Klin Wochenschr. 1987 Mar 16;65(6):274-80. Links

[Mechanisms of supralaryngeal airway obstruction in normal persons and habitual mouth breathers]

[Article in German]

Chowanetz W, **Schott J**, **Jany B**.

We examined oronasal flow partitioning in 27 volunteers with normal or slightly increased nasal resistance (mean +/- SD, 0.24 +/- 0.19 kPa/l/s). Mean percentage of inspiratory nasal flow contribution was measured during spontaneous oronasal breathing. The averaged nasal admixture of airflow differed considerably within and between all subjects (mean +/- SD, 20.9% +/- 16.5%; range 1%-70%), showing no correlation to nasal resistance. Five of 27 subjects with a history of habitual mouth breathing had a significantly lower nasal admixture as compared with controls (2.5% +/- 1.7% vs 25.1% +/- 15.4%; P less than 0.005), but with no statistical difference in nasal resistance. To evaluate the hypothesis that velopharyngeal narrowing is due to an increased tone of the soft palate, measurements were also performed under positive nasal pressure, inspiratory resistive loading at the mouth, and during breath-holding. There was no significant difference of airflow distribution between these modifications and unloaded breathing in either group. These data suggest, therefore, that oronasal flow distribution is due to active positioning of the soft palate, and that habitual mouth breathing without any nasal obstruction may be associated with closure of the velopharyngeal isthmus as a consequence of disturbed neural control mechanisms.

PMID: 3586570 [PubMed - indexed for MEDLINE]