

Der Zusammenhang zwischen Adipositas und Parodontitis

- [1] Mensink G, Schienkiewitz A, Haftenberger M, Lampert T, Ziese T, Scheidt-Nave C: Übergewicht und Adipositas in Deutschland. Vol. 56 : Robert Koch-Institut, Epidemiologie und Gesundheitsberichterstattung (2013).
- [2] Obesity: preventing and managing the global epidemic. Report of a WHO consultation. World Health Organ Tech Rep Ser 894, 1–253 (2000).
- [3] Kisseebah AH, Freedman DS, Peiris AN: Health risks of obesity. Med Clin North Am 73, 111–138 (1989).
- [4] Despres JP, Lemieux I, Prud'homme D: Treatment of obesity: need to focus on high risk abdominally obese patients. BMJ 322, 716–720 (2001).
- [5] Lean ME, Han TS, Morrison CE: Waist circumference as a measure for indicating need for weight management. BMJ 311, 158–161 (1995).
- [6] Hajishengallis G, Lamont RJ: Dancing with the stars: How choreographed bacterial interactions dictate nososymbiosis and give rise to keystone pathogens, accessory pathogens, and pathobionts. Trends Microbiol 24, 477–489 (2016).
- [7] Tatakaris DN, Kumar PS: Etiology and pathogenesis of periodontal diseases. Dent Clin North Am 49, 491–516 (2005).
- [8] Jordan AR, Micheelis W: Fünfte Deutsche Mundgesundheitsstudie (DMS V). IDZ-Materialienreihe, Bd. 35, ed. I.D.Z. Zahnärzte. Deutscher Zahnärzte Verlag DÄV, 617 (2016).
- [9] Perlstein MI, Bissada NF: Influence of obesity and hypertension on the severity of periodontitis in rats. Oral Surgery, Oral Medicine, Oral Pathology 43, 707–719 (1977).
- [10] Saito T, Shimazaki Y, Sakamoto M: Obesity and periodontitis. N Engl J Med 339, 482–483 (1998).
- [11] Nishida N, Tanaka M, Hayashi N, Nagata H, Takeshita T, Nakayama K, Morimoto K, Shizukuishi S: Determination of smoking and obesity as periodontitis risks using the classification and regression tree method. J Periodontol 76, 923–928 (2005).
- [12] Saito T, Shimazaki Y, Koga T, Tsuzuki M, Ohshima A: Relationship between upper body obesity and periodontitis. J Dent Res 80, 1631–1636 (2001).
- [13] Kim EJ, Jin BH, Bae KH: Periodontitis and obesity: a study of the Fourth Korean National Health and Nutrition Examination Survey. J Periodontol 82, 533–542 (2011).

- [14] Al-Zahrani MS, Bissada NF, Borawski EA: Obesity and periodontal disease in young, middle-aged, and older adults. *J Periodontol* 74, 610–615 (2003).
- [15] Moura-Grec PG, Marsicano JA, Carvalho CA, Sales-Peres SH: Obesity and periodontitis: systematic review and meta-analysis. *Cien Saude Colet* 19, 1763–1772 (2014).
- [16] Nascimento GG, Leite FR, Do LG, Peres KG, Correa MB, Demarco FF, Peres MA: Is weight gain associated with the incidence of periodontitis? A systematic review and meta-analysis. *J Clin Periodontol* 42, 495–505 (2015).
- [17] Suvan J, D'Aiuto F, Moles DR, Petrie A, Donos N: Association between overweight/obesity and periodontitis in adults. A systematic review. *Obes Rev* 12, e381–404 (2011).
- [18] Chaffee BW, Weston SJ: Association between chronic periodontal disease and obesity: a systematic review and meta-analysis. *J Periodontol* 81, 1708–1724 (2010).
- [19] Morita I, Okamoto Y, Yoshii S, Nakagaki H, Mizuno K, Sheiham A, Sabbah W: Five-year incidence of periodontal disease is related to body mass index. *J Dent Res* 90, 199–202 (2011).
- [20] Gorman A, Kaye EK, Apovian C, Fung TT, Nunn M, Garcia RI: Overweight and obesity predict time to periodontal disease progression in men. *J Clin Periodontol* 39, 107–114 (2012).
- [21] Nascimento GG, Leite FR, Conceicao DA, Ferrua CP, Singh A, Demarco FF: Is there a relationship between obesity and tooth loss and edentulism? A systematic review and meta-analysis. *Obes Rev* 17, 587–598 (2016).
- [22] O'Connor JP, Milledge KL, O'Leary F, Cumming R, Eberhard J, Hirani V : Poor dietary intake of nutrients and food groups are associated with increased risk of periodontal disease among community-dwelling older adults: a systematic literature review. *Nutr Rev* (2019) [Epub ahead of print].
- [23] Ueda H, Yagi T, Amitani H, Asakawa A, Ikeda S, Miyawaki S, Inui A: The roles of salivary secretion, brain-gut peptides, and oral hygiene in obesity. *Obes Res Clin Pract* 7, e321–329 (2013).
- [24] Smith AG, Sheridan PA, Harp JB, Beck MA: Diet-induced obese mice have increased mortality and altered immune responses when infected with influenza virus. *J Nutr* 137, 1236–1243 (2007).
- [25] Marti A, Marcos A, Martinez JA: Obesity and immune function relationships. *Obes Rev* 2, 131–140 (2001).
- [26] Amar S, Zhou Q, Shaik-Dasthagirisaheb Y, Leeman S: Diet-induced obesity in mice causes changes in immune responses and bone loss manifested by bacterial challenge. *Proc Natl Acad Sci USA* 104, 20466–20471 (2007).

