

## Literatur

### **Diabetes und Implantate**

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1. IDF Diabetes Atlas (6th ed.) International Diabetes Federation, Brussels, Belgium 2013.
2. Tamayo T, Rathmann W. Epidemiologie des Diabetes in Deutschland. In: Deutscher Gesundheitsbericht Diabetes 2015, hrsg. von diabetesDe – Deutsche Diabetes-Hilfe 2015:8-16.
3. Tamayo T, Rosenbauer J, Wild SH, Spijkerman AM, Baan C, Forouhi NG, Herder C, Rathmann W. Diabetes in Europe: an update. *Diabetes Res Clin Pract* 2014; 103:206-217.
4. Wilke T, Ahrendt P, Schwartz D, Linder R, Ahrens S, Verheyen F. Incidence and prevalence of type 2 diabetes mellitus in Germany: an analysis based on 5,43 Million patients. *DMW* 2013;138:69–75.
5. Rathmann W, Strassburger K, Heier M, Holle R, Thorand B, Giani G, Meisinger C. Incidence of type 2 diabetes in the elderly German population and the effect of clinical and lifestyle risk factors: KORA S4/F4 cohort study. *Diabet Med* 2009; 26:1212–1219.
6. Micheelis W, Schiffner U (Hrsg.). Vierte Deutsche Mundgesundheitsstudie (DMS IV). Deutscher Zahnärzte Verlag 2006.
7. MRG (millennium Research Group). European Markets for Dental Implants. 2011.
8. Grossi SG, Genco RJ. Periodontal disease and diabetes mellitus: a two-way relationship. *Annals of Periodontology* 1998; 3:51-61.
9. Chen L, Wei B, Li J, Liu F, Xuan D, Xie B, Zhang J. Association of periodontal parameters with metabolic level and systemic inflammatory markers in patients with type 2 diabetes. *J Periodontol* 2010; 81:364–371.
10. Loe H. Periodontal disease. The sixth complication of diabetes mellitus. *Diabetes Care* 1993; 16:329-334.
11. Patel MH, Kumar JV, Moss ME. Diabetes and tooth loss: an analysis of data from the National Health and Nutrition Examination Survey, 2003– 2004. *J Am Dent Assoc* 2013; 144:478–485.
12. Costa FO, Miranda Cota LO, Pereira Lages EJ, Soares Dutra Oliveira AM, Dutra Oliveira PA, Cyrino RM, Medeiros Lorentz TC, Cortelli SC, Cortelli JR. Progression of periodontitis and tooth loss associated with glycemic control in individuals undergoing periodontal maintenance therapy: a 5- year follow-up study. *J Periodontol* 2013; 84:595– 605.
13. Oates TW, Huynh-Ba G. Diabetes Effects on Dental Implant Survival. *Forum Implantol.* 2012; 8(2):7-14.

