factors, shift work and stroke.

Method Literature on stroke incidence or mortality and occupational factors published up to 2012 was identified from Medline and other relevant databases. The 4 471 abstracts were evaluated independently by two reviewers. Six studies relevant to shift work and eight studies (among them four cohorts from Scandinavia) exploring job strain, job control or other job related “stress” exposures were identified. The evidence for an association was assessed according to defined criteria as strong, moderate, limited, or insufficient.

Results There is limited evidence for an association between shift work and stroke, mainly based on results from two occupational cohorts.

There is also limited evidence for high job strain or low job control from cohort studies. Case- crossover studies, which would better reflect short-term effects, were lacking, and the only case-referent study found was very small.

Conclusions There is now fairly solid evidence that shift work and work-related psychosocial stress are risk factors for coronary heart disease; a fact that supports an association also with stroke, another cardiovascular disease. However, the epidemiological evidence for stroke is limited, with few studies, and very limited exposure information. Better study designs are needed to elucidate accumulated as well as triggering/short time effects.

0290 CANCER RISKS AMONG CANADIAN MINING WORKERS IN A POPULATION-BASED COHORT

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Objectives Mining workers in Canada may be exposed to several potential carcinogens including crystalline silica, various metals, and diesel exhaust. This study aimed to assess the risk of cancer among male mining workers employed in various Canadian mining sectors.

Method The Cohort was created by Statistics Canada through the linkage of the 1991 Canadian Census (long form) to the Canadian Mortality Database, Canadian Cancer Registry, and annual Tax Summary Files (1991–2006). This linkage resulted in a cohort of 1.1 million working males aged 25–74, including over 14 000 workers employed in the mining industry. Cox proportional hazards modelling was used to estimate hazard ratios (HR) and corresponding 95% confidence intervals, adjusted for age and region.

Results There were 700 cancers among 660 mining industry workers. There was an increased risk for rectal cancer (HR: 1.37, 1.01–1.88), particularly in gold mining (HR: 3.11, 1.47–6.56). Increased risks of kidney and prostate cancer were observed for coal mining (HR: 2.71, 1.12–6.57 and HR: 1.80, 1.10–2.94, respectively), and esophageal cancer in metal mining other than gold or iron (HR: 2.78, 1.13–6.80). There were also elevated risks for stomach and laryngeal cancer among mining workers.

Conclusions This study identified increased risks of rectal, kidney, prostate, and esophageal cancers among male mining industry workers employed in specific sectors. There are also a number of limitations and challenges that accompany the investigation. Our findings may have important implications for our understanding of occupational cancer risk factors and potential policy interventions in the mining industry.

0291 DOSE-TIME-RESPONSE ASSOCIATION BETWEEN OCCUPATIONAL ASBESTOS EXPOSURE AND MESOTHELIOMA

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Objectives In case-control studies on cancer, occupational exposure to a specific agent is often summarised through a cumulative index of exposure at the time of diagnosis/interview. This cumulative index is the sum, over all years of exposure to the agent, of the dose received each year. This gives the same weight to each dose, whether this dose was received in the first years of exposure or at a shorter distant time from the diagnosis/interview. This assumption is unlikely to be reasonable for asbestos and mesothelioma.

The objectives of this study were to estimate the weight of each dose of asbestos received in the past, and to compare the risk of mesothelioma associated with different profiles of exposure, using French case-control data.

Method From a French case-control study, 1199 male cases and 2379 male controls were recruited in 1987–2006. Occupational asbestos exposure was assessed using a job exposure matrix, and represented in logistic regression models by a flexible time-dependent weighted function of the dose.

Results The impact of a given increase of the dose depended on when the dose was received. It allowed us to compare the risk of subjects who were exposed for a long duration at a low dose with subjects who were shortly exposed to a high dose at different distant times from diagnosis/interview.

Conclusions This study provides new insights on the dose-time-response relationship between occupational asbestos and mesothelioma, and an illustration of the use of an approach that could be of interest for other associations.

0292 COMPARISON OF PERSONAL HABITS AND BASELINE KNOWLEDGE OF HEALTH PROMOTION AMONG STUDENTS OF THE FACULDADE DE MEDICINA DA UNIVERSIDADE DE SÃO PAULO

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Objectives Because of the importance given to the implementation of health promotion programs nowadays generating positive outcomes important to society and especially to businesses, employees and the financial market this study was designed to assess students' baseline knowledge of expertise in occupational medicine on health promotion and correlate it with the