

Descatha A, Leclerc A et al. Medial Epicondylitis in Occupational Settings: Prevalence, Incidence, and Associated Risk Factors. JOEM 2003;45(5):993-1001.

Design: Design: Observational cohort study

Population/sample size/setting:

- 700 workers who had participated in a longitudinal study of upper extremity disorders in 1993 in France; 598 (178 men, 420 women) of these were followed up in 1996, together with 337 workers who did not perform repetitive work
- The goal of the study was to evaluate personal and occupational factors which predicted incidence of upper extremity conditions in the 3 year interval between 1993 and 1996
- Eligible workers were classed as exposed to repetitive work in one of 5 activity sectors: assembly line manufacture, clothing or shoe industry, food industry, packaging, and supermarket cashiering
- The 598 workers who participated in the 1996 follow-up completed a self-administered questionnaire and were examined by an occupational health physician, who performed a standardized clinical examination at the beginning of the study and again at the 3 year follow-up, using a list or criteria for the diagnoses of diagnosis of upper extremity conditions

Main outcome measures:

- Diagnosis of medial epicondylitis (ME) was based on pain at the medial epicondyle, or medial epicondyle tenderness and pain on resisted pronation or elbow flexion
- Two analyses were done: one based on prevalence at the start of the study, and one based on incidence during the three years of the study
- Job duties assessed in questionnaire included "holding in position," "turning and screwing," forceful work, and repetition (yes or no)
- There were 68 cases of ME at the start of the study; no association was observed between repetition and ME, but the odds ratio was elevated for forceful work (OR=1.95)
- During the three year follow-up there were 25 new cases of ME, for an estimated annual incidence rate of 1.8%
- For incident cases of ME, force was not a risk factor; however, the presence of another upper extremity problem (CTS, shoulder tendonitis, lateral epicondylitis, or ulnar nerve entrapment at the elbow) yielded an increased risk (Relative risk=2.54) of ME during the 3 year follow-up
- The rate of recovery from ME was very high (81% in 3 years); recovery was not associated with a change in working conditions

Authors' conclusions:

- ME is not associated with repetitive work, but may be associated with forceful work, and occurs frequently when other upper extremity conditions are present

- The lack of association between biomechanical factors and ME may have been due to a lack of power, or may have been due to the long time interval between the two evaluations of the workers

Comments:

- There were 19 subjects with both medial and lateral epicondylitis who were excluded from the logistic regression model used to assess the risk factors; when there were only 49 cases of ME (rather than all 68 cases) entered into the model, the power of the study was likely to have been eroded further
- With only 25 incident cases of ME during the 3 year follow-up, the power of any logistic model to detect risk factors is likely to be weak
- Questionnaire assessment of exposure is difficult to interpret, since the direction of potential bias is not easy to predict
- Because the study was done in an industrial setting, it is likely that the exposures occurred for 6 hours per day or more

Assessment: Adequate for a statement that forceful exertion is associated with ME