

# Panoramica della letteratura scientifica sui ponti in composito (ponti ibridi)

Stato: 01.3.2023

1. Akca K, Cehreli MC. Two-year prospective follow-up of im-plant/tooth-supported versus freestanding implant-sup-ported fixed partial dentures. *Int J Periodont Rest Dent* 2008; 28: 593–599
2. Assif D, Marshak B, Schmidt A. Accuracy of implant impression techniques. *Int J Oral Maxillofac Implants* 11 (1996) 216-222
3. Augthun M. Langzeitbewahrung von Verbundbrücken. *Implantologie* 16 3 (2008) 251-260 3) Fröhlich M: Sind Suprakonstruktionen, die Implantate mit natürlichen Zähnen verbinden, sicher und kostensparend? *ZBS* 12 12 (2001) 26-28
4. Beuer F, Sachs C, Groesser J, Gueth JF, Stimmelmayer M. Tooth-implant-supported posterior fixed dental prostheses with zirconia frameworks: 3-year clinical result. *Clin Oral Investig* 2016; 20: 1079–1086
5. Block MS, Lirette D, Gardiner D et al. Prospective evaluation of implants connected to teeth. *Int J Oral Maxillofac Implants* 2002; 17: 473–487
6. Block MS, Lirette D, Gardiner D, Li L, Finger IM, Hochstedler J, Evans G, Kent JN, Misiak DJ, Mendez AJ, Guerra L, Larsen H, Wood W, Worthington P. Prospective Evaluation of Implants Connected to Teeth. *Int J Oral Maxillofac Implants* 2002; 17(4): 473–487
7. Block MS, Lirette D, Gardiner D, Li L, Finger IM, Hochstedler J, Evans G, Kent JN, Misiak DJ, Mendez AJ, Guerra L, Larsen H, Wood W, Worthington P. Prospective evaluation of implants connected to teeth. *Int J Oral Maxillofac Implants* 2002; 17: 473–487
8. Bragger U, Aeschlimann S, Burgin W et al. Biological and tech-nical complications and failures with fixed partial dentures (FPD) on implants and teeth after four to five years of func-tion. *Clin Oral Implants Res* 2001; 12: 26–34
9. Bragger U, Aeschlimann S, Burgin W, Hammerle CH, Lang NP: Biological and technical complications and failures with fixed partial dentures (FPD) on implants and teeth after four to five years of function. *Clin Oral Implants Res* 2001; 12: 26–34
10. Brägger U, Aeschlimann S, Bürgin W, Hämmerle CH, Lang NP. Biological and Technical Complications and Failures with Fixed Partial Dentures on Implants and Teeth after Four to Five Years of Function. *Clin Oral Implants Res* 2001; 12(1): 26–34
11. Bragger U, Hirt-Steiner S, Schnell N et al. Complication and failure rates of fixed dental prostheses in patients treated for periodontal disease. *Clin Oral Implants Res* 2011; 22: 70–77. doi:10.1111/j.1600-0501.2010.02095.x
12. Bragger U, Karoussis I, Persson R et al. Technical and biological complications/failures with single crowns and fixed partial dentures on implants: a 10-year prospective cohort study. *Clin Oral Implants Res* 2005; 16: 326–334. doi:10.1111/j.1600-0501.2005.01105.x
13. Bragger U, Karoussis I, Persson R, Pjetursson B, Salvi G, Lang N. Technical and biological complications/failures with single crowns and fixed partial dentures on implants: a 10-year prospective cohort study. *Clin Oral Implants Res* 2005; 16: 326–334
14. Brunski JB. Biomechanics of Oral Implants: Future Research Directions. *J Dent Educ* 1988; 52: 775–787
15. Chee WW, Cho GC. A Rationale for not Connecting Implants to Natural Teeth. *J Prosthodont* 1997; 6(1): 7–10
16. Chee WW, Mordohai N. Tooth-to-implant connection: a systematic review of the literature and a case report utilizing a new connection design. *Clin Implant Dent Relat Res* 2010; 12(2):122-33
17. Cordaro L, Ercoli C, Rossini C, Torsello F, Feng C. Retrospective evaluation of complete-arch fixed partial dentures connecting teeth and implant abutments in patients with normal and reduced periodontal support. *J Prosthet Dent*. 2005 Oct;94(4):313-20. doi: 10.1016/j.prosdent.2005.08.007.
