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TONGUE FUNCTION AND MALOCCLUSION

Tongue-thrust and the stability of overjet correction

Mary V. Andrianopoulos and Marvin L. Hanson

This report examines the results of two studies. The first study investigates whether tongue thrusting habits are eliminated or reduced as a patient matures. The second study explores three questions: (1) Will orthodontic therapy alone eliminate tongue thrust in Class II patients? (2) Will correct tongue habits remain after a patient undergoes tongue therapy? (3) Will overjet relapse be reduced by tongue therapy?

The first study utilized 61 eighteen-year-old subjects who were part of a 14-year longitudinal study. An independent judgement of each subject's swallow was made by three experienced oral myofunctional therapists. Of the 61 subjects studied, 26 (42.6%) were diagnosed as tongue thrusters. Over the course of the study, the incidence of tongue thrust declined to 35% at age 8, increased slightly to 38% at age 12, and increased again to 42.6% at age 18.

However, many of those with a tongue thrust at age 8 no longer had one at age 18. Conversely, many patients without a tongue thrust earlier had acquired one by age 18. Interestingly, only 7 of the 61 subjects were normal swallowers at all ages. These results suggest that an orthodontist cannot reliably predict whether a patient will retain a tongue thrust or acquire one in the future.

The second study examined 17 subjects who had previously undergone therapy for tongue thrust and 17 subjects who had not. Their ages ranged from 18 to 30 years, with a mean of 22.4 years. All subjects had been classified as Class II, Division 1 prior to orthodontic treatment, and all had worn fixed appliances and retainers. An independent judgement of each subject's swallow and tongue habits was made by three orofacial myologists.

Overjet measurements were made from pretreatment, post-treatment and present dental casts.

Several statistically significant results were measured. A tongue thrust was found in 12 of the 17 non-therapy patients but only 3 of the 17 therapy patients. Tongue thrust therapy subjects were also found to have less overjet relapse than the non-therapy group, and mouth breathers were found to relapse to a greater extent than nose breathers.

The results of the second study suggest that tongue thrust therapy will help prevent overjet relapse after orthodontic treatment, and that patients who have undergone therapy will tend to maintain proper tongue function. But it also suggests that orthodontic treatment alone will not eliminate a tongue thrust. In fact, the retraction of incisors in overjet correction may limit tongue space and, possibly, lead to the activation of a latent tongue thrust.

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REFERENCES

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