Oral Presentation
Cardiovascular Disease

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ISCHAEMIC HEART DISEASE MORTALITY, DIESEL EXHAUST, AND RESPIRABLE PARTICULATE MATTER EXPOSURE IN THE DIESEL EXHAUST IN MINERS STUDY (DEMS)

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We examined the impact of exposure among non-metal miners to respirable elemental carbon (REC), a diesel exhaust surrogate, and respirable particulate matter from mine and ore dust (RPM), on ischaemic heart disease (IHD) mortality in the Diesel Exhaust in Miners Study (DEMS). DEMS was conducted by National Cancer Institute and National Institute for Occupational Safety and Health. Among males at 8 US mines, we estimated IHD mortality hazard ratios (HR) for cumulative exposure and for average intensity to REC and RPM among the 10 070 miners hired since dieselization. In addition, we employed the parametric g-formula to assess the impact of hypothetical REC and RPM interventions on IHD mortality adjusting for time-varying employment status to address healthy worker survivor bias. The HR (95% confidence interval (CI)) for the highest category versus lowest category of exposure were 1.18 (0.56, 2.24) for cumulative REC, 1.25 (0.78, 2.01) for cumulative RPM, 0.75 (0.39, 1.44) for average REC, and 2.58 (1.26, 5.28) for average RPM. Using the parametric g-formula, we estimated the cumulative risk under a hypothetical intervention where annual average daily exposures to REC is set to 0 and a joint intervention consistent with REC and RPM exposure limits of 0 and 0.5 mg/m³ respectively. The ratios comparing the risk under the intervention on REC alone and for the joint intervention, each compared to the observed risk, were 0.86 (0.62, 1.17) and 0.84 (0.71, 0.98) respectively. Our study indicates that exposure to REC and PM may increase IHD mortality among workers in this cohort.

Poster Presentation
Methodology

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THE ROLE OF THE OCCUPATIONAL PHYSICIAN IN THE DIAGNOSIS AND PREVENTION OF OCCUPATIONAL DISEASES IN THE 21ST CENTURY

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One of the most important tasks of the occupational physician in Belgium is the prevention of primary and secondary health damage related to the job.