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Original Articles

Masticatory Function and Maturation of the Jaw-Opening Reflex

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Abstract

Objective: To test the null hypothesis that alteration in masticatory function due to liquid-diet feeding during growth does not affect jaw-opening reflex (JOR) maturation.

Materials and Methods: Soon after weaning, 70 female Wistar rats were divided into two equal groups and fed either solid (control group) or liquid (experimental group) diets. At 5, 9, and 13 weeks, the rats were anesthetized and the JOR was recorded in the anterior belly of the digastric muscles as evoked by a low-intensity electrical stimulation of the left inferior alveolar nerve.

Results: There were similar tendencies at each recording age. Peak-to-peak amplitude of the JOR was significantly smaller, and the latency was significantly longer in the experimental group, although the duration was not significantly different between the two groups.

Conclusions: These data suggest that long-term masticatory functional change due to liquid-diet feeding during growth may impede the learning for JOR maturation, and thus may affect the masticatory performance in the adult.

Keywords: [Jaw-opening reflex](#), [Masticatory function](#), [Development](#), [Liquid diet](#)

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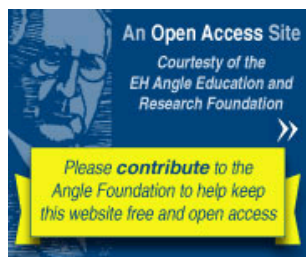
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