

**Literaturverzeichnis zum Fortbildungsbeitrag  
Mikrobiologische und systemisch-immunologische Faktoren  
Ernährung und Parodontitis**

*(Dr. Johan Wölbe, Klinik für Zahnerhaltungskunde & Parodontologie,  
Universitätsklinikum Freiburg, Medizinische Fakultät, Albert-Ludwigs-Universität  
Freiburg)*

1. Abou Sulaiman, A.E., Shehadeh, R.M.H., 2010. Assessment of Total Antioxidant Capacity and the Use of Vitamin C in the Treatment of Non-Smokers With Chronic Periodontitis. *J. Periodontol.* 81, 1547–1554. doi:10.1902/jop.2010.100173
2. Amaliya, Timmerman, M.F., Abbas, F., Loos, B.G., Van der Weijden, G.A., Van Winkelhoff, A.J., Winkel, E.G., Van der Velden, U., 2007. Java project on periodontal diseases: the relationship between vitamin C and the severity of periodontitis. *J. Clin. Periodontol.* 34, 299–304. doi:10.1111/j.1600-051X.2007.01053.x
3. Barbaresko, J., Koch, M., Schulze, M.B., Nöthlings, U., 2013. Dietary pattern analysis and biomarkers of low-grade inflammation: a systematic literature review. *Nutr. Rev.* 71, 511–527. doi:10.1111/nure.12035
4. Bartholomew, M., 2002. James Lind's Treatise of the Scurvy (1753). *Postgrad. Med. J.* 78, 695–696.
5. Bartold, P.M., Van Dyke, T.E., 2013. Periodontitis: a host-mediated disruption of microbial homeostasis. *Unlearning learned concepts. Periodontol.* 2000 62, 203–217. doi:10.1111/j.1600-0757.2012.00450.x
6. Bartsch, H., Frank, N., 1996. Blocking the endogenous formation of N-nitroso compounds and related carcinogens. *IARC Sci. Publ.* 189–201.
7. Basu, S., Yoffe, P., Hills, N., Lustig, R.H., 2013. The Relationship of Sugar to Population-Level Diabetes Prevalence: An Econometric Analysis of Repeated Cross-Sectional Data. *PLOS ONE* 8, e57873. doi:10.1371/journal.pone.0057873
8. Baumgartner, S., Imfeld, T., Schicht, O., Rath, C., Persson, R.E., Persson, G.R., 2009. The impact of the stone age diet on gingival conditions in the absence of oral hygiene. *J. Periodontol.* 80, 759–768. doi:10.1902/jop.2009.080376
9. Bhatavadekar, N.B., Williams, R.C., 2009. Modulation of the host inflammatory response in periodontal disease management: exciting new directions. *Int. Dent. J.* 59, 305–308.

10. Bosma-den Boer, M.M., van Wetten, M.-L., Pruimboom, L., 2012. Chronic inflammatory diseases are stimulated by current lifestyle: how diet, stress levels and medication prevent our body from recovering. *Nutr. Metab.* 9, 32. doi:10.1186/1743-7075-9-32
11. Brex, M.C., Fröhlicher, I., Gehr, P., Lang, N.P., 1988. Stereological observations on long-term experimental gingivitis in man. *J. Clin. Periodontol.* 15, 621–627.
12. Carr, A.C., Vissers, M.C.M., 2013. Synthetic or food-derived vitamin C--are they equally bioavailable? *Nutrients* 5, 4284–4304. doi:10.3390/nu5114284
13. Chakrabarti, P., Kim, J.Y., Singh, M., Shin, Y.-K., Kim, J., Kumbrink, J., Wu, Y., Lee, M.-J., Kirsch, K.H., Fried, S.K., Kandrор, K.V., 2013. Insulin inhibits lipolysis in adipocytes via the evolutionarily conserved mTORC1-Egr1-ATGL-mediated pathway. *Mol. Cell. Biol.* 33, 3659–3666. doi:10.1128/MCB.01584-12
14. Chee, B., Park, B., Fitzsimmons, T., Coates, A.M., Bartold, P.M., 2016. Omega-3 fatty acids as an adjunct for periodontal therapy-a review. *Clin. Oral Investig.* 20, 879–894. doi:10.1007/s00784-016-1750-2
15. Chen, G.-C., Zhang, Z., van Dam, R.M., Qin, L.-Q., 2017. Nonlinear relation between animal protein intake and risk of type 2 diabetes: a dose-response meta-analysis of prospective studies. *Am. J. Clin. Nutr.* 105, 1014–1016. doi:10.3945/ajcn.116.147470
16. Cullinan, M.P., Hamlet, S.M., Westerman, B., Palmer, J.E., Faddy, M.J., Seymour, G.J., 2003. Acquisition and loss of *Porphyromonas gingivalis*, *Actinobacillus actinomycetemcomitans* and *Prevotella intermedia* over a 5-year period: effect of a triclosan/copolymer dentifrice. *J. Clin. Periodontol.* 30, 532–541.
17. Dodington, D.W., Fritz, P.C., Sullivan, P.J., Ward, W.E., 2015. Higher Intakes of Fruits and Vegetables,  $\beta$ -Carotene, Vitamin C,  $\alpha$ -Tocopherol, EPA, and DHA Are Positively Associated with Periodontal Healing after Nonsurgical Periodontal Therapy in Nonsmokers but Not in Smokers. *J. Nutr.* 145, 2512–2519. doi:10.3945/jn.115.211524
18. Feghali, K., Feldman, M., La, V.D., Santos, J., Grenier, D., 2012. Cranberry proanthocyanidins: natural weapons against periodontal diseases. *J. Agric. Food Chem.* 60, 5728–5735. doi:10.1021/jf203304v
19. Fernández-San Juan, P.-M., 2009. Trans fatty acids (tFA): sources and intake levels, biological effects and content in commercial Spanish food. *Nutr. Hosp.* 24, 515–520.
20. Fung, T.T., van Dam, R.M., Hankinson, S.E., Stampfer, M., Willett, W.C., Hu, F.B., 2010. Low-carbohydrate diets and all-cause and cause-specific mortality: two cohort studies. *Ann. Intern. Med.* 153, 289–298. doi:10.7326/0003-4819-153-5-201009070-00003

