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[37]. [8, 13].

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18-20 . [23, 43, 50].

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7,1 1000, 2007 -9,7, 2008 -11,9 , Perlstein -

[14]. , Zucker [54]. -

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60% , -

[44]. , -

« » [7]. , -

1998 Saito .

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CPITN ,

[1,4]. -

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30 / 2 [48]. -

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87- .

[5]. , -

(LADR) -

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[35, 41]. « - » [29].
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[21].
IL-6 C-
[47,53]. Case Western
Reserve University [45].
13665
(NHANES III).
(18-34) 76 %,
[29].
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(60-90).
[10].
[12].
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[47]. Genco RJ
NHANES III
[15].
[42].
L.M. Berstein
(AGE) /
[32, 52]. [25],
« »
«lipostat»,
in vitro in vivo

[26].

IL-1)[38]. Otero M (TNF- , [19].

[39]. (TGF-), TNF- . [49].

[33]. TGF- [27].

[51]. (TNF-) -6 (IL-6). [18].

TNF- , IL-6 - 10-

[28]. RELM TNF- IL-6 [24].

RELM FIZZ3, FIZZ1 FIZZ2, [28]. (TNF-).

[17]. TNF-

[16].

[22]. 1. // .-2003.- 1.- .20-22. /

2. / - , -2008.-C.105.

3. -1 (PAI-1) , 2005 .

[40]. PAI-1 - , .-2006.-C.154 [: <http://www.euro.who.int/Document/E87325R.pdf>

2- [46]. 4.

[34]. // i .-2009.- 3.-C.30-33. 5.

/ . . // .