- [27] Zelkha SA, Freilich RW, Amar S: Periodontal innate immune mechanisms relevant to atherosclerosis and obesity. *Periodontol* 2000 54, 207–221 (2010).
- [28] Tomofuji T, Kusano H, Azuma T, Ekuni D, Yamamoto T, Watanabe T: Effects of a high-cholesterol diet on cell behavior in rat periodontitis. *J Dent Res* 84, 752–756 (2005).
- [29] Bruun JM, Verdich C, Toustrup S, Astrup A, Richelsen B: Association between measures of insulin sensitivity and circulating levels of interleukin-8, interleukin-6 and tumor necrosis factor-alpha. Effect of weight loss in obese men. *Eur J Endocrinol* 148, 535–542 (2003).
- [30] Boesing F, Patino JS, da Silva VR, Moreira EA: The interface between obesity and periodontitis with emphasis on oxidative stress and inflammatory response. *Obes Rev* 10, 290–297 (2009).
- [31] Federico A, D'Aiuto E, Borriello F, Barra G, Gravina AG, Romano M, De Palma R: Fat: a matter of disturbance for the immune system. *World J Gastroenterol* 16, 4762–4772 (2010).
- [32] Wozniak SE, Gee LL, Wachtel MS, Frezza EE: Adipose tissue: the new endocrine organ? A review article. *Dig Dis Sci* 54, 1847–1856 (2009).
- [33] Genco RJ, Grossi SG, Ho A, Nishimura F, Murayama Y: A proposed model linking inflammation to obesity, diabetes, and periodontal infections. *J Periodontol* 76 (Suppl 11S), 2075–2084 (2005).
- [34] Deschner J, Eick S, Damanaki A, Nokhbehsaim M: The role of adipokines in periodontal infection and healing. *Mol Oral Microbiol* 29, 258–269 (2014).
- [35] Chang YH, Chang DM, Lin KC, Shin SJ, Lee YJ: Visfatin in overweight/obesity, type 2 diabetes mellitus, insulin resistance, metabolic syndrome and cardiovascular diseases: a meta-analysis and systemic review. *Diabetes Metab Res Rev* 27, 515–527 (2011).
- [36] Haffajee AD, Socransky SS: Relation of body mass index, periodontitis and *Tannerella forsythia*. *J Clin Periodontol* 36, 89–99 (2009).
- [37] Joshipura KJ, Willett WC, Douglass CW: The impact of edentulousness on food and nutrient intake. *J Am Dent Assoc* 127, 459–467 (1996).
- [38] Johansson I, Tidehag P, Lundberg V, Hallmans G: Dental status, diet and cardiovascular risk factors in middle-aged people in northern Sweden. *Community Dent Oral Epidemiol* 22, 431–436 (1994).
- [39] Ritchie CS, Joshipura K, Silliman RA, Miller B, Douglas CW: Oral health problems and significant weight loss among community-dwelling older adults. *J Gerontol A Biol Sci Med Sci* 55, M366–371 (2000).
- [40] McNamara CL, Balaj M, Thomson KH, Eikemo TA, Solheim EF, Bambra C: The socioeconomic distribution of non-communicable diseases in Europe: findings from the European Social Survey (2014) special module on the social determinants of health. *Eur J Public Health* 27, 22–26 (2017).

[41] Schuch HS, Peres KG, Singh A, Peres MA, Do LG: Socioeconomic position during life and periodontitis in adulthood: a systematic review. *Community Dent Oral Epidemiol* 45, 201–208 (2017).

[42] Yeomans MR: Effects of alcohol on food and energy intake in human subjects: evidence for passive and active over-consumption of energy. *Br J Nutr* 92, 31–34 (2004).

[43] Wang J, Lv J, Wang W, Jiang X: Alcohol consumption and risk of periodontitis: a meta-analysis. *J Clin Periodontol* 43, 572–583 (2016).

[44] Franchini R, Petri A, Migliario M, Rimondini L: Poor oral hygiene and gingivitis are associated with obesity and overweight status in paediatric subjects. *J Clin Periodontol* 38, 1021–1028 (2011).

[45] Hujoel PP, Cunha-Cruz J, Kressin NR: Spurious associations in oral epidemiological research: the case of dental flossing and obesity. *J Clin Periodontol* 33, 520–523 (2006).

[46] Ladabaum U, Mannalithara A, Myer PA, Singh G: Obesity, abdominal obesity, physical activity, and caloric intake in US adults: 1988 to 2010. *Am J Med* 127, 717–727 (2014).

[47] Hajishengallis G: Aging and its impact on innate immunity and inflammation: implications for periodontitis. *J Oral Biosci* 56, 30–37 (2014).

[48] Nibali L, Tatarakis N, Needleman I, Tu YK, D'Aiuto F, Rizzo M, Donos N: Clinical review: Association between metabolic syndrome and periodontitis: a systematic review and meta-analysis. *J Clin Endocrinol Metab* 98, 913–920 (2013).