

# Breast-feeding: Its preventive effect over malocclusions and breath-disorders during sleeping- An updated mini-review

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The growth of craniofacial structures is influenced by functional stimulates such as suction, chewing, and breathing [1]. Malocclusions are a group of multifactorial disorders that can cause deformity or lack of functionality depending of the severity of the occlusal disorder [2].

World Health Organization describes malocclusions as the third most important problem related to oral health, after caries and periodontal disease. Etiology is multifactorial: genetics, ethnicity and environmental factors have to be taken into account [3,4]. Previous studies assess a direct relation between malocclusions in primary dentition and de pattern of feeding of the children [1].

Recent studies show malocclusions as a disorder that could be prevented by breast-feeding: the act of suction is different in children that carry out breast-feeding that those who are fed with feeding-bottle.

Children that are breast-fed present higher facial muscular activity which promotes a more adequate craniofacial growth and an adequate development of the mandible. The movements of tongue and lips during breast-feeding oblige the baby to carry out a compression to extract milk; however, in case of feeding bottle, the movement is more passive, so there is a higher probability to develop a malocclusion. Moreover, the teat of the feeding bottle is usually composed of a non-flexible material, and in consequence it can make pressure at intraoral level and provoke misalignment and inadequate transversal growth of the hard palate. Moreover, there is a direct effect related with the duration of the breast-feeding. In this sense, Chen et al. carried out a study with 734 children from 3 to 6 years old; the authors observed higher prevalence of posterior crossbite in children that have been breast-fed during a period inferior to 6 months.

Agarwal et al. analyzed 415 children; 158 of them have been breast-fed during a period inferior to 6 months (group 1) while the remaining 257 children were breast-fed during more than 6 months (group 2) [5]. Authors obtained statistically significant

differences in relation to posterior crossbite for group1. Moreover, transversal measurements of arches were significantly minors in group 1, specially in upper maxilla.

Malocclusions often appear concomitant to breathing disorders during sleep that will cause a negative impact on the physical and mental development of the children. Signs and symptoms go from oral breathing and adenoid fascies to snoring, apnea, difficulty to concentrate or irritability among others [2,3]. A compressed maxilla, provoked by a lack of breast-feeding will promote the aparition of breathing disorders during sleep. Orthodontic treatments such as rapid maxillary expansion have demonstrated to be successful; however, they are not focused on prevention [4].

Recent studies suggest that exclusive breast-feeding has a multilevel protection effect (Huynh et al). Moreover, children that receive breast-feeding for periods equal or longer than 6 months have 60% less probability of developing a malocclusion.

According to the recent literature, we can conclude the following ideas:

- Malocclusions are more often in children that are not breast-fed.
- Exclusive breast-feeding has a positive impact; it favors the growing of craniofacial complex and reduces the risk of developing malocclusions in primary dentition.
- Prolonged breast-feeding is a protective and preventive factor, reducing the risk of developing malocclusions in primary dentition.

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