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LATERAL EPICONDYLITIS IN A WORKING POPULATION. *M S Thiese, K T Hegmann, A Garg, JJ Wertsch, G Deckow-Schaefer, G Groth, J Kapellush. (University of Utah, Salt Lake City, UT, 84108)

Few studies have assessed risks for tennis elbow on a population basis. Baseline data of prevalence are reported from a cohort of workers (n = 683) in 12 diverse plants in Wisconsin and Utah. The workers are 66.1% female, 27.7% current smokers, 23.9% former smokers, with a mean age of 40.7±11.3 years and mean Body Mass Index (BMI) of 28.5±6.4 kg/m2. All workers underwent a questionnaire, structured interview, and two standardized physical examinations. A total of 14.8% and 8.2% had current complaints in the prior month at baseline of right/left lateral elbow pain. Using standard case criteria of right/left lateral elbow pain and tenderness, the one month period prevalence of lateral epicondylitis in this population is 11.7% / 5.9%. Using standard case criteria of right/left lateral elbow pain, tenderness, and pain on provocation, the point prevalence of lateral epicondylitis in this population is 6.1% / 3.1%. Multiple logistic regression was performed. For lateral epicondylitis the statistically significant finding in the right elbow is female gender [Odds Ratio (OR) = 3.13, 95% Confidence Interval (CI) 1.60, 5.92]. Factors trending toward an association are age (OR = 1.02, p = 0.21), BMI (OR = 1.03, p = 0.12) and tobacco use (OR = 1.54, p = 0.09). Age was statistically associated with left lateral epicondylitis (OR = 1.05, CI 1.01, 1.08) while gender (OR = 1.83, p = 0.14) and tobacco use (OR= 1.47, p = 0.23) tended toward an association. These data suggest that there is a relatively high prevalence of lateral elbow pain and lateral epicondylitis in this population.

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THE PREVALENCE OF ROTATOR CUFF PROBLEMS. *M S Thiese, J Kapellusch, J Foster, D Drury, K T Hegmann, A Garg, G Deckow-Schaefer, G Groth (University of Utah, Salt Lake City, UT, 84108)

Few studies have reported prevalence of supraspinatus tendinitis on a population basis, yet these problems are often the second most costly in many worker compensation systems. We report the prevalence of glenohumeral joint pain and supraspinatus tendinitis and identify non-occupational risk factors. An occupational cohort of 683 workers performing diverse work tasks from multiple industries in 2 states underwent questionnaires, structured interviews and physical examinations. The workers are 66.1% female, with a mean age of 40.7 + 11.3 years and mean Body Mass Index (BMI) of 28.5 + 6.4 kg/m2. The 1-month prevalence of glenohumeral shoulder joint pain on the right and left was 36.1% and 29.1% respectively. Supraspinatus tendinitis was defined as glenohumeral joint pain and a positive supraspinatus test. Prevalence of supraspinatus tendinitis was 7.3% on the right and 8.5% on the left. Logistic regression results for right glenohumeral joint pain showed age [Odds Ratio (OR) = 1.03 (95% Confidence Interval (CI) 1.01, 1.04)] and BMI (OR = 1.03, 95% CI = 1.01, 1.06) to be statistically associated. Tobacco was borderline associated (p = 0.14). Results for the left shoulder were similar, but not statistically significant. Logistic regression results for right supraspinatus tendinitis showed age to be associated (OR = 1.03, 95% CI = 1.01, 1.06)], while tobacco was borderline (p = 0.10) and BMI was not (p = 0.29). Results were not statistically significant on the left. Glenohumeral joint pain and supraspinatus tendinitis appear common. Non-occupational risk factors appear to include age and possibly BMI and tobacco.

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RELATIONSHIP BETWEEN DEPRESSION, PESTICIDE POISONING, AND SAFETY PRACTICES AMONG COLORADO FARM RESIDENTS. *C Beseler, L Stallones (Colorado Injury Control Research Center, Fort Collins, CO 80526)

Objective: The purpose of this study is to examine the association between depressive symptoms and safety practices among a population exposed to chemicals as a result of agricultural use using structural equation modeling techniques (SEM). Methods: Data for this study came from a cross-sectional survey of 761 farmers and their spouses conducted in an eight county area in northeastern Colorado between 1992 and 1997. Personal interviews were conducted with the study participants. Confirmatory factor analysis was used to refine exploratory factor models describing the relationship between the depressive symptoms and depression by the CES-D scale. SEM was used to examine the relationship between depression, health, finances, pesticide poisoning, and safety practices. Results: The optimal measurement model was used in SEM and identified health, financial condition and past pesticide poisoning to be significant causal factors in the development of the depressive factors. With the safety factor in the model, the positive affect pathway became insignificant indicating that it is the presence of a negative effect and not the absence of a positive effect that influences safety practices. SEM was able to identify models with an excellent fit for all of the safety factors examined when modeling the probability that the pesticide poisoning preceded the depression factor components. Conclusion: Depression was associated with certain safety practices with path coefficients ranging from 0.14 to 0.21. SEM suggests that most likely the first event was an acute pesticide poisoning followed by the depressed mood. In five of six safety practice models a path could be drawn directly from pesticide poisoning to feeling fearful with path coefficients ranging from 0.09 to 0.12.

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WORK COMPATIBILITY: AN INTEGRATED APPROACH FOR EVALUATING MUSCULOSKELETAL DISORDERS. *A Genaidy, G Lemasters (University of Cincinnati, Cincinnati, OH 45221)

The primary objective of this study is to develop and validate work compatibility (WC) as an innovative and integrated approach to evaluate work-related musculoskeletal disorders (MSDs) and stress symptoms, with WC defined as a latent variable integrating the positive and negative impact characteristics of work-related variables. The most fundamental difference between WC and prior work is that any work-related variable is assumed to have three characteristics depending upon its health impact: only negative impact (i.e., demand), only positive impact (i.e., energizer), and, both positive and negative impact. In the WC framework, 12 work-related variables have been identified (e.g., organizational, technological, social / communication, mental or physical task content). We present approximate solutions for the compatibility variables based on practice and expert knowledge. In the second part of the study, we validated the concept of WC on workers engaged in various types of manual handling activities. The eligible population was drawn from two departments. Fifty-five workers volunteered to participate in this study (61% of workers from the two departments). Each study participant was asked to fill out two surveys: demand-energizer and musculoskeletal/stress symptoms. The results indicated that scales demonstrated good internal consistency reliability (0.75–0.95). Logistic regression analyses showed that WC had significant associations with MSDs in several body regions (odds ratios "OR" – 2.43 to 6.22) and high frequency symptoms (OR – 2.42 to 4.61), while accounting for potential confounders. This study is limited by its cross-sectional design and sample size.

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