18. Drolshagen M, Keilig L, Hasan I, Reimann S, Deschner J, Brinkmann KT, Krause R, Favino M, Bourauel C. Development of a novel intraoral measurement device to determine the biomechanical characteristics of the human periodontal ligament. *J Biomech*. 2011 Jul 28;44(11):2136-43.
19. Fugazzotto PA, Kirsch A, Ackermann KL et al. Implant/tooth-connected restorations utilizing screw-fixed attachments: a survey of 3,096 sites in function for 3 to 14 years. *Int J Oral Maxillofac Implants* 1999; 14: 819–823
20. Garcia LT, Oesterle LJ. Natural Tooth Intrusion Phenomenon with Implants: a Survey. *Int J Oral Maxillofac Implants* 1998; 13(2): 227–231

21. Geis-Gerstorfer, J. Lukas. Galvanische Korrosion bei der Verbindung von Ti-Implantaten und Ni-Cr Suprakonstruktionen–In-vitro-Massenverlustbestimmung aus der Kontaktstromdichte. D. Z. Zahnärztl. Implantol. IV. 200-203 (1988)
22. Gunne J, Astrand P, Lindh T et al. Tooth-implant and implant supported fixed partial dentures: a 10-year report. *Int J Prosthodont* 1999; 12: 216–221
23. Gunne J, Astrand P, Lindh T, Borg K, Olsson M. Tooth-implant and implant supported fixed partial dentures: a 10-year report. *Int J Prosthodont* 1999; 12: 216–221
24. Heinemann F, Mundt T, Biffar R. Retrospective evaluation of temporary cemented, tooth and implant supported fixed partial dentures. *J Cran Max Fac Surg* 2006; 34 (Suppl. 2): 86–90. doi:10.1016/s1010-5182(06)60019-x
25. Heners M. Experimentelle Untersuchungen über den Mechanismus der physiologischen Zahnbeweglichkeit. Med. Diss. 1970, Freiburg
26. Hofmann M. Zahnbeweglichkeit–Bestimmung und Analyse. *Dtsch. Zahnärztl Z* 1963; 18: 924
27. Hosny M, Duyck J, van Steenberghe D, Naert I. Within-subject Comparison Between Connected and Nonconnected Tooth-to-implant Fixed Partial Prostheses: up to 14-Year Follow-up Study. *Int J Prosthodont* 2000; 13(4): 340–346
28. Jacobs R, van Steenberghe D: Comparison between implant-supported prostheses and teeth regarding passive threshold level. *Int J Oral Maxillofac Implants* 8 (1993) 549-554
29. Keller W, Bragger U, Mombelli A. Peri-implant microflora of implants with cemented and screw retained suprastructures. *Clin Oral Implants Res* 1998; 9: 209–2017
30. Körber KH. Electronic Registration of Tooth Movements. *Int Dent J* 1969; 21: 466
31. Koth DL, McKinney RV, Steflik DE, Davis QB. Clinical and statistical analyses of human clinical trials with the single crystal aluminum oxide endosteal dental implant: five-year results. *J Prosthet Dent* 1988; 60: 226–234
32. Lang NP, Pjetursson BE, Tan K et al. A systematic review of the survival and complication rates of fixed partial dentures (FPDs) after an observation period of at least 5 years. II. Combined tooth-implant-supported FPDs. *Clin Oral Implants Res* 2004; 15: 643–653. doi:10.1111/j.1600-0501.2004.01118
33. Lindh T: Should we extract teeth to avoid tooth-implant combinations? *Journal of Oral Rehabilitation* 35, 44–54 (2008).