6. .-2005.- 5.- .63-65.
7. . . . : . . . / - . . . // - 2009.- .55, 1.- .44-50.
8. . . . : . . . , . . . , . . . / - . . . : - . . . , 2004.- 456 .
9. . . . // - 2006.- 1.- .55-57.
10. / . . . , . . . , . . . // . . . , - 2008.- 2.- .86-90.
11. / [. . . ,] // - 2006.- 4, 6.- .14-17.
12. / [. . . ,] // - 2008.- 2.- .29-32.
13. . . . - . . . , 1999.- C.189.
14. / . . . , . . . , . . . // - 2004.- 1 (30).- .3-7.
- 2009.-C.360.
15. A proposed model linking inflammation to obesity, diabetes, and periodontal infections/ [RJ Genco, SG Grossi, Ho A et al.] // J Periodontol.- 2005.-Vol 76 , 11(Suppl).-P.2075-2084.
16. Adipocyte-derived plasma protein adiponectin acts as a platelet-derived growth factor-BB-binding protein and regulates growth factor-induced common postreceptor signal in vascular smooth muscle cell/[Y. Arita, S. Kihara, N. Ouchi et al]//Circulation.-2002.-Vol. 105.-P.2893-2898.
17. Adiponectin and Metabolic Syndrome/ [Y. Matsuzawa, T. Funahashi, S. Kihara et al]// Arterioscler. Thromb. Vasc. Biol. — 2004. — Vol. 24. — P. 29-33.
18. Adipose tissue tumor necrosis factor and interleukin-6 expression in human obesity and insulin resistance / [PA Kern, S Ranganathan, Li C, et al] //Am J Physiol Endocrinol Metab.- 2001.- Vol. 280.- P.745-751.
19. Aizawa-Abe M. Pathophysiological role of leptin in obesity-related hypertension / M. Aizawa-Abe // J. Clin. Invest. — 2000. — Vol. 105. — P. 1243-1252.
20. Al-Zahrani MS. Obesity and periodontal disease in young, middle-aged, and older adults/ Al-Zahrani MS, NF Bissada, EA Borawskit //J Periodontol.-2003.-Vol. 74.-P.610-615.
21. Al-Zahrani MS. Periodontitis and three health-enhancing behaviors: maintaining normal weight, engaging in recommended level of exercise, and consuming a high-quality diet / MS Al-Zahrani, EA Borawski, NF Bissada //J Periodontol.-2005.-Vol. 76.-P.1362-1366.
22. An adipocyte-derived plasma protein, adiponectin, adheres to injures vascular walls/[Y. Okamoto, Y. Arita, M. Nishida et al]//Horm. Metab. Res. — 2000. — Vol. 32. — P.47.
23. Association between periodontitis and hyperlipidemia: cause or effect?/ [CW Cutler, EA. Shinedling, M. Nunn et al.]// J Periodontal.- 1999.- Vol. 70, 12.-P.1429-3d
24. Beck JD. Systemic effects of periodontitis: epidemiology of periodontal disease and cardiovascular disease. / JD Beck, S. Offenbacher //J Periodontol.- 2005.- Vol. 76, 11 (Suppl).- P.2089-2100.
25. Berstein L.M. Macrosomy. Obesity and Cancer/ Berstein L.M. Macrosomy // Nova Sci. Publ. — 1997. — Vol. 7. — P. 195.
26. Biological action of leptin as an angiogenic factor/ [M.R. Sierra-Honigmann, A.K. Nath, C. Murakami et al] // Science. — 1998. — Vol. 281. — P. 1683-1686.
27. Blobe G.C. Role of Transforming Growth Factor beta in Human Disease / G.C. Blobe, W.P. Schieman, H.F. Lodish // N. Engl. J. Med. — 2000. — Vol. 342. — P. 1350-1358.
28. Burnett M.S. Cross-Sectional Associations of Resistin, Coronary Heart Disease, and Insulin Resistance / M.S. Burnett, J.M. Devaney, R.J. Adenika // J. Clin. Endocrinol. Metab. — 2006. — Vol. 91(1). — P. 64-68.
29. Determination of smoking and obesity as periodontitis risks using the classification and regression tree method/ [N Nishida, M Tanaka, N Hayashi et al]//J Periodontol.-2005.- Vol. 76.-P.923-928.
30. Food and health in Europe: a new basis for action / [A.Pobertson, C. Tirado, T. Lobstein et al.]// WHO, 2002. —P.385.
31. Gomez-Ambrosi J. Do resistin and resistin-like molecules also link obesity to inflammatory diseases? / J. Gomez-Ambrosi, G. Fruhbeck //Ann Intern Med.-2001.- Vol. 135.- P. 306-307.
32. Iacopino AM. Pathophysiological relationships between periodontitis and systemic disease¹ recent concepts involving serum lipids/ AM Iacopino, CW Cutler //J Periodontal.- 2000.-Vol. 71, 81.-P.1375-1384.
33. II-1 beta mediates leptin induction during inflammation / [R. Faggioni, G. Fantuzzi, J. Fuller et al] // Am J Physiol.-1998.- Vol. 274.-P.204-208.
34. Increased adipose angiotensinogen gene expression in human obesity / [V. Van Harmelen, P. Ariapart, J. Hoffstedt et al] // Obes. Res. — 2000. — Vol. 8. — P. 337-341.
35. Jimenez M. Is there a prospective association between obesity and periodontal disease?/ [M Jimenez, Hu F, Li Y et al.]//87th General Session of the International Association for Dental Research, Miami,

