

Obezite ve Üst Ekstremitte Hastalıkları

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Giriş

Yağ dokusu miktarında artış olarak tanımlanan obezite, karmaşık, çok faktörlü bir hastalıktır . Dünya çapında obezite prevalansı 1980'den beri ikiye katlanmıştır, öyle ki dünya nüfusunun yaklaşık üçte biri artık aşırı kilolu veya obez olarak sınıflandırılmaktadır (1). Obezite vücudun neredeyse tamamında fizyolojik fonksiyonları olumsuz etkiler ve önemli bir halk sağlığı tehdidi oluşturur. Diabetes mellitus, çeşitli kanser türleri, bir dizi kas-iskelet sistemi bozuklukları ve kötü ruh sağlığı gibi birden çok hastalık durumu geliştirme riskini artırır (2-6). Bunların tümünün yaşam kalitesi, iş verimliliği ve sağlık harcamalarında olumsuz etkileri bulunmaktadır. Obezite oranları, coğrafi bölge, etnik köken veya sosyoekonomik duruma bakılmaksızın her yaşta ve her iki cinsiyette artmaya devam etmektedir.

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Obez hastalarda artan kan hacmi nedeniyle karpal tünelde doku basıncında yükselme olmaktadır. Karpal tünel hidrostatik basıncındaki sürekli artış, lokal iskeminin sebebidir. İskemi, demiyelinizasyon ve akson kaybı ile sonuçlanan median sinir hasarına neden olabilir. Ek olarak sürekli basınçla sinoviyal doku etrafında ve kanalda fibrozis ve kalınlaşma meydana gelmektedir (46).

Sonuç

Obezite sadece vücuttaki yağ miktarındaki artış ve buna bağlı kilo artışı olarak değerlendirilemez. Yağ dokusu bir endokrin organ gibi çalışan ve vücutta birçok düzenleyici görevi olan hormon benzeri madde salgılamaktadır. Salgılanan bu hormon benzeri yapıların vücutta farklı düzenleyici etkileri olmakla birlikte kas iskelet sistemi üzerinde olumsuz etkileri daha belirgindir. Diğer yandan obez hastalarda kas iskelet sistemi rahatsızlıklarının tedavileri daha güç, cerrahi riskleri ve komplikasyon oranları daha yüksek; başarı şansları ise daha düşük olmaktadır.

Kaynaklar

1. A A, MH F, MB R, P S, K E, A L, et al. Health Effects of Overweight and Obesity in 195 Countries over 25 Years. *N Engl J Med* (Internet). 2017 Jul 6 (cited 2022 Nov 13);377(1):13–27. Available from: <https://pubmed.ncbi.nlm.nih.gov/28604169/>
2. Singh GM, Danaei G, Farzadfar F, Stevens GA, Woodward M, Wormser D, et al. The Age-Specific Quantitative Effects of Metabolic Risk Factors on Cardiovascular Diseases and Diabetes: A Pooled Analysis. *PLoS One* (Internet). 2013 Jul 30 (cited 2022 Nov 13);8(7):e65174. Available from: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0065174>
3. Czernichow S, Kengne AP, Stamatakis E, Hamer M, Batty GD. Body mass index, waist circumference and waist-hip ratio: which is the better discriminator of cardiovascular disease mortality risk?: evidence from an individual-participant meta-analysis of 82 864 participants from nine cohort studies. *Obes Rev* (Internet). 2011 Sep (cited 2022 Nov 13);12(9):680–7. Available from: <https://pubmed.ncbi.nlm.nih.gov/21521449/>

