

# The effect of tooth clenching and grinding on anterior temporalis electromyographic activity in healthy subjects

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The aim of this study was to determine the effect of tooth clenching and grinding on anterior temporalis electromyographic (EMG) activity. The sample included 30 healthy subjects with natural dentition and bilateral molar support, 15 with bilateral canine guidance and 15 with bilateral group function. An inclusion criterion was that subjects have to be free of signs and symptoms of any dysfunction of the masticatory system. Bipolar surface electrodes were located on the left and right anterior temporalis muscles. EMG activity was recorded during the following conditions: A. eccentric grinding from intercuspal position to the right lateral edge-to-edge contact position; B. clenching in right edge-to-edge lateral contact position; and C. concentric grinding from right lateral edge-to-edge contact position to intercuspal position. On the working side, EMG activity was not significantly different between conditions in both occlusal schemes. On the nonworking side, EMG activity was significant