

# Craneocervical analysis in subjects with oral and nasal breathing [Análisis craneocervical en sujetos con respiración oral y nasal]

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The influence of respiratory function on the development of orofacial structures and craniocervical posture has been widely discussed. The objective of the study was to compare cephalometric values of the craniocervical and hyoid region in subjects with nasal and oral respiration. Subjects between 18 and 27 years of age, of both sexes, were included, where 20 presented oral breathing diagnosis and 20 did not present this alteration; using lateral telerradiography of the head and neck, craniocervical cephalometric analysis was performed of Rocabado and Penning technique was applied, obtaining craniocervical and hyoid measurements, anterior nasopharyngeal dimension and cervical curvature. For the statistical analysis we used the Shapiro-Wilk normality test and the T test for independent samples, considering a value of  $p < 0.05$  to obtain significant differences; in those parameters where no normal distribution was presented, the Mann-Whitney U test was applied. No significant differences were found between the study groups and the cephalometric values-analyzed, except for the distance between the base of the occipital bone and the posterior arch of the atlas ( $p=0.03$ ). There are limited cephalometric differences between subjects with oral breathing and nasal breathing, with no association of the nasopharyngeal air space with the breathing modalities studied. Conditions of facial or mandibular morphology should be considered in order to determine more adequately the influence of cephalometric parameters in the diagnosis of the respiratory mode in future studies. © 2019, Universidad de la Frontera. All rights reserved.

Breathing

Cephalometry

Hyoid bone

Nasal obstruction

Posture