34. Mamalis A, Markopoulou K, Kaloumenos K et al. Splinting os-seointegrated implants and natural teeth in partially edentulous patients: a systematic review of the literature. *J Oral Im-plantol* 2012; 38: 424–434. doi:10.1563/aaid-joi-d-10-00099
35. Muddugangadhar BC, Amarnath GS, Sonika R et al. Meta-analysis of Failure and Survival Rate of Implant-supported Single Crowns, Fixed Partial Denture, and Implant Tooth-supported Prostheses. *J Int Oral Health* 2015; 7: 11–17
36. Mühlemann HR, Rateitschak KH. Mechanische und elektrische Zahnbeweglichkeitsmessungen. *Dtsch. Zahnärztl Z* 1963; 18: 1353 3
37. Mühlemann HR: 10 years of tooth-mobility measurements. *J Periodontol* 31 (1960) 110-122 8) Rangert B, Gunne J, Sullivan DY: Mechanical aspects of a Brånemark implant connected to a natural tooth: an in vitro study. *Int J Oral Maxillofac Implants* 6 2 (1991) 177-186
38. Mühlemann HR. Ten Years of Tooth-Mobility Measurements. *J Periodontol* 1960; 31: 110
39. Mundt T, Heinemann F, Schwahn C, Biffar R. Retrievable, tooth-implant-supported, complete-arch fixed restorations in the maxilla: a 6-year retrospective study. *Biomed Tech (Berl)* 2012; 57: 39–43
40. Naert IE, Duyck JA, Hosny MM et al. Freestanding and tooth-implant connected prostheses in the treatment of partially edentulous patients. Part I: An up to 15-years clinical evaluation. *Clin Oral Implants Res* 2001; 12: 237–244
41. Naert IE, Duyck JA, Hosny MM, Van Steenberghe D. Free-standing and Tooth-implant Connected Prostheses in the Treatment of Partially Edentulous Patients. Part I: An up to 15 Years Clinical Evaluation. *Clin Oral Implants Res* 2001; 12(3): 237–244
42. Ney T. Die vertikale Beweglichkeit des Tübinger Implantates im Vergleich zum natürlichen Zahn. *Z Zahnärztl Implantol* 1986; 2:17–25
43. Nickenig HJ, Schafer C, Spiekermann H. Survival and complication rates of combined tooth-implant-supported fixed partial dentures. *Clin Oral Implants Res* 2006; 17: 506–11
44. Nickenig HJ, Spiekermann H, Wichmann M, Andreas SK, Eitner S. Survival and complication rates of combined tooth-implant-supported fixed and removable partial dentures. *Int J Prosthodont* 2008; 21: 131–137
45. Nicking HJ, Schäfer C, Spiekermann H. Survival and complication rates of combined tooth-implant-supported fixed partial dentures. *Clin. Oral Impl. Res.* 17, 2006; 506 - 511
46. Paesani, DA. *Bruxism–Theory and Practice* 1st edition 2010. Quintessenz Verlags-GmbH
47. Papadopoulou K, Keilig L, Eliades T, Krause R, Jäger A, Bourauel C. The time-dependent biomechanical behaviour of the periodontal ligament—an in vitro experimental study in minipig mandibular two-rooted premolars. *Eur J Orthod.* 2011 Nov 22.

48. Parfitt GJ. Measurement of the Physiological Mobility of Individual Teeth in Axial Direction. *J Dent Res* 1960; 39: 608-4
49. Pesun IJ. Intrusion of Teeth in the Combination Implant-to-Natural-tooth Fixed Partial Denture: a Review of the Theories. *J Prosthodont* 1997; 6(4): 268–277
50. Picton DCA. The Effect on Normal Vertical Tooth Mobility of the Rate of Thrust and Time Interval between Thrusts. *Arch Oral Biol* 1963; 8: 291
51. Pieralli S, Kohal RJ, Rabel K, von Stein-Lausnitz M, Vach K, Spies BC. Clinical outcomes of partial and full-arch all-ceramic implant-supported fixed dental prostheses. A systematic review and meta-analysis. *Clin Oral Implants Res* 2018; 29 Suppl 18: 224–236
52. Pjetrusson BE, Brägger U, Lang NP, Zwahlen M. Comparison of survival and complication rates of tooth-supported fixed dental prostheses (FDPs) and implant-supported FDPs and single crowns (SCs). *Clin. Oral Impl. Res.* 18 (Suppl. 3), 2007; 97 - 113
53. Pjetrusson BE, Tan K, Lang NP et al. A systematic review of the survival and complication rates of fixed partial dentures (FPDs) after an observation period of at least 5 years. *Clin Oral Impl Res* 2004; 15: 625–642. doi:10.1111/j.1600-0501.2004.01117.x
54. Richter EJ, Weigl P, Gomez-Roman G. Empfehlungen der DGI–Verbundbrücken. DGI, Würzburg, 2003
55. Richter EJ. Basic biomechanics of dental implants in prosthetic dentistry. *J Prosth Dent* 1989; 61: 602–609
56. Richter EJ. Die Verbundbrücke zwischen Zahn und Implantat: Ergebnisse experimenteller und klinischer Untersuchungen. Med. Habil. 1992, Aachen
57. Richter EJ. Die Verbundbrücke zwischen Zahn und Implantat: Ergebnisse experimenteller und klinischer Untersuchungen [Med. Habil.]. Aachen: RWTH Aachen; 1992
58. Sheets CG, Earthmann JC. Natural Tooth Intrusion and Re-versal in Implant-assisted Prosthesis: Evidence of and a Hypothesis for the Occurrence. *J Prosthet Dent* 1993; 70: 513–520
59. Siewert B, Parra M. Eine neue Werkstoffklasse in der Zahnmedizin. PEEK als Gerüstmaterial bei 12 gliedrigen implantatgetragenen Brücken. *Z Zahnärztl Implantol* 2013;29:148–159.
