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## Arch length changes from 6 weeks to 45 years

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### ABSTRACT

The purpose of this study was to evaluate, on a longitudinal basis, changes in maxillary and mandibular arch length over a 45-year period. Subjects were drawn from two pools of normal individuals. Twenty-eight male and 33 female infants were evaluated longitudinally at 6 weeks, 1 year, and 2 years (before the eruption of the deciduous dentition). Fifteen males and 15 females from the Iowa Facial Growth Study were evaluated at 3, 5, 8, 13, 26, and 45 years. Arch length measurements were obtained independently by two investigators. Intra- and interexaminer reliabilities were predetermined at 0.25 and 0.5 mm, respectively. The greatest incremental increases occurred during the first two years of life. Arch length continued to increase until 13 years in the maxillary arch, and until 8 in the mandibular. Then significant and consistent decreases occurred in both arches mesial to the permanent first molars.

**KEY WORDS:** Arch length, Longitudinal, Normal.

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