

# The relationship between intercanthal dimension and the widths of maxillary anterior teeth

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**Statement of problem.** One of the difficult aspects of complete denture prosthodontics is the selection of appropriately sized maxillary anterior teeth. Many attempts have been made to establish methods of estimating the combined width of maxillary anterior teeth and/or central incisors.

**Purpose.** The aim of this investigation was to determine whether a relationship exists between the intercanthal dimension and 4 mesiodistal width combinations of the maxillary anterior teeth.

**Material and methods.** The maxillary anterior teeth of 443 adult subjects were examined.

Intercanthal distance was measured between the median angles of the palpebral fissure. The mean widths of the 2 central incisors, the combined widths of the central incisors, the combined width of the 4 incisors, and the combined width of the 6 anterior teeth were determined intraorally at their widest dimension. Pearson correlation coefficients were calculated to determine the relationship between intercanthal distance and the 4 measurements of maxillary anterior teeth ( $\alpha=.05$ ).

**Results.** Although the Pearson correlation coefficients were relatively small, a significant relationship existed between intercanthal dimension and the 4 maxillary teeth dimensions ( $P<.0001$ ). It was found that biometric ratios of 1:0.267 and 1:1.426 could be used to estimate the central incisor width and the combined widths of the 6 anterior teeth, respectively.

**Conclusion.** Within the limitations of this study, the results suggest that intercanthal distance can be used as a preliminary method for determining the width of the maxillary anterior teeth for edentulous patients. (J Prosthet Dent 2001;86:608-12.)