Reviewer's report

Title: The effect of forearm posture on wrist flexion in computer workers with chronic upper limb pain

Version: 1 Date: 27 December 2007

Reviewer: David Rempel

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The study compares active wrist flexion from 5 subjects with chronic upper limb pain attributed to computer use to 13 control subjects. The primary concerns are the small sample size, lack of matched controls, and lack of clear case definition for the subjects with pain.

Major Compulsory Revisions:

1. P4 The background suggests that the musculoskeletal disorders experienced by computer users are not known. This is the case for about 50% but not all of those experiencing symptoms. References 5 and 6 are not the most appropriate for demonstrating pathology. Gerr et al. Am J Ind Medicine 41:221-235, 2002 is a prospective study of computer users with a standardized assessment for diagnosing upper limb disorders. Evidence of objective signs (not pathology) is missing in approximately 50% of those with symptoms.

2. P8 Two-tailed testing is preferred. The use of a Tukey follow-up test instead of the more conservative Bonferroni would be more appropriate.

Minor Essential Revisions

3. P4 References 3 and 4 are reviews of the literature and their findings are not equivocal. There are consistent findings that increasing hours of keyboard or mouse use are associated with increasing prevalence of symptomatic reporting.

4. P7 It would very useful to classify the musculoskeletal conditions of the participants with a systematic history and physical examination. Were these primarily neurogenic or musculoskeletal? What were the specific diagnoses based on one, experienced physician's evaluation? The control subjects should have been age and gender matched.

5. P7 Measurement of wrist posture with passive flexion would have allowed some differentiation whether the limitation of wrist motion was due to excess muscle tone vs structural changes in the extensor system.

6. P8 and all figures Either the term 'dominant' or 'right' should be used throughout the text and in the figures. Both terms are used.

7. Discussion The discussion is long. It is also short on interpreting the findings and lengthy on speculation. The discussion would be improved if these were
reversed.

8. The term CULP should be replaced with chronic upper extremity musculoskeletal disorder.

Discretionary Revisions

9. P4 Replace 'psychological stressors' with 'psychosocial stressors'

10. P7 The extended elbow position allows rotation at the shoulder during forearm pronation/supination - an elbow flexed to 90 degrees would not have allowed this motion.