

## Hinweis in eigener Sache

Auf den folgenden Seiten finden Sie Verweise, die rot markiert sind, diese beziehen sich auf das Keramikimplantat **ZV3/BioWin!**. Dieses Implantat wird seit 2018 von uns, Champions-Implants GmbH, unter dem Produktnamen **PATENT™** vertrieben. Wir weisen daraufhin, dass dieses Implantat völlig identisch mit dem in anderen Studien erwähnten Implantat ist – inkl. der Produktion und dem Zubehör.

- 1 Akagawa Y, Hosokawa R, Sato Y, Kamayama K. Comparison between freestanding and tooth-connected partially stabilized zirconia implants after two years' function in monkeys: A clinical and histologic study. J Prosthet Dent 1998; 80: 551–558.
- 2 Akagawa Y, Ichikawa Y, Nikai H, Tsuru H. Interface histology of unloaded and early loaded partially stabilized zirconia endosseous implant in initial bone healing. J Prosthet Dent 1993; 69: 599–604.
- 3 Andreiotelli M, Wenz HJ, Kohal RJ. Are ceramic implants a viable alternative to titanium implants? A systematic literature review. Clin Oral Implants Res 2009; 20 (suppl 4): 32–47.
- 4 Assenza B, Tripodi D, Scarano A, et al. Bacterial leakage in implants with different implant-abutment connections: An in vitro study. J Periodontol 2012; 83: 481–497.
- 5 Basegmez C, Yalcin S, Yalcin F, Ersanli S & Mijiritsky E (2012). Evaluation of periimplant crevicular fluid prostaglandin E2 and matrix metalloproteinase – 8 levels from health to periimplant disease status: a prospective study. Implant Dentistry 21: 306–310.
- 6 **Becker J, John G, Becker K, Mainusch S, Diedrichs G, Schwarz F. Clinical performance of two-piece zirconia implants in the posterior mandible and maxilla: a prospective cohort study over 2 years. Clin Oral Implants Res. 2017 Jan; 28 (1): 29–35**
- 7 Berglundh T, Lindhe J, Ericsson, Marinello CP, Lijenberg B, Thomsen P. Soft tissue barrier at implants and teeth. Clin Oral Implant Res. 1991; 2: 81–90.
- 8 Berglundh T, Lindhe J, Jonsson K, Ericsson. The topography of the vascular systems in the periodontal and peri-implant tissues in dog. J Clin Periodontol 1994, 21: 189–93.
- 9 Bianchi AE, et al. In vitro and in vivo follow-up of titanium transmucosal implant with zirconia collar. J of Applied Biomaterials and biomechanics vol 2. number 3, 2004.
- 10 Bianco PD, Ducheyne P, Cuckler JM. Local accumulation of titanium released from a titanium implant in the absence of wear. J Biomed Mater Res 1996; 312: 27–234.
- 11 Bollen CML., Papaioannou W, van Eldere J, Schepers E, Quirynen M & Van Steenberghe D (1996). The influence of abutment surface roughness on plaque accumulation and periimplant mucositis. Clinical Oral Implants Research 7: 201–211.
- 12 Borgonovo A, Censi R, Dolci M, Vavassori V, Bianchi A, Maiorana C. Use of endosseous one-piece yttrium-stabilized zirconia dental implants in premolar region: A two-year clinical preliminary report. Miner va Stomatol 2011; 60: 229–242.
- 13 Boutaga K, van Winkelhoff AJ, Vandenbroucke-Grauls CM, Savelkoul PH. Periodontal pathogens: A quantitative comparison of anaerobic culture and real-time PCR. FEMS Immunol Med Microbiol 2005; 45: 19–1199.
- 14 Boutaga K, van Winkelhoff AJ, Vandenbroucke-Grauls CM, Savelkoul PH. The additional value of real-time PCR in the quantitative detection of periodontal pathogens. J Clin Periodontol 2006; 33: 427–433.
