

# Clinical performance of complete dentures: a retrospective study.

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## Abstract

**Purpose:** Denture survival, or the time between the date of a denture's insertion and the date of its renewal for any clinical reason, was assessed in this retrospective study on 353 complete dentures. The procedures required to prolong the useful time of the study sample—relines, repair of denture base fractures, or replacement of lost artificial teeth—were also evaluated. **Materials and Methods:** All dentures were examined by the authors and were constructed according to a standardized protocol by full-time staff members of the Department of Prosthodontics, Regensburg University Medical Center, between 1984 and 2009. Two subgroups were assigned: 94 patients had one complete denture in each arch (group 1), while 165 patients had one complete denture in either the mandible or the maxilla (group 2). **Results:** In group 1, the median (75th, 90th percentile) survival time of dentures was 15.8 years in the mandible (15.7, 7.0; 95% confidence interval [CI]: 15.5 to 16.1) and 19.4 years in the maxilla (15.8, 8.7; 95% CI: 14.0 to 24.7). Reline procedures were required most frequently in the maxilla, while 5-year event-free rates were 69.7% for the maxilla and 80.5% for the mandible. Denture base fractures were reported in 5.8% of patients in group 1 and tended to occur more frequently (median: 15.2%) if patients had only one denture (group 2, n = 25 [maxilla: n = 23, mandible: n = 2]). Loss of artificial teeth was a rare complication and found in only 5.8% of patients in group 1 and 10.9% of patients in group 2. During the first 5 years of service, more than 95% of patients in group 1 and 90% of patients in group 2 were "event free" with regard to loss of artificial teeth. **Conclusions:** Long-term functional service of complete dentures requires a high number of maintenance procedures, and there is a greater need for interventions in patients wearing only one complete denture (group 2). *Int J Prosthodont* 2010;23:410-417.

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