21. Galland, L., 2010. Diet and Inflammation. *Nutr. Clin. Pract.* 25, 634–640. doi:10.1177/0884533610385703
22. Genco, R.J., Borgnakke, W.S., 2013. Risk factors for periodontal disease. *Periodontol.* 2000 62, 59–94. doi:10.1111/j.1600-0757.2012.00457.x
23. Glickman, I., 1947. The relation of experimental diabetes to periodontal disease. *Am. J. Orthod.* 33, 703–722.
24. Gruner, D., Paris, S., Schwendicke, F., 2016. Probiotics for managing caries and periodontitis: Systematic review and meta-analysis. *J. Dent.* 48, 16–25. doi:10.1016/j.jdent.2016.03.002
25. Hujoel, P., 2009. Dietary carbohydrates and dental-systemic diseases. *J. Dent. Res.* 88, 490–502. doi:10.1177/0022034509337700
26. Iwasaki, M., Manz, M.C., Moynihan, P., Yoshihara, A., Muramatsu, K., Watanabe, R., Miyazaki, H., 2011. Relationship between saturated fatty acids and periodontal disease. *J. Dent. Res.* 90, 861–867. doi:10.1177/0022034511405384
27. Jenzsch, A., Eick, S., Rassoul, F., Purschwitz, R., Jentsch, H., 2009. Nutritional intervention in patients with periodontal disease: clinical, immunological and microbiological variables during 12 months. *Br. J. Nutr.* 101, 879–885. doi:10.1017/S0007114508047776
28. Jockel-Schneider, Y., Goßner, S.K., Petersen, N., Stölzel, P., Hägele, F., Schweiggert, R.M., Haubitz, I., Eigenthaler, M., Carle, R., Schlagenhaut, U., 2016. Stimulation of the nitrate-nitrite-NO-metabolism by repeated lettuce juice consumption decreases gingival inflammation in periodontal recall patients: a randomized, double-blinded, placebo-controlled clinical trial. *J. Clin. Periodontol.* 43, 603–608. doi:10.1111/jcpe.12542
29. Karygianni, L., Al-Ahmad, A., Argyropoulou, A., Hellwig, E., Anderson, A.C., Skaltsounis, A.L., 2015. Natural Antimicrobials and Oral Microorganisms: A Systematic Review on Herbal Interventions for the Eradication of Multispecies Oral Biofilms. *Front. Microbiol.* 6, 1529. doi:10.3389/fmicb.2015.01529
30. Lee, J.-H., Shin, M.-S., Kim, E.-J., Ahn, Y.-B., Kim, H.-D., 2017. The association of dietary vitamin C intake with periodontitis among Korean adults: Results from KNHANES IV. *PloS One* 12, e0177074. doi:10.1371/journal.pone.0177074
31. Liu, C.-Y., Hsu, Y.-H., Wu, M.-T., Pan, P.-C., Ho, C.-K., Su, L., Xu, X., Li, Y., Christiani, D.C., Kaohsiung Leukemia Research Group, 2009. Cured meat, vegetables, and bean-curd foods in relation to childhood acute leukemia risk: a population based case-control study. *BMC Cancer* 9, 15. doi:10.1186/1471-2407-9-15

