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Changes in lip pressure following extension and flexion of the head and at changed mode of breathing.

Hellsing E, L'Estrange P.

The changes in upper and lower resting lip pressures following extension and flexion of the head and at changed mode of breathing were studied in a sample of 15 adults with Class I molar relationship. The lip pressure was measured with bonded strain gauge transducers on the upper and lower central incisors. The transducers could be calibrated directly in the subject's mouth. The upper and lower lip pressures during natural head posture had a mean value of 3.91 g/cm2 and 8.58 g/cm,2 respectively. The mean values of the differences between pressures obtained during natural head posture and during 5 degrees, 10 degrees, and 20 degrees of extension showed a continuously, highly significant increase in pressure. During 5 degrees, 10 degrees, and 20 degrees of flexion, the upper lip pressure continuously decreased with highly significant values. Changes in the lower lip pressure during flexion were difficult to measure because of intense muscle activity. A significant decrease was shown for the difference in upper and lower lip pressures between nose breathing and mouth breathing, whereas there was a significant increase in pressure when the subject extended the head 5 degrees during mouth breathing.

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