

[Aust Paediatr J.](#) 1986;22 Suppl 1:59-61. [Links](#)

## **Nasal obstruction in infancy.**

### **Harding R.**

It is stated frequently that human infants during the first 6-12 postnatal months can breathe only through their noses, except when crying. It has been proposed that there are anatomical reasons for the apparent inability to switch to oral breathing when the nasal airway is occluded, namely the relatively high position of the larynx and base of the tongue and the presence of a velolingual sphincter. Others, however, consider that immaturity of the central nervous system may be responsible. Partial obstruction of the nasal airway triggers reflexes which increase both the strength of subsequent inspiratory efforts and the degree of inspiratory activity in muscles involved in maintaining the patency of the upper airway (e.g., genioglossus and laryngeal abductors). Receptors in the larynx and pharynx which sense pressure reductions have been shown recently to be involved in regulating the activities of these upper airway muscles. When the nasal airway is obstructed to the point where ventilation cannot be maintained (or when it is totally occluded) the appropriate response is to switch to oral breathing. This response to nasal occlusion, usually accompanied by arousal, has been reported recently in some sleeping human infants. Preliminary observations in awake lambs show that total occlusion of the nasal airway leads to a switch to oral breathing only after considerable hypoxaemia has developed. After a few breaths, which restore the blood gas status, the mouth closes until the animal becomes hypoxaemic again. The maturational time-course and mechanisms underlying the infantile response to prolonged nasal obstruction, including the influence of sleep-states, clearly require further investigation, through necessity, in experimental animals.

PMID: 3539080 [PubMed - indexed for MEDLINE]