

The effect of wrist braces on current perception threshold (CPT) among female data processing operators in Malaysia

ABSTRACT

A cross sectional study was conducted to evaluate the effect of wrist braces on current perception threshold value of median nerve among female data processing operators (n = 48). Respondents were interviewed using a validated questionnaire to obtain information such as demographics and background data, work history, symptoms pertaining to carpal tunnel syndrome. Electrodiagnostic examination was performed using Neurometer® CPT/C to obtain CPT level of median nerve on index and middle fingers among respondents before and after work, with and without wrist braces. CPT testing detected 15 respondents (31%) had median nerve abnormalities. Results from the paired t-test analysis showed no significant difference ($p > 0.05$) on CPT value after work with and without wrist brace used. However, this study suggests that CPT value showed an increased trend after data entry tasks when no wrist braces used and a reduced trend when wrist braces were used. This study concluded that wearing a wrist brace for a short period of time during repetitive activities has no immediate influence on CPT value among computer operators, however, this study suggests that wrist braces may be beneficial in protecting workers against median nerve compression.

Keyword: Data processing operator; Current perception threshold; Wrist brace