- 15 **Brüll F, van Winkelhoff AJ & Cune MS (2014). Zirconia dental implants: A clinical, radiographic, and microbiologic evaluation up to 3 years. International Journal of Oral and Maxillofacial Implants 29: 914–920.**

- 16 Brüll, van Winkelhoff AJ, Cune MS. Zirconia dental implants: a clinical, radiographic and microbiologic evaluation up to 3 years. *Int J Oral Maxillofac Implants*. 2014 Jul-Aug; 29 (4): 914–20.
- 17 Burger W, Richter HG, Piconi C, Vatroni R, Cittadini A, Boccalari M. New Y-TZP powders for medical grade zirconia. *J Mater Sei Mater Med* 1997; 8: 113–118.
- 18 Cannizzaro G, Leone M, Ferri V, Viola P, Federico, G & Esposito, M (2012). Immediate loading of single implants inserted flapless with medium or high insertion torque: a 6-month follow-up of a split-mouth randomised controlled trial. *European Journal of Oral Implantology* 5: 333–342.
- 19 Cionca N, Hashim D, Monbelli A. Zirconia dental implants: where are we now and where are we heading? *Periodontol* 2000. 2017. 73: 241–58.
- 20 Cionca N, Muller N & Mombelli A (2014). Two-piece zirconia implants supporting all-ceramic crowns: a prospective clinical study. *Clinical Oral Implants Res*. doi: 10.1111/clr.12370.
- 21 Degidi M, Piatelli A, Scarano A, Shibli JA, Lezzi G. Peri-implant collagen fibers around human cone morse connection implants under polarized light: a report of 3 cases. *Int J Periodontics Restorative Dent* 2012; 32: 323–328.
- 22 Deprich R, Naujoks C, Ommerborn M, Schwarz F, Kubler NR & Handschel J (2014). Current findings regarding zirconia implants. *Clinical Implant Dentistry and Related Research* 16: 124–137.
- 23 Deprich R, Ommerborn M, Zipprich H, et al. Behavior of osteoblastic cells cultured on titanium and structured zirconia surfaces. *Head Face Med* 2008; 4: 29.
- 24 Deprich R, Zipprich H, Ommerborn M, et al. Osseointegration of zirconia implants compared with titanium: An in vivo study. *Head Face Med* 2008; 4: 30.
- 25 Deprich R, Zipprich H, Ommerborn M, et al. Osseointegration of zirconia implants: An SEM observation of the bone-implant interface. *Head Face Med* 2008; 4: 25.
- 26 Derks J, Tomasi C. Peri-implant health and disease. A systematic review of current epidemiology. *J Clin Periodontol* 2015; 42 (suppl 16). S158–71.
- 27 Duchatelard P. La zircone est elle une alternative au titane en implantologie orale? *L'Information dentaire*, N 39-13 nov 2019: 88–94.
- 28 Farenholz H. Immediate placement and loading of zirconia implant. High efficiency and primary stability. *European J Dent Impl*. 2; 2020: 50–4.
- 29 Fretwurst T, Buzanich G, Nhales S, Woelber JP, Riesemeier H, Nelson K. Metal elements in tissues with dental peri-implantitis: a pilot study. *Clin Oral Impl Res* 2016. Sep 27 (9): 1178–86.
- 30 Fretwurst T, Nelson K, Wang HL, Giannobile WV. Is metal particle release associated with peri-implant bone destruction? An emerging concept. *J Dent. Rest*. 2018, Mar 97 (3): 259–65.
- 31 Gahlert M, Burtscher D, Grunert I, Kniha H, Steinhauser E. Failure analysis of fractured dental zirconia implants. *Clin Oral Implants Res* 2012; 23: 287–293.
- 32 Gahlert M, Gudehus T, Eichhorn S, Steinhauser E, Kniha H, Erhardt W. Bio mechanical and histomorphometric comparison between zirconia implants with varying surface textures and a titanium implant in the maxilla of miniature pigs. *Clin Oral Implants Res* 2007; 18: 662–668.
- 33 Gahlert M, Roehling S, Sprecher CM, Kniha H, Milz S & Bormann K (2012). In vivo performance of zirconia and titanium implants: a histomorphometric study in minipig maxillae. *Clinical Oral Implants Res* 23: 281–286.
