



[Angle Orthod.](#) 2005 Jan;75(1):35-9.

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Modulation of masticatory muscle activity by tongue position.

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The purpose of this study was to test whether the tongue position affects the electromyographic (EMG) activities of masticatory muscles. We recorded the EMG activities of the masseter and anterior temporalis muscles in 10 skeletal Class I adults. Tongue position was monitored by two pressure transducers embedded in the midpalatal region and the lingual flange of a custom-made acrylic monoblock. We instructed subjects to assume three different tongue positions: rest, superior, and anterior. Friedman's test and Sheffe's F-test were used to statistically examine differences in muscle activities induced by changes in tongue position. Significant differences were found in masseter muscle activity between the rest and anterior positions and in anterior temporalis muscle activity between the rest and both the anterior and the superior tongue positions. We concluded that masticatory muscle activity is affected by tongue position.

PMID: 15747813 [PubMed - indexed for MEDLINE]