


[Am J Orthod Dentofacial Orthop.](#) 1997 Jan;111(1):38-43.  [Links](#)

## **Influences of nasal respiratory obstruction on craniofacial growth in young *Macaca fuscata* monkeys.**

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This study was conducted to investigate the influences of artificial nasal respiratory obstruction on craniofacial growth in young *Macaca fuscata* monkeys. Eleven monkeys were used; seven monkeys served as the experimental animals and the remaining four as the control animals. Further, the experimental animals were divided into light and heavy obstruction groups. Nasal respiratory obstruction was created by injecting dental impression material into the nasopharyngeal region. Nasal respiratory function was evaluated in terms of nasal airway resistance. Craniofacial structure in the experimental monkeys was compared with the control animals by means of cephalometric analysis. Nasopharyngeal respiratory obstruction was associated with downward and backward rotation of the mandible, upward and backward growth of the condyle, divergent gonial angle, anterior open bite, and spaced dental arch in the lower anterior region. These changes were significantly greater in the experimental monkeys with heavy respiratory obstruction. The current findings support the hypothesis that nasal obstruction existing before and during pubertal growth may result in permanent craniofacial deformities pertinent to skeletal open bite.

PMID: 9009922 [PubMed - indexed for MEDLINE]