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**Is sEMG biofeedback an effective training method for persons with neck and shoulder complaints after Whiplash associated disorders concerning activities of daily living and pain - a randomized controlled trial.**

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**Objective:** To evaluate the effectiveness of surface EMG biofeedback training as a supplement to an interdisciplinary rehabilitation program regarding consequences for activities of daily living and pain.

**Design:** A randomized controlled unblinded trial.

**Settings:** The study was carried out at a pain unit at a rehabilitation centre.

**Subjects:** Sixty-five people with chronic whiplash-associated disorders consecutively referred to the pain unit, agreed to participate in the study. Participants were randomly assigned to either the treatment or control group.

**Intervention:** All participants received interdisciplinary rehabilitation and the treatment group also had four weeks of surface EMG biofeedback training.

**Main measures:** The Canadian Occupational Performance Measure (COPM) was used at admission discharge, and at the six-month follow-up to register changes in activities of daily living. The Multidimensional Pain Inventory, the Swedish version, (MPI-S) capturing the multidimensional aspects of pain was used at admission and at the six-month follow-up.

**Results:** Sixty-two people completed the study. Both the treatment and control group improved significantly according to the COPM at discharge and the results remained after six months ( $p < 0.001$ ). The subscale "Interference" on the MPI-S was significantly decreased at six months for the treatment group ( $p < 0.001$ ). No differences were found between the two groups for activities of daily living (performance  $p = 0,586$ ; satisfaction  $p = 0,988$ ) at follow-up or for pain level ( $p = 0,914$ ) indicating no additional effect of the surface EMG biofeedback training.

**Conclusion:** In this study there was no support for the effectiveness of surface EMG biofeedback training as a supplement to an interdisciplinary rehabilitation program for people with long-lasting pain after whiplash.