- 34 Gahlert M, Rohling S, Wieland M, Eichhorn S, Kuchenhoff H & Kniha H (2010). A comparison study of the osseointegration of zirconia and titanium dental implants. A biomechanical evaluation in the maxilla of pigs. *Clinical Implant Dentistry and Related Research* 12: 297–305.
- 35 Harder S, Dimaczek B, Acil Y, Terheyden H, Freitag-Wolf S, Kern M. Molecular leakage at implant-abutment connection – In vitro investigation of tightness of internal conical implant-abutment connections against endotoxin penetration. *Clin Oral Invest* 2010; 14: 427–432.
- 36 Heitz-Mayfield LJA, Needleman I, Salvi GE & Pjetursson BE (2014). Consensus statements and clinical recommendations for prevention and management of biologic and technical implant complications. *International Journal of Oral and Maxillofacial Implants* 29 (Suppl.): 346–356.
- 37 Hempel U, Hefti T, Kalbacova M, Wolf-Brandstetter C, Dieter P & Schlottig F (2010). Response of osteoblast-like SAOS-2 cells to zirconia ceramics with different surface topographies. *Clinical Oral Implants Research* 21: 174–181.
- 38 Hui Y, Yi-Li X, Guang H, Hao Y. Effects of low temperature degradation on the surface roughness of yttria-stabilized tetragonal zirconia polycrystal ceramics: a systematic review and meta-analysis. *J Prothet Dent*. 2021 Feb; 125 (2): 222–230.
- 39 Hulbert SF, Morrison SI, Klaxitter JJ. Tissue reaction of three ceramics of porous and non porous structures. *J Biomed Mater Res* 1972; 6: 347–74.
- 40 Javed F, Al-Hezaimi K, Almas K, Romanos GE. Is titanium sensitivity associated with allergic reactions in patients with dental implants? A systematic review. *Clin Implant Dent Res* 2013 Feb; 15 (1): 47–52.

- 41 Kajiwara N, Nasaki C, Makaido T, Kondo Y, Nkamoto T, Hosokawa R. Soft tissue biological response to zirconia and metal abutments compared with natural tooth: microcirculation monitoring as a novel bioindicator. *Implant Dent* 2015 Feb 25 (1): 37–41.
- 42 Koch FP, Weng D, Kramer S, Biesterfeld S, Jahn-Eimermacher A, Wagner W. Osseointegration of one-piece zirconia implants compared with a titanium implant of identical design: A histomorphometric study in the dog. *Clin Oral Implants Res* 2010; 21: 350–356.
- 43 Koha I RJ, Weng D, Bachle M, Strub JR. Loaded custom-made zirconia and titanium implants show similar osseointegration: An animal experiment. *J Periodontol* 2004; 75: 1262–1268.
- 44 Kohal RJ, Klaus G. A zirconia implant-crown system: A case report. *Int J Periodontics Restorative Dent* 2004; 24: 147–153.
- 45 Kohal RJ, Knauf M, Larsson S, Sahlin H, Butz F. One-piece zirconia oral implants: One-year results from a prospective cohort study. 1. Single tooth replacement. *J Clin Periodontol* 2012; 39: 590–597.
- 46 Kohal RJ, Weng D, Bachle M, Strube JR. Loaded custom made zirconia and titanium implants show similar osteointegration: an animal experiment. *J Periodontol* 2004; 75: 1262–8.
- 47 Korpi JT, Astrom P, Lehtonen N, Tjaderhane L, Kallio-Pulkkinen S, Siponen M, Sorsa T, Pirila E & Salo T (2009). Healing of extraction sockets in collagenase-2 (matrix metalloproteinase-8)-deficient mice. *European Journal of Oral Science* 117: 248–254.
- 48 Kuboniwa M, Amano A, Kimura KR, et al. Quantitative detection of periodontal pathogens using real-time polymerase chain reaction with TaqMan probes. *Oral Microbiol Immunol* 2004; 19: 168–176.
