

MODERATE ALCOHOL CONSUMPTION AND HEARING LOSS; A PROTECTIVE EFFECT. M.M. Popelka,* K.J. Cruickshanks, T.L. Wiley, T. Tweed, B.E.K. Klein, R. Klein (University of Wisconsin-Madison, Madison, WI 53705).

Hearing loss is one of the most common chronic conditions affecting the health of older adults, yet little is known about its etiology. Cardiovascular disease (CVD) and arteriosclerosis may be risk factors for hearing loss through effects on cochlear blood supply. The purpose of this study was to determine if moderate alcohol consumption, which is inversely associated with CVD, may also have a protective association with hearing loss. Data were from the population-based Epidemiology of Hearing Loss Study (EHLS) of adults 48-92 years of age in Beaver Dam, Wisconsin. Participants (n=3571) were 65.7 years of age on average and 43% were men. Hearing was measured using pure tone air and bone conduction audiometry in sound treated booths using standard techniques. Hearing loss was defined as a pure tone average (PTA) of the thresholds at 500, 1000, 2000, and 4000 Hertz greater than 25 decibels (dB) hearing level (HL). Self-report of alcohol consumption was ascertained by questionnaire. Univariately, the prevalence of hearing loss decreased with increasing alcohol consumption (p trend <.002). In a multiple logistic regression model controlling for age, gender, smoking status, and noise exposure, those consuming more than 140 grams of alcohol per week (about 12 beverages) were less likely to have a mild hearing loss than non-drinkers (Odds Ratio (OR) = 0.72, 95% Confidence Interval (CI) = 0.52, 0.98). This protective effect was also present for moderate (PTA > 40 dB HL) hearing loss (OR = 0.65, CI = 0.44, 0.95). Models controlling for CVD, heavy drinking, serum cholesterol levels, and two way interactions produced similar results. These cross-sectional results suggest that moderate alcohol consumption may have a protective effect on age-related hearing loss, similar to the relationship seen in studies of alcohol consumption and cardiovascular disease.

PREVALENCE OF CIGARETTE SMOKING BY OCCUPATION IN THE U.S. POPULATION, 1988-1991. K.M. Bang,* J.H. Kim, S.S. Roberts (National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, Morgantown, WV 26505).

The Third National Health and Nutrition Examination Survey (NHANES III), 1988-1994, is a 6-year survey conducted by the National Center for Health Statistics. Included in NHANES III is data on the cigarette smoking status of U.S. noninstitutionalized civilians obtained through household interview surveys. NHANES III data consist of two data sets: Phase 1 (1988-1991) and Phase 2 (1992-1994). To estimate the prevalence of cigarette smoking across occupational groups and compute standard errors, we analyzed NHANES III-Phase 1 data with SUDAAN, a statistical software which incorporates sample weights. Based on the 9,477 sampled adults, 20 years of age and older, the overall prevalence of cigarette smoking was 30.9% (95% CI=28.6-33.1). Cigarette smoking prevalence was significantly higher (p<0.001) among blue-collar workers (44%, 95% CI=40.3-47.7) than white-collar workers (25.7%, 95% CI=22.9-28.5). Among occupational groups of which more than 30 employees were sampled, cigarette smoking was most prevalent among construction laborers (54.6%), whereas the lowest smoking prevalence was found among freight and material handlers (12.7%). These findings provide information useful for targeting educational activities focusing on adverse health effects of cigarette smoking and smoking cessation programs.

OCCUPATIONAL AND ENVIRONMENTAL RISK FACTORS FOR IDIOPATHIC PULMONARY FIBROSIS: A MULTICENTER CASE-CONTROL STUDY. K.B. Baumgartner,* J.M. Samet, D.B. Coultas, C.A. Stidley, W.C. Hunt (Epidemiology and Cancer Control, University of New Mexico Health Sciences Center, Albuquerque, NM 87131).

Occupational and environmental exposures were investigated in a multi-center case-control study of clinically and histologically diagnosed idiopathic pulmonary fibrosis (IPF), a chronic diffuse interstitial lung disease with an unknown etiology. Results are based on 739 subjects; 248 cases and 491 controls matched to cases on sex, age, and geographic region. Cases were aged 20 to 75 years and diagnosed between January, 1989 and July, 1993. Data were collected by telephone, using a standard questionnaire, on occupational factors based on both lifetime job history and a checklist of job exposures, and environmental exposures including smoking, hobbies, and household exposures. Several environmental and occupational factors were significantly associated with IPF, including: ever smoking (odds ratio (OR)=1.6, 95% confidence interval (CI) 1.1-2.4; farming (OR=1.6, 95% CI 1.0-2.5); hairdressing (OR=4.4, 95% CI 1.2-16.3); metal dust (OR=2.0, 95% CI 1.0-4.0); raising birds (OR=4.7 95% CI 1.6-14.1); stone cutting/polishing (OR=3.9, 95% CI 1.2-12.7); and vegetable dust/animal dust (OR=4.7, 95% CI 2.1-10.4). These results suggest that IPF may be a heterogeneous disorder caused by several occupational and environmental exposures. Our results support three previous studies for increased risk associated with dusty environments.

