



Dental arch diameters and relationships to oral habits.

[Aznar T](#), [Galán AF](#), [Marín I](#), [Domínguez A](#)

School of Dentistry, University of Seville, 41004 Seville, Spain.

The objective was to analyze variations in dental arch width in relation to oral habits. Maxillary and mandibular intercanine and intermolar distance were determined in relation to certain oral habits in 1297 children (ages 3 to 6 years). After an oral examination, the parents of each child completed a questionnaire about oral habits, including the use of a dummy or a bottle (or both), finger sucking, mouth breathing, breast- or bottle-feeding, and duration of these habits. Data were subjected to statistical analysis by the chi-square test for qualitative variables and analysis of variance for quantitative variables with homogeneous variances. Statistical significance was $P < .05$. In general, the maxillary arch was larger than the mandibular arch with regard to both the intercanine and the intermolar distances and more significantly so in boys. In relation to age, a significant increase was found only for the mandibular intercanine distance ($P = .001$). When arch width was analyzed in relation to various oral habits, the maxillary intercanine distance was less in children who used a dummy, especially one of a round design ($P = .003$). The maxillary intercanine distance was also less in children who breathed through their mouth ($P = .002$). In most cases, dummy use and mouth breathing were associated with a reduction in the intercanine distance in the maxillary arch. A dummy habit leads to a reduction in maxillary arch width, and mouth breathing causes a reduction in the size of both arches.

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