- 49 Lang NP, Berglundh T & Working Group 4 of Seventh European Workshop on P (2011). Periimplant diseases: where are we now? – Consensus of the Seventh European Workshop on Periodontology. *Journal of Clinical Periodontology* 38 (Suppl. 11): 178–181.
- 50 Lang NP, Berglundh T, Heitz-Mayfield LJ, Pjetursson BE, Salvi GE, Sanz M. Consensus statements and recommended clinical procedures regarding implant survival and complications. *Int J Oral Maxillofac Implants* 2004; 19 (suppl): 150–154.
- 51 Iglhaut G, Schwartz F, Winter R, Mihatovic I, Stimmelmayer M, Schliephake H (2014). Epithelial attachment and downgrowth on dental implant abutments a comprehensive review. *Journal of Esthetic and Restorative Dentistry* 26, 324–331.
- 52 Lindhe J, Meyle J. Periimplant diseases: Consensus Report of the Sixth European Workshop on Periodontology. *J Clin Periodontol* 2008; 35: 282–285.
- 53 Löe H (1967). The Gingival Index, the Plaque Index and the Retention Index Systems. *Journal of Periodontology* 38 (Suppl.): 610–616.
- 54 Lugh V, Sergio V. Low temperature degradation aging of zirconia. A clinical review of relevant aspects in dentistry. *Dent Mater* 2010; 26 (8): 807–20.
- 55 Manicone PF, Rossi IP, Raffaelli L, et al. Biological considerations on the use of zirconia for dental devices. *Int J Immunopathol Pharmacol* 2007; 20: 9–12.
- 56 Manicone PF, Rossi IP, Raffaelli L. An overview of zirconia ceramics: Basic properties and clinical applications. *J Dent* 2007; 35: 819–826.
- 57 Manzano G, Herrero LR & Montero J (2014). Comparison of clinical performance of zirconia implants and titanium implants in animal models: a systematic review. *International Journal of Oral and Maxillofacial Implants* 29: 311–320.
- 58 Muller K, Valentine-Thon E. Hypersensitivity to titanium: Clinical and laboratory evidence. *Neuro Endocrinol Lett* 2006; 27 (suppl 1): 31–35.
- 59 Negahdari R, Rahoar M, Fakhrzadeh V, Eslami H, Akbari T, Bohluli S. comparison of pro-inflammatory cytokine levels in gingival crevicular fluid around dental implants with ceramic and titanium abutments. *J Contemp. Dent. Pract.* 2017 Sep 1; 18 (9): 831–836.
- 60 Nevins M, Camelo M, Nevins ML, Schupbach P & Kim DM (2011). Pilot clinical and histologic evaluations of a two-piece zirconia implant. *International Journal of Periodontics and Restorative Dentistry* 31: 157–163.
- 61 Noronha O, Schumemann WVH, Mathew MT, Henriques B, Magini RS, Teughels W, Souza JCM. Can degradation products released from dental implants affect peri-implant tissues. *J Periodontal Res.* 2018, Feb 53 (1): 1–11.
- 62 Nscimento CD, Pita MS, Fernandes FHNC, Pedrazzi V, De Albuquerque JRF, Ribeiro RF. Bacterial adhesion on the titanium and zirconia abutment surfaces. *Clin Oral Impl Res*, 2014 Mars 25 (3): 337–343.
- 63 Oliva J, Oliva X & Oliva JD (2010). Five-year success rate of 831 consecutively placed Zirconia dental implants in humans: a comparison of three different rough surfaces. *International Journal of Oral and Maxillofacial Implants* 25: 336–344.
- 64 Oliva J, Oliva X, Oliva JD. One-year follow-up of first consecutive 100 zirconia dental implants in humans: A comparison of 2 different rough surfaces. *Int J Oral Maxillofac Implants* 2007; 22: 430–435.

- 65 Oliva J, Oliva X, Oliva JD. Ovoid zirconia implants: Anatomie design for premolar replacement. *Int J Periodontics Restorative Dent* 2008; 28: 609–615.