60. Siewert B, Rieger H. Ein „neues“ Gerüstmaterial für die metallfreie prothetische Therapie. *Quintessenz Zahntech* 2013;39(10):2–11
61. Siewert B: Polyetheretherketon (PEEK)—ein neuartiger Werkstoff für die Gerüstherstellung, Teil 1. *Zahntech Mag* 17, 7/8, 460–465 (2013)
62. Siewert B: Polyetheretherketon (PEEK)—ein neuartiger Werkstoff für die Gerüstherstellung, Teil 2. *Zahntech Mag* 17, 9, 226 ff. (2013)
63. Spiekermann H, Nickenig HJ. Kontroverse Fragen zur Implantatprothetik (Teil I). *Zahnärztl Impl* 2006; 22: 22–28
64. Spiekermann H, Nickenig HJ. Kontroverse Fragen zur Implantatprothetik (Teil I) Verbindung von Zähnen und Implantaten—die primäre und sekundäre Verblockung. *Z Zahnärztl Implantol* 22 (2006) 22-28
65. Spyropoulou PE, Razzoog ME, Chronaios D. Nonrigid connection of tooth with implants in the esthetic zone with a ceramic restoration: a clinical report. PMID: 21962582. DOI: 10.1016/S0022-3913(11)60125-X. *J Prosthet Dent.* 2011 Oct;106(4):214-8.
66. Steflik DE, Koth DL, Robinson FG, McKinney RV, Davis BC, Morris CF, Davis QB. Prospective investigation of the single-crystal sapphire endosteal dental implant in humans: ten-year results. *J Oral Implantol* 1995; 21: 8–18
67. Tan K, Pjetrusson BE, Lang NP et al. A systematic review of the survival and complication rates of fixed partial dentures (FPDs) after an observation period of at least 5 years. *Clin Oral Implants Res* 2004; 15: 654–666. doi:10.1111/j.1600-0501.2004.01119.x
68. Tsaousoglou P, Michalakis K, Kang K et al. The effect of rigid and non-rigid connections between implants and teeth on biological and technical complications: a systematic review and a meta-analysis. *Clin Oral Implants Res* 2016; 27: 1–15. doi:10.1111/clr.12890
69. von Stein-Lausnitz M, Nickenig HJ, Wolfart S, Neumann K, von Stein-Lausnitz A, Spies BC, Beuer F. Survival rates and complication behaviour of tooth implant-supported, fixed dental prostheses: A systematic review and meta-analysis. *J Dent* 2019; 88: 103167
70. Walther W, Bühler Ch, Heners M. Prothetischer Erhaltungsaufwand bei implantatgestütztem und kombiniert Zahn-implantatgetragenen Zahnersatz. *Z Zahnärztl Implantol* 1999; 15(2): 92 -96
71. Weinberg LA, Kruger B. Biomechanical Considerations when Combining Tooth-supported and Implant-supported Prostheses. *Oral Surg Oral Med Oral Pathol* 1994; 78: 22–27