4. Lauby-Secretan B, Scoccianti C, Loomis D, Grosse Y, Bianchini F, Straif K. Body Fatness and Cancer--Viewpoint of the IARC Working Group. *N Engl J Med* (Internet). 2016 Aug 25 (cited 2022 Nov 13);375(8):794–8. Available from: <https://pubmed.ncbi.nlm.nih.gov/27557308/>
5. Anandacoomarasamy A, Caterson I, Sambrook P, Fransen M, March L. The impact of obesity on the musculoskeletal system. *Int J Obes (Lond)* (Internet). 2008 Feb (cited 2022 Nov 13);32(2):211–22. Available from: <https://pubmed.ncbi.nlm.nih.gov/17848940/>
6. Anstey KJ, Cherbuin N, Budge M, Young J. Body mass index in midlife and late-life as a risk factor for dementia: a meta-analysis of prospective studies. *Obes Rev* (Internet). 2011 (cited 2022 Nov 13);12(5). Available from: <https://pubmed.ncbi.nlm.nih.gov/21348917/>
7. Obesity and overweight (Internet). (cited 2022 Nov 13). Available from: <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>
8. Amin AK, Sales JD, Brenkel IJ. Obesity and total knee and hip replacement. *Curr Orthop* (Internet). 2006 Jun (cited 2022 Nov 13);20(3):216–21. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S0268089006000363>
9. Luime JJ, Koes BW, Hendriksen IJM, Burdorf A, Verhagen AP, Miedema HS, et al. Prevalence and incidence of shoulder pain in the general population; a systematic review. *Scand J Rheumatol* (Internet). 2004 (cited 2022 Nov 13);33(2):73–81. Available from: <https://pubmed.ncbi.nlm.nih.gov/15163107/>
10. Luime JJ, Koes BW, Miedem HS, Verhaar JAN, Burdorf A. High incidence and recurrence of shoulder and neck pain in nursing home employees was demonstrated during a 2-year follow-up. *J Clin Epidemiol* (Internet). 2005 (cited 2022 Nov 13);58(4):407–13. Available from: <https://pubmed.ncbi.nlm.nih.gov/15862727/>
11. Kuijpers T, van Tulder MW, van der Heijden GJMG, Bouter LM, van der Windt DAWM. Costs of shoulder pain in primary care consulters: A prospective cohort study in The Netherlands. *BMC Musculoskelet Disord* (Internet). 2006 Nov 1 (cited 2022 Nov 13);7(1):1–8. Available from: <https://bmc-musculoskeletdisord.biomedcentral.com/articles/10.1186/1471-2474-7-83>
12. Blevins FT, Djurasovic M, Flatow EL, Vogel KG. Biology of the rotator cuff tendon. *Orthop Clin North Am* (Internet). 1997 (cited 2022 Nov 13);28(1):1–16. Available from: <https://pubmed.ncbi.nlm.nih.gov/9024427/>
13. Dandona P, Aljada A, Chaudhuri A, Mohanty P, Garg R. Metabolic syndrome: a comprehensive perspective based on interactions between obesity, diabetes, and inflammation. *Circulation* (Internet). 2005 Mar 22 (cited 2022 Nov 13);111(11):1448–54. Available from: <https://pubmed.ncbi.nlm.nih.gov/15781756/>
14. Lohr JF, Uthoff HK. The microvascular pattern of the supraspinatus tendon. *Clin Orthop Relat Res*. 1990 May;(254):35–8.

15. Wendelboe AM, Hegmann KT, Gren LH, Alder SC, White GL, Lyon JL. Associations between body-mass index and surgery for rotator cuff tendinitis. *J Bone Joint Surg Am* (Internet). 2004 (cited 2022 Nov 13);86(4):743–7. Available from: <https://pubmed.ncbi.nlm.nih.gov/15069138/>
16. Rechart M, Shiri R, Karppinen J, Jula A, Heliövaara M, Viikari-Juntura E. Lifestyle and metabolic factors in relation to shoulder pain and rotator cuff tendinitis: A population-based study. *BMC Musculoskeletal Disord* (Internet). 2010 Jul 20 (cited 2022 Nov 13);11(1):1–11. Available from: <https://bmcmusculoskeletaldisord.biomedcentral.com/articles/10.1186/1471-2474-11-165>
17. Titchener AG, White JJE, Hinchliffe SR, Tambe AA, Hubbard RB, Clark DI. Comorbidities in rotator cuff disease: a case-control study. *J Shoulder Elbow Surg* (Internet). 2014 (cited 2022 Nov 13);23(9):1282–8. Available from: <https://pubmed.ncbi.nlm.nih.gov/24618192/>
18. Felson DT. An update on the pathogenesis and epidemiology of osteoarthritis. *Radiol Clin North Am* (Internet). 2004 Jan (cited 2022 Nov 13);42(1):1–9, v. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/15049520>
19. Yusuf E, Ioan-Facsinay A, Bijsterbosch J, Klein-Wieringa I, Kwekkeboom J, Slagboom PE, et al. Association between leptin, adiponectin and resistin and long-term progression of hand osteoarthritis. *Ann Rheum Dis* (Internet). 2011 Jul (cited 2022 Nov 13);70(7):1282–4. Available from: <https://pubmed.ncbi.nlm.nih.gov/21470970/>
20. Pallu S, Francin PJ, Guillaume C, Gegout-Pottie P, Netter P, Mainard D, et al. Obesity affects the chondrocyte responsiveness to leptin in patients with osteoarthritis. *Arthritis Res Ther* (Internet). 2010 Jun 9 (cited 2022 Nov 13);12(3). Available from: <https://pubmed.ncbi.nlm.nih.gov/20534145/>
21. Yusuf E, Kloppenburg M. Epidemiological studies on adipokines and osteoarthritis. *Int J Clin Rheumatol* (Internet). 2013 Jun;8(3):327–34. Available from: <http://www.futuremedicine.com/doi/abs/10.2217/ijr.13.18>
22. Berry PA, Jones SW, Cicuttini FM, Wluka AE, MacIewicz RA. Temporal relationship between serum adipokines, biomarkers of bone and cartilage turnover, and cartilage volume loss in a population with clinical knee osteoarthritis. *Arthritis Rheum* (Internet). 2011 Mar (cited 2022 Nov 13);63(3):700–7. Available from: <https://pubmed.ncbi.nlm.nih.gov/21305502/>
23. Gandhi R, Perruccio A v., Rizek R, Dessouki O, Evans HMK, Mahomed NN. Obesity-Related Adipokines Predict Patient-Reported Shoulder Pain. *Obes Facts* (Internet). 2013 Dec (cited 2022 Nov 13);6(6):536–41. Available from: <https://www.karger.com/Article/FullText/357230>
24. Battery L, Maffulli N. Inflammation in overuse tendon injuries. *Sports Med Arthrosc Rev* (Internet). 2011 Sep (cited 2022 Nov 13);19(3):213–7. Available from: <https://pubmed.ncbi.nlm.nih.gov/21822104/>