14. Kawamura M, Tsurumoto A, Fukuda S, Sasahara H. Health behaviors and their relation to metabolic control and periodontal status in type 2 diabetic patients: a model tested using a linear structural relations program. *J Periodontol* 2001; 72:1246-1253.
15. Karoussis IK, Salvi GE, Heitz-Mayfield LJ, Brägger U, Hämmerle CH, Lang NP. Long-term implant prognosis in patients with and without a history of chronic periodontitis: a 10-year prospective cohort study of the ITI Dental Implant System. *Clin Oral Implants Res* 2003; 14:329-339.
16. Chrcanovic BR, Albrektsson T, Wennerberg A. Periodontally compromised vs. periodontally healthy patients and dental implants: a systematic review and meta-analysis. *J Dent* 2014b; 42:1509-1527.
17. Dubey RK, Gupta DK, Singh AK. Dental implant survival in diabetic patients; review and recommendations. *Natl J Maxillofac Surg* 2013; 4:142-150.
18. von Wilmsky C, Stockmann P, Harsch I, Amann K, Metzler P, Lutz R, Moest T, Neukam FW, Schlegel KA. Diabetes mellitus negatively affects periimplant bone formation in the diabetic domestic pig. *J Clin Periodontol* 2011; 38:771-779.
19. Quintero DG, Winger JN, Khashaba R, Borke JL. Advanced glycation endproducts and rat dental implant osseointegration. *J Oral Implantol* 2010; 36:97-103.
20. Graves DT, Liu R, Oates TW. Diabetes-enhanced inflammation and apoptosis: impact on periodontal pathosis. *Periodontology* 2000 2007; 45:128-137.
21. Inouye KA, Bisch FC, Elsalanty ME, Zakhary I, Khashaba RM, Borke JL. Effect of metformin on periimplant wound healing in a rat model of type 2 diabetes. *Implant Dent* 2014; 23:319-327.
22. de Morais JA, Trindade-Suedam IK, Pepato MT, Marcantonio E, Jr, Wenzel A, Scaf G. Effect of diabetes mellitus and insulin therapy on bone density around osseointegrated dental implants: A digital subtraction radiography study in rats. *Clin Oral Implants Res* 2009; 20:796–801.
23. Kwon PT, Rahman SS, Kim DM, Kopman JA, Karimbux NY, Fiorellini JP. Maintenance of osseointegration utilizing insulin therapy in a diabetic rat model. *J Periodontol* 2005; 76:621–626.
24. de Molon RS, Morais-Camilo JA, Verzola MH, Faeda RS, Pepato MT, Marcantonio E Jr. Impact of diabetes mellitus and metabolic control on bone healing around osseointegrated implants: removal torque and histomorphometric analysis in rats. *Clin Oral Implants Res* 2013; 24:831-837.
25. Nemtoi A, Ladunca O, Dragan E, Budacu C, Mihai C, Haba D. Quantitative and qualitative bone assessment of the posterior mandible in patients with diabetes mellitus: a cone beam computed tomography study. *Rev Med Chir Soc Med Nat Iasi* 2013; 117: 1002-1008.
26. Oates TW, Galloway P, Alexander P, Vargas Green A, Huynh-Ba G, Feine J, McMahan CA. The effects of elevated hemoglobin A (1c) in patients with type 2 diabetes mellitus on dental implants: Survival and stability at one year. *J Am Dent Assoc* 2014; 145: 1218-1226.