- 66 Oliva J, Oliva X, Oliva JD. Zirconia implants and all-ceramic restorations for the esthetic replacement of the maxillary central incisors. *Eur J Esthet Dent* 2008; 3: 174–185.
- 67 Oliva X, Oliva J, Oliva JD. Full-mouth oral rehabilitation in a titanium allergy patient using zirconium oxide dental implants and zirconium oxide restorations. A case report from an ongoing clinical study. *Eur J Esthet Dent* 2010; 5: 190–203.
- 68 Payer M, Heschl A, Koller M, Arnetzl G, Lorenzoni M & Jakse N (2015). All-ceramic restoration of zirconia two-piece implants – a randomized controlled clinical trial. *Clinical Oral Implants Res* 26: 371–376.
- 69 Piatelli A, Scarano A, Piatelli M, Bertolai RA, Panzoni E. Histologic aspects of the bone and soft tissues surrounding three titanium non-submerged plasmasprayed implants retrieved at autopsy: a case report. *J Periodontol* 1997; 68: 694–700.
- 70 Pjetursson BE, Bragger 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 Implants Res* 2007; 18 (suppl 3): 97–113.
- 71 Pommer B, Bucur L, Zauza K, Tepper G, Hof M, Watzek G. Meta-Analysis of Oral Implant Fracture Incidence and Related Determinants. *Journal of Oral Implants*, Volume 2014,
- 72 Renvert S, Polysois N. Clinical approaches to treat peri-implant mucositis and periimplantitis. *Periodontology* 2000, vol 68, 2015: 369–404.
- 73 Rimondini L, Cerroni L, Carrassi A & Torricelli P (2002). Bacterial colonization of zirconia ceramic surfaces: an in vitro and in vivo study. *International Journal of Oral and Maxillofacial Implants* 17: 793–798.
- 74 Rimondini L, Cerroni L, Carrassi A, Torricelli P. Bacterial colonization of zirconia ceramic surfaces: an in vitro and in vivo study. *International Journal of Oral and Maxillofacial Implants*; 17 (2002): 793–798.
- 75 Rocchietta I, Fontana F, Addis A, Schupbach P, Simion M. Surface-modified zirconia implants: Tissue response in rabbits. *Clin Oral Implants Res* 2009; 20: 844–850.
- 76 Roehling S, Schlegel KA, Woelfer H, Gahlert M. Performance and outcome of zirconia dental implants in clinical studies: meta-analysis. *Clin Oral Implants Res*. 2018 ; 29 (Suppl 16): 135–153.
- 77 Rompen E, Domken O, Degidi M, Pontes AE, Piatelli A. The effect of material characteristic of surface topography and of implant components and connections on soft tissue integration. A literature review. *Clin Oral Implants Res* 2006, Oct 17, Suppl 2: 55–57.
- 78 Sanz M, Chapple IL & Working Group 4 of the V. E. W. o. P. (2012). Clinical research on periimplant diseases: consensus report of Working Group 4. *Journal of Clinical Periodontology* 39 (Suppl. 12): 202–206.
- 79 Scarano A, Di CF, Quaranta M, Piatelli A. Bone response to zirconia ceramic implants: An experimental study in rabbits. *J Oral Implantol* 2003; 29: 8–12.
- 80 Schierano G, Ramieri G, Cortese M, Aimetti M, Pretti G. Organization of the connective tissue barrier around long term loaded implant abutments in man. *Clin Oral Implants Res* 2002; 13: 460–64.
- 81 Schwarz F, Golubovic V, Mihatovic I, Becker J. Periodontally diseased tooth roots used for lateral alveolar ridge augmentation. A proof-of-concept study. *J Clin Periodontol* 2016; 43: 797–803. doi: 10.1111/jcpe.12579.
- 82 Schwarz F, Mihatovic I, Golubovic V, Eick S, Iglhaut T & Becker J (2014). Experimental periimplant mucositis at different implant surfaces. *Journal of Clinical Periodontology* 41: 513–520.
