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 conservative risk under a hypothetical intervention where annual average intensity to REC and RPM is set to 0 and a joint intervention 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
Psychosocial

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

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