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# Musikphysiologie und Musikermedizin in anderen Publikationen

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## Englischsprachige Abstracts

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### Impact of a Neck Strap Intervention on Perceived Effort, Thumb Force, and Muscle Activity of Clarinetists

SMYTH C, MIRKA GA

*Med Probl Perform Art* 2021, 36 (4): 225–232.  
<https://doi.org/10.21091/mppa.2021.4025>

**Abstract:** OBJECTIVE: Clarinetists often report discomfort of the right wrist and thumb and note that it is likely the result of the constant force applied to the area from the instrument's weight and the musician's technique. One preventative measure to reduce this discomfort is the use of a neck strap. The objective of the current study was to document the biomechanical impacts of this intervention.

METHODS: Eight experienced clarinetists played a series of three etude pieces while playing both with and without a neck strap. For each condition, the force between the right thumb and clarinet was measured, electromyographic (EMG) data were collected from seven muscle groups, and subjective assessment of perceived effort was obtained.

RESULTS: The results showed that when the neck strap was used, there was a significant decrease in the average force between the thumb and clarinet ( $p < 0.05$ ) and a decrease in the average perceived effort required for the right shoulder and thumb of the participants ( $p < 0.05$ ). Importantly, there were no statistically significant increases in the muscle activity of any of the neck and shoulder muscles with the introduction of the neck strap intervention.

CONCLUSION: A neck strap intervention had positive effects on the right thumb while not causing any known adverse effects to other areas such as the neck, upper back, and shoulders.

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### Novel Ultrasonographic Thickness and Strength Assessments of the Flexor Digitorum: A Reliability Analysis

IOANNOU CI, HODDE-CHRISKE FL, AVRAAMIDES MN, ALTENMÜLLER E

*Med Probl Perform Art* 2021, 36 (4): 269–278.  
<https://doi.org/10.21091/mppa.2021.4030>

**Abstract:** OBJECTIVE: Clinical conditions such as focal dystonia often require the assessment of atrophy and weakness of the finger muscles. However, due to a lack of well-established protocols, the current investigation focused on assessing the reliability of thickness and strength assessments of the flexor digitorum (FD) muscle,