

## Biologic width and morphologic characteristics of soft tissues around immediately loaded implants: studies performed on human autopsy specimens.

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### Abstract

**BACKGROUND:** Esthetics and the health of oral implants are based upon the soft tissue reaction and biologic width (BW).

**METHODS:** Twelve dental implants were placed in the maxilla and mandible of a patient who smoked. Permanent standard abutments and temporary restorations were immediately fixed in place during the surgery stage. The definitive restorations were placed 4 months after loading without removal of the original abutments. After 10 months, the patient died, and the implants were removed en block and processed for histology.

**RESULTS:** The BW in the maxilla was 6.5 +/- 2.5 mm, whereas in the mandible, it was 4.8 +/- 1.3 mm (P = 0.017). The sulcular epithelium (SE) in the maxilla was 2.7 +/- 0.8 mm, whereas in the mandible, it was 1.7 +/- 0.4 mm (P <0.001). The junctional epithelium (JE) in the maxilla was 1.3 +/- 0.4 mm, whereas in the mandible, it was 1.5 +/- 0.5 mm (P = 0.164). The connective tissue (CT) in the maxilla was 2.5 +/- 1.3 mm, whereas in the mandible, it was 1.6 +/- 0.4 mm (P = 0.006). In the maxillary bone, the BW, SE, and CT were significantly longer than in the mandible, whereas for the JE, no statistically significant difference was observed.

**CONCLUSION:** The soft tissue organization around dental implants was different for upper and lower jawbones.

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