currently ~2300 cases and ~4200 controls), to study risk factors and possible gene-environment interactions; international pooling of case-control studies; using existing cohorts (e.g. EPIC) ; and aiming to register all Dutch ALS cases. Consistent positive associations between smoking and ALS were observed within PAN and EPIC, indicating that a similar approach for occupational risk factors would be informative.

Because each study design has its advantages and disadvantages, neurodegenerative disorders should be looked at more in a range of (occupational) studies to gain better understanding of the aetiology.

Oral Presentation

Exposure Assessment

0326 A SWEDISH JOB EXPOSURE MATRIX FOR PHYSICAL WORKLOAD

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Background To study associations between physical workload and health outcomes, valid and feasible exposure assessment methods are needed. Physical workload can be assessed by technical measurements, observations and questionnaires. Measurements and observations are often too costly in large epidemiological studies. Response rates to surveys are decreasing. Also, self-reported exposure is prone to bias since it may be influenced by e.g. health. Alternatives are to use job exposure matrices (JEM) where each job is attributed exposure measures. This enables large epidemiological studies to be conducted on registers and cohorts that include job titles. The aim was to construct a Swedish JEM for physical workload.

Methods Data from the Swedish Work Environment Surveys conducted every second year 1997–2013, including 90 077 working Swedes, were used. The JEM was based on eight questions concerning heavy lifting, strenuous work postures, repetitive work and physical strenuous work. The response scales specify the proportion of working time with the exposure. Occupational titles were coded on 4-digit level according to the 1996 version of the Swedish Standard Classification of Occupations.

Results The JEM provides information on physical exposures in 355 occupations, divided into men and women. Each occupation has been assigned mean values for specific exposures, e.g. heavy lifting, and overall physical exposure, as well as the proportion of workers exposed. Analyses will be presented on the predictive validity of JEM estimates on musculoskeletal disorders in a Swedish cohort.

Conclusions If the JEM is considered valid it will be a valuable tool in epidemiological studies of physical workload.

Oral Presentation

Exposure Assessment

0327 EXPOSURE ASSESSMENT FOR U.S. CASE-CONTROL STUDY ON OCCUPATIONAL LIFTING AND RETINAL DETACHMENT: A COMPARISON OF METHODS. (TO BE PRESENTED IN AN ACCEPTED MINI-SYMPOSIUM)

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Objectives To support a case-control study investigating the association between occupational lifting and retinal detachment (RD) in Massachusetts, we estimated and compared self-reported lifting exposures to those documented in O*NET, a government database that characterises physical exposures such as manual material handling and vibration for hundreds of U. S. job titles.

Methods Cases of RD were identified based on recent surgical treatment and controls based on a recent routine eye exam. All recruited participants were mailed a questionnaire including questions on the magnitude and frequency of lifting, pushing and pulling in all previous jobs. To help patients recall physical exertion across their lives, photos of lifting common objects were included. Participant responses were used to estimate occupational lifting exposures in three ways: 1) self-reports; 2) a job exposure matrix (JEM) linking job titles with O*NET exposure data; and 3) combining 1 and 2 with Empirical Bayes Estimators (EBE).

Results Study recruitment will continue through 2017, enrolling at least 150 cases and 250 controls. Preliminary analyses from half of the participants indicate an average of four jobs/person. Self-reports and job-title based exposures from O*NET were moderately correlated for lifting (Spearman rank correlation=0.48, $p<0.0001$). Frequent reports of whole body vibration exposures were uncommon (<5% of all jobs), suggesting the study will have less power to evaluate this exposure.

Conclusions By combining strengths of JEMs with personal recall, this study sought to improve on previous investigations. EBE provide a formal method for optimising the two types of data.

Oral Presentation

Cancer

0328 EXTENDED MORTALITY FOLLOW-UP OF A COHORT OF WORKERS EXPOSED TO ACRYLONITRILE

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