Oral Presentation

Cardiovascular Disease

0344 ISCHAEMIC HEART DISEASE MORTALITY, DIESEL EXHAUST, AND RESPIRABLE PARTICULATE MATTER EXPOSURE IN THE DIESEL EXHAUST IN MINERS STUDY (DEMS)

[1]Sadie Costello*, [2]Michael Attfield, [3]Jay Lubin, [1]Andreas Neophytou, [3]Aaron Blair, [1]Daniel Brown, [3]Patricia Stewart, [3,4]Roel Vermeulen, [1]Ellen Eisen, [3]Debra Silverman. *[1]Division of Environmental Health Sciences, School of Public Health, University of California, Berkeley, Berkeley, CA, USA; [2]Division of Respiratory Disease Studies, National Institute for Occupational Safety and Health, Morgantown, WV, USA; [3]Division of Cancer Epidemiology and Genetics, National Cancer Institute, Bethesda, MD, USA; [4]Institute for Risk Assessment Sciences, Utrecht University, Utrecht, The Netherlands*

10.1136/oemed-2017-104636.281

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/m^3 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

0345 THE ROLE OF THE OCCUPATIONAL PHYSICIAN IN THE DIAGNOSIS AND PREVENTION OF OCCUPATIONAL DISEASESIN THE 21THE CENTURY

[1,2]Bieke Claesen*, [1,2]Antoon De Schryver. *[1]University of Antwerp, Antwerp, Belgium; [2]IDEWE, Heverlee, Belgium*

10.1136/oemed-2017-104636.282

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.

An occupational disease (OD) is a disease that at least partially is caused by risk factors at work or in which the evolution is caused by risk factors in the working environment.

In different countries, the scientific literature about OD and the several registration systems in occupational health generates data about those risk factors responsible for the development of OD.

That data and the legislative framework can lead to preventive measures that can prevent OD, a task for the occupational physician.

In Belgium, the available data about OD, coming from occupational health context, appear to be rare. So to find out more about the incidence and the diagnosis of OD, we will use other existing systems of surveillance in Belgium.

We'll use two sentinel surveillance systems in primary care and one general health care surveillance system. With the use of specific questionnaires about the chosen OD, we search for the risk factors recorded by the attending physicians.

This poster presents you how we used the existing methods in the context of occupational health and explains how the OD and the search for the risk factors are questioned in the general health care surveillance systems.

Dr Bieke Claesen, PhD student University of Antwerp, Occupational Physician at IDEWE.

Prof Dr A De Schryver, Faculty of Medicine and Health Sciences, Epidemiology and Social Medicine (ESOC) University of Antwerp.

Poster Presentation

Psychosocial

0346 RELATIONSHIP BETWEEN PSYCHOLOGICAL STRESS-JOB SATISFACTION AND WEIGHT CHANGE IN EMPLOYEES AT A GLOBAL OIL AND GAS COMPANY

April Clark*, Delya Sommerville, Richard Heron. *BP Plc, Houston, Texas, USA*

10.1136/oemed-2017-104636.283

In an era of uncertainty and falling oil prices, addressing work-related stress plays a vital role in maintaining safe operations, productivity, and decreasing turnover.

Employees have access to a confidential assessment which considers their lifestyle, health status, work and life outside of work. One section of the assessment measures psychological stress and job satisfaction. Psychological stress has been implicated as a risk factor for cardiovascular disease, cancer and weight changes.

This cross-sectional analysis aimed to examine the association between psychological stress, job satisfaction, and weight gain.

Self-administered health risk assessments from over 6000 employees were assessed. Questions about satisfaction with work decisions, job effort reward, time pressures at work, stress from mental fatigue at work were used to create a stress satisfaction score. Prevalence of stress was calculated and multivariate regression analyses, stratified by sex and age groups, were conducted.

Over 70% of respondents who reported stress assigned the cause of stress to be work-related. Female respondents indicated more stress than satisfaction in the workplace (p