Poster Presentation

Musculoskeletal

0069 KNEE DISORDERS, WORK LIMITATIONS AND WORK STATUS. FIRST RESULTS FROM THE CONSTANCES COHORT

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Objective Knee disorders, including osteoarthritis and knee replacement, are a growing problem for more and more workers due to increasing retirement ages. Aim is to describe work-related outcomes of possible knee replacement, meniscal surgery and other knee pain in a new large population cohort at its inception.

Methods The CONSTANCES cohort is a randomly selected representative sample of French adults aged 18–69 years at recruitment. Participants completed symptom questionnaires, and surgery in the last 4 years period was collected from a national health claims database. Knee disorders were defined as severe or daily knee pain, or history of surgery for meniscal tear or knee replacement. We considered several outcomes, including self-reported functional limitations (climbing stairs, walk 1 km, carrying 5 kg), task modifications and current work status. Multinomial logistic models were built separately for men and women; only variables with an Odds Ratio >2 (or <0.5) at p<0.001 were considered significant after adjustment for other relevant variables.

Results Of 85.826 participants, of whom 38.571 (44.9%) reported knee pain. 10.683 (12.4%) reported severe knee pain, 1305 (1.5%) with meniscal tear surgery, and 403 (0.5%) with knee replacement. All limitations considered were significantly associated with severe knee pain, meniscus surgery and knee replacements among men and women, such as task modification for knee disorders. Loss of activity was only significantly associated with knee replacement among men.

Conclusions Based on a cross-sectional design at this time, theses first analyses reported a poor outcomes of knee disorders for work-related activities.

Oral Presentation

Dusts and Fibres

0071 VALIDATION OF ACM CHECK: A MOBILE APPLICATION TO SCREEN FOR ASBESTOS IN RESIDENTIAL SETTINGS

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Background/Aim A large reservoir of *in situ* asbestos-containing materials (ACM) remain in residential settings throughout Australia. Tradesmen and householders are at risk of exposure if they work on or near these materials, without knowing they contain asbestos. The aim of this study was to validate ACM Check, a screening tool to identify and assess the condition of potential ACMs located in and around Western Australian homes.

Methods A two stage cross-sectional study was undertaken: 1) completion of ACM Check by 40 Western Australian householders, and 2) an on-site asbestos inspection by an experienced Environmental Consultant, which included collecting samples of suspect ACM to be tested in a laboratory. Cohen's kappa coefficient compared the results obtained from ACM Check with those of the Environmental Consultant.

Results 40 houses ranging in date of construction from 1898 through to 1988 with a median year of 1966, were sampled. 38 of the 40 houses (95%) were identified as having one or more 'possible' or 'likely' asbestos-containing materials present on the property. Overall, there was perfect agreement between ACM Check and the Environmental Consultant's assessment for any (1 or more) ACM present, K=1.00, p<.005, perfect agreement for any ACM located outside the house, K=1.00, p<.005, and moderate agreement for any ACM located inside the house, K=0.593, p<.005.

Conclusions ACM Check is a reliable screening tool to identify *in situ* ACMs in Western Australian residential settings. Its method can potentially be modified for implementation in other countries

Poster Presentation

Chemicals

0072 OIL MIST, FROM EXPOSURE DETERMINANTS TO EARLY EFFECT MARKERS: AN INTEGRATIVE STUDY DESIGN

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The present project focuses on the effects of occupational exposure to oil mists on a panel of exposure and effect biomarkers in an epidemiological study. The assumption is that different health outcomes are caused by reactive particles causing oxidative stress leading to lung inflammation and ultimately cancer or asthma.

Ninety workers from France and Switzerland (30 controls, 30 exposed to straight cutting oil and 30 to soluble cutting oil) will be followed over two days after a non-exposed period of at least two days.

The exposure assessment is based on measurements of particles, metals, aldehydes, amines, the intrinsic oxidative potential of aerosols and the cutting oil. Furthermore, exposure biomarkers are measured in exhaled breath condensate (EBC)-metals, ions (nitrite, nitrate...) and urine –metals, metabolites of PAHs- . Finally, exposure determinants will be collected to guide future efforts in exposure prevention.

Effect biomarkers of oxidative stress (malondialdéhyde, 8-isoprostane, 8-hydroxy-2'-deoxyguanosine) in EBC and urine will be repeatedly measured as well as exhaled nitric oxide (FeNO), an inflammation marker.

Genotoxic effects will be assessed using the buccal micronucleus cytome assay. Finally, the possible chronic effects of oil mist exposure on respiratory health will be explored by standard questionnaires.