

**FRANCISCO STUDY**

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**Aims**

Wrist tendonitis is a common work-related upper extremity disorder. Workplace cross-sectional (Franzblau 2005) and prospective studies (Leclerc 2001, Thomsen 2007) have linked hand/wrist tendonitis to forceful or repetitive hand exertions, but the associations are not consistent across studies. We report preliminary findings on a prospective study of wrist tendonitis among blue-collar workers.

**Methods**

Workers (N=359) at four industries were followed up for up to 28 months with questionnaires and physical examinations every 4 months to identify incident cases of right wrist tendonitis. Workers were eligible to participate if they performed primarily hand intensive manual (not office) work and were not assigned to more than four tasks. Exposure assessment was based on job evaluations by experienced ergonomists and video analysis of tasks. Detailed video analysis determined percent time the right hand applied a high force (> 1 kg-force) pinch or power grip for each task and time weighted average exposures were calculated for each subject. Survival analysis using the Cox Proportional Hazards Model was used to assess the relationship between individual and workplace factors and wrist tendonitis. Variables with p

**Results**

During the follow-up period there were 30 incident cases of right wrist tendonitis. Job satisfaction, smoking status, annual income, education level, and general health were not significant predictors in the univariate analysis and were therefore not included in the model. Age, gender, BMI and ethnicity were included in all models. Six variables remained in the final model and the significant variables were percent time spent in high force pinch (HR = 4.56; CI: 2.02-10.23; p

**Conclusion**

In this prospective study, the workplace factors predicting incident cases of wrist tendonitis were the shift and the percent time spent performing a high force pinch calculated as a TWA. Time spent in power grip was not a significant workplace predictor. Individual factors of gender was a significant predictor, but job satisfaction, general health, and BMI were not. Future analysis of this data set will evaluate the role of repetition, contact stress and other factors.

**Reference 1 :**

Franzblau A, Armstrong TJ, Werner RA, Ulin SS. A cross-sectional assessment of the ACGIH TLV for hand activity level. J Occup Rehabil 2005; 15:57-67.

**Reference 2 :**

Leclerc, A., MF Landre, JF Chastang., I Niedhammer. and Y Roquelaure (2001). Upper-limb disorders in repetitive work. Scand J Work Environ Health 2001; 27:268-78.

**Reference 3 :**

Thomsen, J. F., S. Mikkelsen, et al. Risk factors for hand-wrist disorders in repetitive work. Occup Environ Med 2007; 64:527-533.

**Keyword 1 :**

Postures, physical exposure

Keyword 2 :

Epidemiology

Keyword 3 :

Upper limb