- FL, April 1–4, 2009. Abstract available at: <http://iadr.confex.com/iadr/2009miami/webprogram/Paper116221.html>. Accessed April 13, 2009.
36. Kershaw EE. Adipose tissue as an endocrine organ/ EE Kershaw, JS Flier // *J Clin Endocrinol Metab.*-2004.-Vol. 89.-P.2548–2556.
 37. Leptin directly regulates bone cell function in vitro and reduces bone fragility in vivo/ J. Cornish, KE Callon, U. Bava et al // *J Endocrinol.*-2002.- Vol. 175.- P.405–415.
 38. Leptin modulates the T-cell immune response and reverses starvation-induced immunosuppression / [G.M. Lord, G. Matarese, J.K. Howard et al] // *Nature.* — 1998. — Vol. 394. — P. 897-901.
 39. Leptin, from fat to inflammation: old questions and new insights / [M. Otero, R. Lago, F. Lago et al] // *FEBS Lett.*-2005.- Vol. 579.-P.295–301.
 40. Mertens I. Obesity, haemostasis and the fibrinolytic system/ I. Mertens, L.F. Van Gaal // *Obes. Rev.* — 2002. — Vol. 3(2). — P. 85-101.
 41. Munoz F. Associations between measures of adiposity and periodontitis among older adults/ F Munoz, M Jimenez, K. Joshipura // 87th General Session of the International Association for Dental Research, Miami, FL, April 1–4, 2009. Abstract available at: <http://iadr.confex.com/iadr/2009miami/webprogram/Paper121111.html>. Accessed April 13, 2009.
 42. Obesity is associated with macrophage accumulation in adipose tissue/[S.P Weisberg., D.McCann, M. Desai et al] // *J. Clin. Invest.* — 2003. — Vol.112.— .1796-1808.
 43. Overweight and obesity as risk indicators for periodontitis in adults/ [Dalla Vecchia CF, C. Susin, CK Rosing et al.] // *J Periodontol.*-2005.- Vol. 76. –P.1721–1728.
 44. Perlstein MI. Influence of obesity and hypertension on the severity of periodontitis in rats/ MI Perlstein, NF Bissada // *Oral Surg Oral Med Oral Pathol.*- 1977.- Vol. 43.- P.707–719.
 45. Pischon T. Leisure-time physical activity and reduced plasma levels of obesity-related inflammatory markers/[T Pischon, SE Hankinson, GS Hotamisligil et al] // *Obes Res.*-2003.-Vol. 11.- P.1055–1064.
 46. Plasma levels of tissue plasminogen activator/ plasminogen activator inhibitor-1 complex and von Willebrand factor are significant risk markers for recurrent myocardial infarction in the Stockholm Heart Epidemiology Program (SHEEP) study/[B, Wiman, T. Andersson et al] // *Arterioscler. Thromb. Vasc. Biol.* — 2000. — Vol. 20, 8. — P. 2019-23.
 47. Relationship between upper body obesity and periodontitis/ [T Saito, Y Shimazaki, T Koga et al.] // *Dent Res.*-2001.-Vol. 80.-P.1631–1636.
 48. Saito T. Obesity and periodontitis./ T Saito, Y Shimazaki, M Sakamoto // *N Engl J Med.*-1998.-Vol. 339.-P.482–483.
 49. Samad F. Tissue distribution and regulation of plasminogen activator inhibitor-1 in obese mice / F. Samad, D.J. Loskutoff // *Mol. Med.* — 1996. — Vol. 2. — P. 568-582.
 50. The association between periodontal disease and obesity among adults in Jordan./ [YS Khader, HA. Bawadi, TF Haroun et al.] // *J Clin Periodontal.*- 2009.- Vol. 36, 1.-P.18-24.
 51. Thomas T. Leptin: a potential mediator for protective effects of fat mass on bone tissue/ T. Thomas // *Joint Bone Spine.*-2003.-Vol. 70.- P.18–21.
 52. Van Dyke TE. Inflammation and periodontal disease, a reappraisal/ TE Van Dyke // *J Periodontal.*- 2008.-Vol. 79, 8(Suppl).-P.1501-1502
 53. Wood N. Comparison of body composition and periodontal disease using nutritional assessment techniques. Third National Health and Nutrition Examination Survey (NHANES III)/ N Wood, RB Johnson, CF Streckfus // *J Clin Periodontol.*2001.-Vol. 30.-P.321–327.
 54. Zucker TF. Hereditary obesity in the rat associated with high serum fat and cholesterol/ TF Zucker, LM Zucker // *Proc Soc Exp Biol Med.*-1962. – Vol. 110.-P.165–171.