27. Khandelwal N, Oates TW, Vargas A, Alexander PP, Schoolfield JD, Alex McMahan C. Conventional SLA and chemically modified SLA implants in patients with poorly controlled type 2 diabetes mellitus--a randomized controlled trial. *Clin Oral Implants Res* 2013; 24: 13-19.
28. Fontanari LA, Pimentel Lopes De Oliveira GJ, Durigan Basso TL, Marcantonio Junior E, Perez Orrico SR, Cezar Sampaio JE. The influence of different implant surfaces on osseointegration in diabetes: a systematic review of the literature. *Minerva Stomatol* 2014; 63:127-133.
29. Albrektsson T, Zarb G, Worthington P, Eriksson AR. The long-term efficacy of currently used dental implants: a review and proposed criteria of success. *Int J Oral Maxillofac Implants* 1986; 1:11-25.
30. Buser D, Weber HP, Bragger U, Balsiger C. Tissue integration of one-stage ITI implants: 3-year results of a longitudinal study with Hollow-Cylinder and Hollow-Screw implants. *Int J Oral Maxillofac Implants* 1991; 6:405-412
31. Klokkevold PR, Han TJ. How do smoking, diabetes and periodontitis affect outcomes of implant treatment? *Int J Oral Maxillofac Implants* 2007; 22 Suppl:173-202.
32. Chrcanovic BR, Albrektsson T, Wennerberg A. Diabetes and oral implant failure: a systematic review. *J Dent Res*. 2014a; 93:859-867.
33. Busenlechner D, Fürhauser R, Haas R, Watzek G, Mailath G, Pommer B. Long-term implant success at the Academy for Oral Implantology: 8-year follow-up and risk factor analysis. *J Periodontal Implant Sci* 2014; 44:102-108.
34. Zupnik J, Kim SW, Ravens D, Karimbux N, Guze K. Factors associated with dental implant survival: a 4-year retrospective analysis. *J Periodontol* 2011; 82:1390-1395.
35. Bornstein MM, Cionca N, Mombelli A. Systemic conditions and treatments as risks for implant therapy. *Int J Oral Maxillofac Implants* 2009; 24 Suppl:12-27.
36. Olson JW, Shernoff AF, Tarlow JL, Colwell JA, Scheetz JP, Bingham SF. Dental endosseous implant assessments in a type 2 diabetic population: a prospective study. *Int J Oral Maxillofac Implants* 2000; 15:811-818.
37. Javed F, Romanos GE. Impact of diabetes mellitus and glycemic control on the osseointegration of dental implants: a systematic literature review. *J Periodontol* 2009;80: 1719-1730.
38. Kotsakis GA, Ioannou AL, Hinrichs JE, Romanos GE. A systematic review of observational studies evaluating implant placement in the maxillary jaws of medically compromised patients. *Clin Implant Dent Relat Res* 2015; 17:598-609.
39. Diz P, Scully C, Sanz M. Dental implants in the medically compromised patient. *J Dent* 2013; 41:195-206.
40. Oates TW, Huynh-Ba G, Vargas A, Alexander P, Feine J. A critical review of diabetes, glycemic control, and dental implant therapy. *Clin Oral Implants Res* 2013; 24:117-127.
41. Aguilar-Salvatierra A, Calvo-Guirado JL, González-Jaranay M, Mo-reu G, Delgado-Ruiz RA, Gómez-Moreno G. Peri-implant evaluation of immediately loaded implants placed in esthetic zone in patients with diabetes mellitus type 2: a two-year study. *Clin Oral Implants Res*. 2015 Jan 26. doi: 10.1111/clr.12552. [E-pub ahead of print]

42. Gómez-Moreno G, Aguilar-Salvatierra A, Rubio Roldán J, Guardia J, Gargallo J, Calvo-Guirado JL. Periimplant evaluation in type 2 diabetes mellitus patients: a 3-year study. *Clin Oral Implants Res* 2014 Mar 31. doi: 10.1111/clr.12391. [Epub ahead of print]
43. Esposito M, Grusovin MG, Worthington HV. Interventions for replacing missing teeth: antibiotics at dental implant placement to prevent complications. *Cochrane Database Syst Rev*. 2013 Jul 31; 7:CD004152. doi: 10.1002/14651858.CD004152.pub4.
44. Morris HF, Ochi S, Winkler S. Implant Survival in Patients With Type 2 Diabetes: Placement to 36 Months. *Ann Periodontol* 2000; 5:157-165.
45. Al Nawas B, Stein K. Indikation einer präoperativen antibiotischen Prophylaxe bei Insertion enossaler Implantate – ein systematischer Review. *Z Zahnärztl Impl* 2010;26:49-60.
46. Borba AM, Souza DF, Brozoski MA, Burim RA, Naclério-Homem Mda G, Deboni MC. Can the use of antibiotics interfere with the success of dental osseointegrated implants in diabetic patients? *J Contemp Dent Pract* 2013 Nov 1; 14:1197-1201.
47. Mellado-Valero A, Ferrer García JC, Herrera Ballester A, Labaig Rueda C. Effects of diabetes on the osseointegration of dental implants. *Med Oral Patol Oral Cir Bucal* 2007 Jan 1; 12(1):E38-43.
48. Erdogan Ö, Charudilaka S, Tatli U, Damlar I. A Review on alveolar bone augmentation and dental implant success in diabetic patients. *Oral Surgery* 2010; 3:115–119.
49. Farzad P, Andersson L, Nyberg J. Dental implant treatment in diabetic patients. *Implant Dent* 2002; 11:262-267.
50. Schwartz-Arad D, Levin L, Sigal L. Surgical success of intraoral autogenous block onlay bone grafting for alveolar ridge augmentation. *Implant Dent* 2005; 14:131-138.
51. Huynh-Ba G, Friedberg JR, Vogiatzi D, Ioannidou E. Implant failure predictors in the posterior maxilla: a retrospective study of 273 consecutive implants. *J Periodontol* 2008; 79:2256-2261.
52. Tawil G, Younan R, Azar P, Sleilati G. Conventional and advanced implant treatment in the type II diabetic patient: surgical protocol and long-term clinical results. *Int J Oral Maxillofac Implants* 2008; 23:744-752.
53. Donos N, Mardas N, Chadha V. Clinical outcomes of implants following lateral bone augmentation: systematic assessment of available options (barrier membranes, bone grafts, split osteotomy). *J Clin Periodontol* 2008; 35(Suppl8):173-202.
54. Retzeppi M, Lewis MP, Donos N. Effect of diabetes and metabolic control on de novo bone formation following guided bone regeneration. *Clin Oral Implants Res* 2010; 21:71-79.
55. Erdogan O, Uçar Y, Tatlı U, Sert M, Benlidayı ME, Evlice B. A clinical prospective study on alveolar bone augmentation and dental implant success in patients with type 2 diabetes. *Clin Oral Implants Res* 2014 Jul 11. doi: 10.1111/clr.12450. [Epub ahead of print]

