

[Pediatr Clin North Am.](#) 1989 Dec;36(6):1423-34.[Links](#)

## **The relationship between nasal obstruction and craniofacial growth.**

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The relationship between nasal obstruction and craniofacial growth is unclear. The literature indicates that upper-airway compromise produces chronic mouth breathing, especially in the dolichocephalic (narrow-faced) child. It has been shown that a greater tendency exists toward the skeletal pattern associated with long face syndrome in dolichocephalic head types. Therefore, it becomes difficult to assess whether the long face syndrome is a cause or an effect of increased nasal airway resistance. Nevertheless, animal studies have demonstrated the development of typical craniofacial anomalies in experimentally induced nasal obstruction. Some of these changes are also noted to be reversed by removing the nasal obstruction. Although much of the concern for nasal obstruction and abnormal dentofacial growth has centered around adenotonsillar hypertrophy, other causes for nasal obstruction should be sought. Allergic rhinitis and choanal atresia also should be considered. Longitudinal data are lacking to support conclusively abnormal dentofacial growth as an indication for surgical intervention. Available literature would suggest, however, that relief of nasal obstruction should be attempted in an effort to establish a patent airway and decrease the possibility of abnormal craniofacial development. The more information we gain about nasal obstruction and abnormal dentofacial development, the greater our diagnostic ability becomes. We can now incorporate information from a thorough nasal-oral examination with rhinomanometry and cephalometrics to provide a rational treatment plan for these children. Future directions should investigate genetic influences on craniofacial morphology and growth.

PMID: 2587086 [PubMed - indexed for MEDLINE]