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**Noteworthy Abstracts
of the
Current Literature****Complications of dental implants: identification, frequency, and associated risk factors**

McDermott NE, Chuang SK, Woo VV, Dodson TB. *Int J Oral Maxillofac Implants* 2003;18:848-55.

Purpose. This study sought to identify the types, frequencies, and risk factors associated with complications following placement of dental implants. It was hypothesized that one or more factors could be identified that are associated with an increased risk for complications and may be modified by the clinician to enhance outcome.

Materials and Methods. A retrospective cohort study design was used that included patients who received Bicon implants (Bicon, Boston, MA) between 1992 and 2000. Predictor variables were grouped into demographic, medical history, implant-specific, anatomic, prosthetic, and reconstructive categories. Complications were grouped into inflammatory, prosthetic, operative, and major or minor categories. Cox proportional hazards regression models were developed to identify risk factors for complications.

Results. The sample was composed of 677 patients. The overall frequency of implant complications was 13.9% (10.2% inflammatory, 2.7% prosthetic, 1.0% operative), of which 53% were minor. The multivariate Cox model revealed that smoking, use of 1-stage implants, and reconstructive procedures were statistically associated with an increased risk for overall complications ($P < .05$). The median duration of follow-up was 13.1 months (range 0 to 85.6 months).

Discussion. A lower frequency of complications was found compared to mean frequencies calculated from past reports. Investigations examining the influence of smoking and reconstructive procedures on implant complications are recommended.

Conclusion. Of the 3 factors associated with an increased risk for complications, tobacco use and implant staging may be modified by the clinician to enhance outcome.—*Reprinted with permission of Quintessence Publishing.*