32. Lula, E.C.O., Ribeiro, C.C.C., Hugo, F.N., Alves, C.M.C., Silva, A.A.M., 2014. Added sugars and periodontal disease in young adults: an analysis of NHANES III data. *Am. J. Clin. Nutr.* 100, 1182–1187. doi:10.3945/ajcn.114.089656
33. Marsh, P.D., Devine, D.A., 2011. How is the development of dental biofilms influenced by the host? *J. Clin. Periodontol.* 38 Suppl 11, 28–35. doi:10.1111/j.1600-051X.2010.01673.x
34. Merchant, A.T., Pitiphat, W., Franz, M., Joshipura, K.J., 2006. Whole-grain and fiber intakes and periodontitis risk in men. *Am. J. Clin. Nutr.* 83, 1395–1400.
35. Moorthi, R.N., Vorland, C.J., Hill Gallant, K.M., 2017. Diet and Diabetic Kidney Disease: Plant Versus Animal Protein. *Curr. Diab. Rep.* 17, 15. doi:10.1007/s11892-017-0843-x
36. Neiva, R.F., Al-Shammari, K., Nociti, F.H., Soehren, S., Wang, H.-L., 2005. Effects of vitamin-B complex supplementation on periodontal wound healing. *J. Periodontol.* 76, 1084–1091. doi:10.1902/jop.2005.76.7.1084
37. Noh, E.-J., Kang, M.-J., Jeong, Y.-J., Lee, J.-Y., Park, J.-H., Choi, H.-J., Oh, S.-M., Lee, K.-B., Kim, D.-J., Shin, J.-A., Cho, S.-D., Park, J.-H., 2016. Withaferin A inhibits inflammatory responses induced by *Fusobacterium nucleatum* and *Aggregatibacter actinomycetemcomitans* in macrophages. *Mol. Med. Rep.* 14, 983–988. doi:10.3892/mmr.2016.5326
38. Serhan, C.N., Chiang, N., Dalli, J., 2015. The resolution code of acute inflammation: Novel pro-resolving lipid mediators in resolution. *Semin. Immunol.* 27, 200–215. doi:10.1016/j.smim.2015.03.004
39. Simopoulos, A.P., 2006. Evolutionary aspects of diet, the omega-6/omega-3 ratio and genetic variation: nutritional implications for chronic diseases. *Biomed. Pharmacother., Special Issue for the 50<sup>th</sup> anniversary of the journal* 60, 502–507. doi:10.1016/j.biopha.2006.07.080
40. Sleeth, M.L., Thompson, E.L., Ford, H.E., Zac-Varghese, S.E.K., Frost, G., 2010. Free fatty acid receptor 2 and nutrient sensing: a proposed role for fibre, fermentable carbohydrates and short-chain fatty acids in appetite regulation. *Nutr. Res. Rev.* 23, 135–145. doi:10.1017/S0954422410000089
41. Staudte, H., Sigusch, B.W., Glockmann, E., 2005. Grapefruit consumption improves vitamin C status in periodontitis patients. *Br. Dent. J.* 199, 213–217, discussion 210. doi:10.1038/sj.bdj.4812613
42. Staufenbiel, I., Weinspach, K., Förster, G., Geurtsen, W., Günay, H., 2013. Periodontal conditions in vegetarians: a clinical study. *Eur. J. Clin. Nutr.* 67, 836–840. doi:10.1038/ejcn.2013.101
43. Van der Velden, U., Kuzmanova, D., Chapple, I.L.C., 2011. Micronutritional approaches to periodontal therapy. *J. Clin. Periodontol.* 38 Suppl 11, 142–158. doi:10.1111/j.1600-051X.2010.01663.x

44. van Woudenberg, G.J., Theofylaktopoulou, D., Kuijsten, A., Ferreira, I., van Greevenbroek, M.M., van der Kallen, C.J., Schalkwijk, C.G., Stehouwer, C.D.A., Ocké, M.C., Nijpels, G., Dekker, J.M., Blaak, E.E., Feskens, E.J.M., 2013. Adapted dietary inflammatory index and its association with a summary score for low-grade inflammation and markers of glucose metabolism: the Cohort study on Diabetes and Atherosclerosis Maastricht (CODAM) and the Hoorn study. *Am. J. Clin. Nutr.* 98, 1533–1542. doi:10.3945/ajcn.112.056333
45. Varela-López, A., Giampieri, F., Bullón, P., Battino, M., Quiles, J.L., 2016. A Systematic Review on the Implication of Minerals in the Onset, Severity and Treatment of Periodontal Disease. *Mol. Basel Switz.* 21. doi:10.3390/molecules21091183
46. Williams, R.C., 2008. Host modulation for the treatment of periodontal disease. *Compend. Contin. Educ. Dent. Jamesburg NJ 1995* 29, 160–162, 164, 166–168 passim.
47. Woelber, J.P., Bremer, K., Vach, K., König, D., Hellwig, E., Ratka-Krüger, P., Al-Ahmad, A., Tennert, C., 2016. An oral health optimized diet can reduce gingival and periodontal inflammation in humans - a randomized controlled pilot study. *BMC Oral Health* 17, 28. doi:10.1186/s12903-016-0257-1
48. Zong, G., Holtfreter, B., Scott, A.E., Völzke, H., Petersmann, A., Dietrich, T., Newson, R.S., Kocher, T., 2016. Serum vitamin B12 is inversely associated with periodontal progression and risk of tooth loss: a prospective cohort study. *J. Clin. Periodontol.* 43, 2–9. doi:10.1111/jcpe.12483