RESPIRATORY SYMPTOMS IN ALUMINIUM SMELTER WORKERS. L. Fritsch,* M. Sim, A.W. Musk, J. Beach, G. Benke, J.J. McNeil (Monash University, Melbourne, Australia; University of Western Australia, Perth, Australia).

Despite the presence of several respiratory irritants in aluminium smelters, evidence of adverse health effects in parts of the smelter other than potrooms is uncommon. Data collected on 5095 employees at two Australian aluminium smelters (operating since 1962 and 1986) included demographic variables, a detailed job history, British MRC questions on cough, sputum, dyspnoea, and rhinitis, the perceived relationship between respiratory symptoms and work, and spirometry. The risk of respiratory symptoms for production workers was compared with that for administration workers, adjusting for age, smoking, schooling, and previous potroom work. Potroom workers at the newer smelter were significantly more likely to report rhinitis, and at the older smelter they were more likely to report wheeze, work-related chest tightness (Odds Ratio = 3.5 95% Confidence Interval 1.7 - 7.1), and work-related wheeze (OR = 4.3 95% CI 2.2 - 8.3). Anode workers were more likely to report rhinitis at both smelters and work-related wheeze (OR = 2.6 95% CI 1.1 - 6.1) at the older smelter. Ingot mill workers at the older smelter were significantly more likely to report all respiratory symptoms, and were 4 to 5 times more likely to report work-related respiratory symptoms. This group also had a significantly lower average forced expiratory volume than administration workers, but no decrease in forced vital capacity.

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Journal of

ISSN 0002-9262
Printed in the U.S.A.

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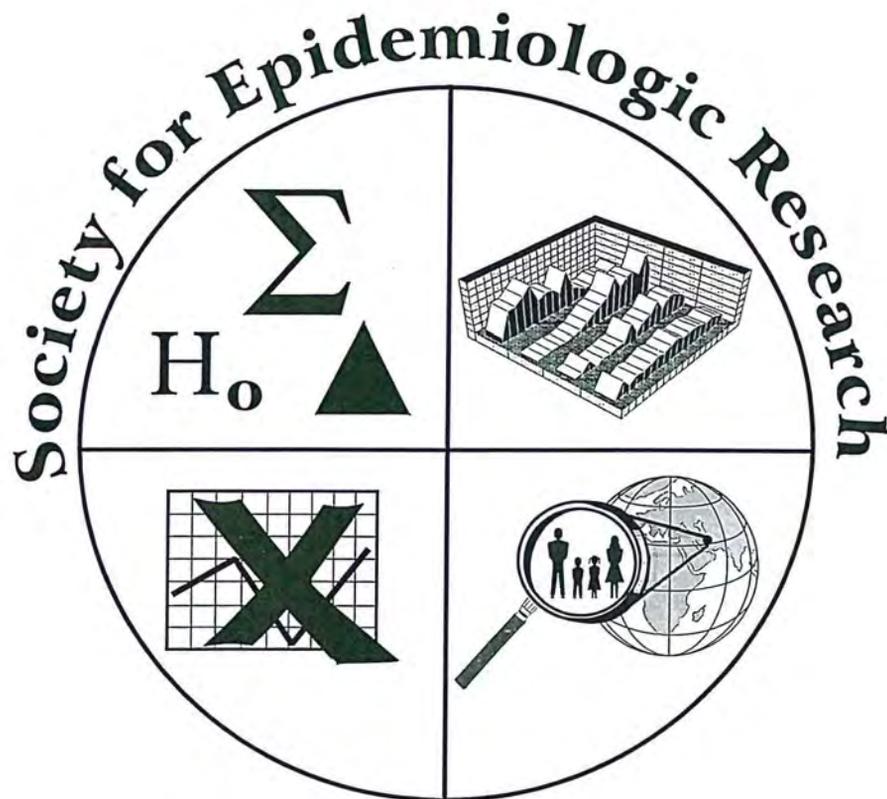
Volume 145

Number 11

June 1, 1997

Published by The Johns Hopkins University
School of Hygiene and Public Health

Sponsored by the Society for Epidemiologic Research



**ABSTRACTS OF THE 30TH ANNUAL MEETING
EDMONTON, ALBERTA, CANADA, JUNE 12-14, 1997**