- 83 Sennerby L, Dasmah A, Larsson B & Iverhed M (2005). Bone tissue responses to surface-modified zirconia implants: a histomorphometric and removal torque study in the rabbit. *Clinical Implant Dentistry and Related Research* 7 (Suppl. 1): S13–S20.
- 84 Sennerby L, Dasmah A, Larsson B, Iverhed M. Bone tissue responses to surface-modified zirconia implants: A histomorphometric and removal torque study in the rabbit. *Clin Implant Dent Relat Res* 2005; 7 (suppl 1): 513–520.
- 85 Sennerby L. Torque study in the rabbit. *Clin Implant Dent Relat Res* 2005 ; 7 suppl 1: 13–20.
- 86 Sicilia A, Cuesta S, Coma G, et al. Titanium allergy in dental implant patients: A clinical study on 1500 consecutive patients. *Clin Oral Implants Res* 2008; 19: 823–835.
- 87 Siddiqi A, Payne AG, De Silva RK, Duncan WJ. Titanium allergy: Could it affect dental implant integration? *Clin Oral Implants Res* 2011 Jul; 22 (7): 673–680.
- 88 Simmons CA, Valiquette N, Pilliar RM. Osseointegration of sintered porous-surfaced and plasmaspray-coated implants: An animal model study of early post implantation healing response and mechanical stability. *J Biomed Mater Res* 1999; 47: 127–138.
- 89 Sivaraman K, Chopra A, Norrayan AI, Balakrishnan D. Is zirconia a viable alternative to titanium for oral implant. A clinical review. *J Prosthodont. Res* 2018; 62: 121–33.

- 90 Stadlinger B, Hennig M, Eckelt U, Kuhlisch E, Mai R. Comparison of zirconia and titanium implants after a short healing period. A pilot study in minipigs. *Int J Oral Maxillofac Surg* 2010; 39: 585–592.
- 91 Taira M, Kagiya T, Harada H, et al. Microscopic observations and inflammatory cytokine productions of human macrophage phagocytising submicron titanium particles. *J Mater Sei Mater Med* 2010; 21: 267–275.
- 92 Taira M, Nezu T, Sasaki M, et al. Gene expression analyses of human macrophage phagocytizing sub-microtitanium particles by allergy DNA chip (Genopal). *Biomed Mater Eng* 2009; 19: 63–70.
- 93 Tete S, Matrangelo F, Bianchi A, Zizzari V, Scarano A. Collagen fiber orientation around machined titanium and zirconia dental necks: an animal study. *Int J Oral Maxillofac Implants* 2009; 24: 52–8.
- 94 Tschernitschek H, Borchers L, Geurtsen W. Nonalloyed titanium as a bioinert metal – A review. *Quintessence Int* 2005; 36: 523–530.
- 95 van Brakel R, Cune MS, van Winkelhaff AJ, de Putter C, Verhoeven JW, van der Reijden WA. Early bacterial colonization and soft tissue health around zirconia and titanium abutments: An invivo study in man. *Clin Oral Implants Res* 2011; 22: 571–577.
- 96 van Brakel R, Noordmans HJ, Frenken J, de Roode R, de Wit GC, Cune MS. The effect of zirconia and titanium implant abutments on light reflection of the supporting soft tissues. *Clin Oral Implants Res* 2011; 22: 1172–1178.
- 97 Verhoeven JW, Cune MS, de Putter C. Reliability of some clinical parameters of evaluation in implant dentistry. *J Oral Rehabil* 2000; 27: 211–216.
- 98 Wangb Y, Zhang Y, Miron RJ. Health maintenance and recovery of soft tissues around implant. *Clin Impl Dent Relat Res*. 2016 June. 18 (3): 618–39.
- 99 Wenz HJ, Bartsch J, Wolfart S, Kern M. Osseointegration and clinical success of zirconia dental implants: A systematic review. *Int J Prosthodont* 2008; 21: 27–36.



**Champions-Implants GmbH**

Im Baumfeld 30 | Champions Platz 1 | D-55237 Flonheim  
 fon +49 (0)6734 91 40 80 | fax +49 (0)6734 10 53  
 info@champions-implants.com