

論文名：Effect of volition on chewing and swallowing behaviors in healthy humans (健康者において咀嚼の意識化が摂食嚥下運動にもたらす影響)

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ここから記入

This study was aimed to analyze how the volition alters the chewing and swallowing behaviors. Twenty-one healthy volunteers were asked to perform the three tests. First, the participants were asked to take 8 g of steamed rice freely three times, and the average of number of chewing cycles (N) and chewing duration (T) until the first swallow was obtained. In the N limited test, the participants were asked to chew the food with counting the number of chewing cycles up to N by themselves, and swallow it. In the T limited test, they were instructed to chew the food for T sec and swallow it by a cue of experimenter. Electromyograms of masseter (Mas) and suprahyoid (Supra) muscles as well as videoendoscopic images were recorded. In the N limited test, chewing speed decreased, and Mas and chewing duration increased. In the T limited test while the chewing speed increased and Mas and Supra activities per cycle decreased, the number of cycles increased. It should also be noted that temporal changes in EMG activity were different among the tests. Occurrence frequency and time duration of stage II transport were smaller in the N and T limited tests than in the free chewing test. Whiteout time was longer in the T limited test than in the free chewing test. Our current results strongly suggest that volitional chewing changes not only chewing but also swallowing in a different way between with and without command of swallow.