25. Abate M, Oliva F, Schiavone C, Salini V. Achilles tendinopathy in amateur runners: role of adiposity (Tendinopathies and obesity). *Muscles Ligaments Tendons J* (Internet). 2012 Jan (cited 2022 Nov 13);2(1):44. Available from: [/pmc/articles/PMC3666497/](http://pubmed.ncbi.nlm.nih.gov/23825198/)
26. del Buono A, Battery L, Denaro V, Maccauro G, Maffulli N. Tendinopathy and Inflammation: Some Truths. <http://dx.doi.org/10.1177/03946320110241S209> (Internet). 2011 Jan 1 (cited 2022 Nov 13);24(1 Suppl 2):45–50. Available from: <https://journals.sagepub.com/doi/10.1177/03946320110241S209>
27. Wearing SC, Hennig EM, Byrne NM, Steele JR, Hills AP. Musculoskeletal disorders associated with obesity: a biomechanical perspective. *Obes Rev* (Internet). 2006 Aug (cited 2022 Nov 13);7(3):239–50. Available from: <https://pubmed.ncbi.nlm.nih.gov/16866972/>
28. Shiri R, Viikari-Juntura E, Varonen H, Heliövaara M. Prevalence and determinants of lateral and medial epicondylitis: a population study. *Am J Epidemiol* (Internet). 2006 Dec (cited 2022 Nov 13);164(11):1065–74. Available from: <https://pubmed.ncbi.nlm.nih.gov/16968862/>
29. Titchener AG, Fakis A, Tambe AA, Smith C, Hubbard RB, Clark DI. Risk factors in lateral epicondylitis (tennis elbow): a case-control study. *J Hand Surg Eur Vol* (Internet). 2013 Feb (cited 2022 Nov 13);38(2):159–64. Available from: <https://pubmed.ncbi.nlm.nih.gov/22490998/>
30. Descatha A, Dale AM, Jaegers L, Herquelot E, Evanoff B. Self-reported physical exposure association with medial and lateral epicondylitis incidence in a large longitudinal study. *Occup Environ Med* (Internet). 2013 Sep (cited 2022 Nov 13);70(9):670–3. Available from: <https://pubmed.ncbi.nlm.nih.gov/23825198/>
31. Pereira D, Peleteiro B, Araújo J, Branco J, Santos RA, Ramos E. The effect of osteoarthritis definition on prevalence and incidence estimates: a systematic review. *Osteoarthritis Cartilage* (Internet). 2011 Nov (cited 2022 Nov 13);19(11):1270–85. Available from: <https://pubmed.ncbi.nlm.nih.gov/21907813/>
32. Kwok WY, Vliet Vlieland TPM, Rosendaal FR, Huizinga TWJ, Kloppenburg M. Limitations in daily activities are the major determinant of reduced health-related quality of life in patients with hand osteoarthritis. *Ann Rheum Dis* (Internet). 2011 Feb (cited 2022 Nov 13);70(2):334–6. Available from: <https://pubmed.ncbi.nlm.nih.gov/21081529/>
33. Zhang Y, Niu J, Kelly-Hayes M, Chaisson CE, Aliabadi P, Felson DT. Prevalence of symptomatic hand osteoarthritis and its impact on functional status among the elderly: The Framingham Study. *Am J Epidemiol* (Internet). 2002 Dec 1 (cited 2022 Nov 13);156(11):1021–7. Available from: <https://pubmed.ncbi.nlm.nih.gov/12446258/>
34. Hochberg MC, Lethbridge-Cejku M, Scott WW, Plato CC, Tobin JD. Obesity and osteoarthritis of the hands in women. *Osteoarthritis Cartilage* (Internet). 1993 (cited 2022 Nov 13);1(2):129–35. Available from: <https://pubmed.ncbi.nlm.nih.gov/8886089/>

