

A retrospective study with two to six years of follow-up

# Immediate loading of extra-short implants (6.5 mm in length)

EDUARDO ANITUA MD, PHD, DDS

## Literature

1. Lefkove MD, Beals RP. Immediate loading of cylinder implants with overdentures in the mandibular symphysis: the titanium plasma-sprayed screw technique. *J Oral Implantol.* 1990;16(4):265–271.
2. Hruska AR, Borelli P. Intra-oral welding of implants for an immediate load with overdentures. *J Oral Implantol.* 1993;19(1):34–38.
3. Rosenlicht JL. Advanced surgical techniques in implant dentistry: contemporary applications of early techniques. *J Dent Symp.* 1993;1:16–19.
4. Sanz-Sánchez I, Sanz-Martín I, Figuero E, Sanz M. Clinical efficacy of immediate implant loading protocols compared to conventional loading depending on the type of the restoration: a systematic review. *Clin Oral Implants Res.* 2015;26(8):964–982.
5. Aparicio C, Rangert B, Sennerby L. Immediate/early loading of dental implants: a report from the Sociedad Española de Implantes World Congress consensus meeting in Barcelona, Spain, 2002. *Clin Implant Dent Relat Res.* 2003;5(1):57–60. doi:10.1111/j.1708-8208.2003.tb00183.x
6. Esposito M, Grusovin MG, Willings M, Coulthard P, Worthington HV. The effectiveness of immediate, early, and conventional loading of dental implants: a Cochrane systematic review of randomized controlled clinical trials. *Int J Oral Maxillofac Implants.* 2007;22(6):893–904.
7. Borges AF, Dias Pereira LA, Thomé G, Melo AC, de Mattias Sartori IA. Prostheses removal for suture removal after immediate load: success of implants. *Clin Implant Dent Relat Res.* 2010;12(3):244–248. doi:10.1111/j.1708-8208.2009.00157.x
8. Esposito M, Grusovin MG, Willings M, Coulthard P, Worthington HV. The effectiveness of immediate, early, and conventional loading of dental implants: a Cochrane systematic review of randomized controlled clinical trials. *Int J Oral Maxillofac Implants.* 2007;22(6):893–904.
9. Su M, Shi B, Zhu Y, et al. Comparison of implant success rates with different loading protocols: a meta-analysis. *Int J Oral Maxillofac Implants.* 2014;29(2):344–352.
10. Benic GI, Mir-Mari J, Hämmerle CH. Loading protocols for single-implant crowns: a systematic review and meta-analysis. *Int J Oral Maxillofac Implants.* 2014;29 Suppl:222–238.
11. Huynh-Ba G, Oates TW, Williams MAH. Immediate loading vs. early/conventional loading of immediately placed implants in partially edentulous patients from the patients' perspective: A systematic review. *Clin Oral Implants Res.* 2018;29 Suppl 16:255–269.
12. Anitua E. Immediate Loading of Short Implants in Posterior Maxillae: Case Series. *Acta Stomatol Croat.* 2017;51:157-162
13. Anitua E, Flores J, Flores C, Alkhraisat MH. Long-term Outcomes of Immediate Loading of Short Implants: A Controlled Retrospective Cohort Study. *Int J Oral Maxillofac Implants.* 2016;31:1360-1366.
14. Alvira-González J, Díaz-Campos E, Sánchez-Garcés MA, Gay-Escoda C. Survival of immediately versus delayed loaded short implants: A prospective case series study. *Med Oral Patol Oral Cir Bucal.* 2015;20:e480-8.
15. Maló P, de Araújo Nobre MA, Lopes AV, Rodrigues R. Immediate loading short implants inserted on low bone quantity for the rehabilitation of the edentulous maxilla using an All-on-4 design. *J Oral Rehabil.* 2015;42:615-23.
16. Rossi F, Lang NP, Ricci E, Ferraioli L, Marchetti C, Botticelli D. Early loading of 6-mm-short implants with a moderately rough surface supporting single crowns--a prospective 5-year cohort study. *Clin Oral Implants Res.* 2015;26:471-477.
17. Cannizzaro G, Leone M, Torchio C, Viola P, Esposito M. Immediate versus early loading of 7-mm-long flapless-placed single implants: a split-mouth randomized controlled clinical trial. *Eur J Oral Implantol.* 2008;1:277-92.
18. Degidi M, Piattelli A, Iezzi G, Carinci F. Immediately loaded short implants: analysis of a case series of 133 implants. *Quintessence Int.* 2007;38:193-201.

19. Anitua E, Flores C, Flores J, Alkhraisat MH. Clinical Effectiveness of 6.5-mm-Long Implants to Support Two-Implant Fixed Protheses in Premolar-Molar Region: The Influence of Immediate Loading and the Length of Splinting Implant. *J Prosthodont*. 2019;28:e688-e693.
20. Cannizzaro G, Felice P, Leone M, Ferri V, Viola P, Esposito M. Immediate versus early loading of 6.5 mm-long flapless-placed single implants: a 4-year after loading report of a split-mouth randomized controlled trial. *Eur J Oral Implantol*. 2012;5(2):111–121.
21. Anitua E, Tapia R, Luzuriaga F, Orive G. Influence of implant length, diameter, and geometry on stress distribution: a finite element analysis. *Int J Periodontics Restorative Dent* 2010; 30: 89-95.
22. Pierrisnard L, Renouard F, Renault P, Barquins M. Influence of implant length and bicortical anchorage on implant stress distribution. *Clin Implant Dent Relat Res* 2003; 5: 254-262.
23. Gapski R, Wang HL, Mascarenhas P, Lang NP. Critical review of immediate implant loading. *Clin Oral Implants Res* 2003; 14: 515-527.
24. Barewal RM, Stanford C, Weesner TC. A randomized controlled clinical trial comparing the effects of three loading protocols on dental implant stability. *Int J Oral Maxillofac Implants* 2012; 27: 945-956.