56. Zitzmann NU, Berglundh T. Definition and prevalence of periimplant diseases. *J Clin Periodontol* 2008; 35(Suppl 8):286-291.
57. American Academy of Periodontology (AAP). Periimplant mucositis and periimplantitis: a current understanding of their diagnoses and clinical implications. *J Periodontol* 2013;84:436-443.
58. Konstantinidis IK, Kotsakis GA, Gerdes S, Walter MH. Cross-sectional study on the prevalence and risk indicators of peri-implant diseases. *Eur J Oral Implantol* 2015; 8:75-88.
59. Daubert DM, Weinstein BF, Bordin S, Leroux BG, Flemming TF. Prevalence and predictive factors for peri-implant disease and implant failure: a cross-sectional analysis. *J Periodontol* 2015; 86:337-347.
60. Ferreira SD, Silva GL, Cortelli JR, Costa JE, Costa FO. Prevalence and risk variables for periimplant disease in Brazilian subjects. *J Clin Periodontol*. 2006; 33:929-935.
61. Lindhe J, Meyle J; Group D of European Workshop on Periodontology. Periimplant diseases: Consensus Report of the Sixth European Workshop on Periodontology. *J Clin Periodontol* 2008; 35(Suppl 8):282-285.
62. Salvi GE, Carollo-Bittel B, Lang NP. Effects of diabetes mellitus on periodontal and peri-implant conditions: Update on associations and risks. *J Clin Periodontol* 2008; 35:398-409.
63. Kolb H, Mandrup-Poulsen T. The global diabetes epidemic as a consequence of lifestyle-induced low-grade inflammation. *Diabetologia* 2010; 53:10-20.
64. Deschner J, Haak T, Jepsen S, Kocher T, Mehnert H, Meyle J, Schumm-Draeger PM, Tschöpe D. Diabetes mellitus und Parodontitis. Konsensuspapier: Wechselbeziehungen und klinische Implikation. *Zahnärztliche Mitteilungen* 2011:50-59 und *Der Internist* 2011; 52:466-477.
65. Engebretson S, Kocher T. Evidence that periodontal treatment improves diabetes outcomes: a systematic review and meta-analysis. In: Tonetti M, Kornman KS eds. *Periodontitis and Systemic Diseases – Proceedings of a workshop jointly held by the European Federation of Periodontology and American Academy of Periodontology* 2013:153-163.
66. Schwarz F, Becker J. Periimplantäre Entzündungen. Ätiologie, Pathogenese, Diagnostik und aktuelle Therapiekonzepte. Quintessenz Verlags GmbH, Berlin, 1. Auflage 2006.