35. Denisov LN, Nasonova VA, Koreshkov GG, Kashevarova NG. (Role of obesity in the development of osteoarthritis and concomitant diseases). *Ter Arkh.* 2010;82(10):34–7.
36. Cicuttini FM, Baker JR, Spector TD. The association of obesity with osteoarthritis of the hand and knee in women: a twin study. *J Rheumatol.* 1996 Jul;23(7):1221–6.
37. Killock D. The influence of obesity on OA—does size matter or is metabolic dysfunction more important? *Nature Reviews Rheumatology* 2012 8:2 (Internet). 2012 Jan 24 (cited 2022 Nov 13);8(2):61–61. Available from: <https://www.nature.com/articles/nrrheum.2011.221>
38. Magliano M. Obesity and arthritis. *Menopause Int* (Internet). 2008 Dec 1 (cited 2022 Nov 13);14(4):149–54. Available from: <http://mi.rsmjournals.com/cgi/content/full/14/4/149>
39. Gabay O, Berenbaum F. Adipokines in Arthritis: New Kids on the Block. *Curr Rheumatol Rev.* 2009 Dec 24;5(4):226–32.
40. Gillig JD, White SD, Rachel JN. Acute Carpal Tunnel Syndrome: A Review of Current Literature. *Orthop Clin North Am* (Internet). 2016 Jul 1 (cited 2022 Nov 13);47(3):599–607. Available from: <https://pubmed.ncbi.nlm.nih.gov/27241382/>
41. Becker J, Nora DB, Gomes I, Stringari FF, Seitensius R, Panosso JS, et al. An evaluation of gender, obesity, age and diabetes mellitus as risk factors for carpal tunnel syndrome. *Clinical Neurophysiology* (Internet). 2002 (cited 2022 Nov 13);113(9):1429–34. Available from: <https://pubmed.ncbi.nlm.nih.gov/12169324/>
42. Kouyoumdjian JA, Penha Ananias Morita MDA, Rocha PRF, Miranda RC, Gouveia GM. Body mass index and carpal tunnel syndrome. *Arq Neuropsiquiatr* (Internet). 2000 (cited 2022 Nov 13);58(2A):252–6. Available from: <https://pubmed.ncbi.nlm.nih.gov/10849623/>
43. Werner RA, Albers JW, Franzblau A, Armstrong TJ. The relationship between body mass index and the diagnosis of carpal tunnel syndrome. *Muscle Nerve* (Internet). 1994 (cited 2022 Nov 13);17(6):632–6. Available from: <https://pubmed.ncbi.nlm.nih.gov/8196706/>
44. Dieck GS, Kelsey JL. An epidemiologic study of the carpal tunnel syndrome in an adult female population. *Prev Med (Baltim)* (Internet). 1985 Jan (cited 2022 Nov 13);14(1):63–9. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/4034515>
45. Radecki P. Variability in the median and ulnar nerve latencies: implications for diagnosing entrapment. *J Occup Environ Med* (Internet). 1995 Nov (cited 2022 Nov 13);37(11):1293–9. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/8595499>
46. Bland JDP. Carpal tunnel syndrome. *BMJ* (Internet). 2007 Aug 18 (cited 2022 Nov 13);335(7615):343–6. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/17703044>