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JAW-HEAD MOVEMENT PATTERNS SHORTLY AFTER A WHIPLASH TRAUMA

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Introduction: Individuals with chronic whiplash associated disorders report more neck and jaw pain and show smaller neck and mandibular movements, compared to healthy. The effect on the jaw and neck motor strategy shortly after a neck trauma is still unclear.

Aim: To evaluate the jaw-neck movements during maximum jaw opening-closing in individuals with a recent whiplash injury, compared to healthy individuals.

Methods: Twenty-one cases with a recent whiplash trauma and 27 controls performed maximum jaw opening-closing movements. Simultaneous movements of lower jaw and head were registered with an optoelectronic recording system. The participants rated the pain in the neck and jaw and completed the neck disability index (NDI).

Results: Head movement amplitudes did not differ between cases and controls. Jaw movement amplitudes were significantly lower for cases ($p=0.001$), compared to controls. The correlation between jaw movement amplitudes and NDI was significant ($p=0.013$), but not the correlation between head movement amplitudes and NDI ($p=0.057$).

Conclusions: Jaw motor control is affected soon after a whiplash trauma, whereas the neck movements do not seem to be affected in an early stage. Furthermore, the correlation between jaw amplitudes and neck disability underlines the close functional integration between the jaw and neck regions.