

BÖLÜM 6

DİYABET EPİDEMİYOLOJİSİ



Güliz AYDEMİR ACAR¹

TANIM

Diyabetes mellitus: İnsülinin sekresyonunda, etkinliğinde veya her ikisinde bozulma sonucu oluşan, ana bulgusu hiperglisemi (artmış kan glukozu) olan, heterojen metabolik hastalıkların ortak adıdır (1,2,3).

Prediyabet: Glukoz düzeyleri diyabet kriterlerini karşılamayan, normal olarak da değerlendirilmeyecek kadar yüksek olan durumlarda kullanılan terimdir (4).

Tip 2 diyabet riskini arttıran çevresel, sosyal ve yaşam tarzı faktörleri

Tip 2 diyabet oluşumunda genetik faktörlerin yanı sıra sosyal, çevresel ve yaşam tarzı faktörlerinin etkileşimi de söz konusudur. Bu faktörler direkt ve indirekt yollar ile Tip 2 diyabet riskini arttırmaktadır (5,6,7,8). Tablo 1’de bu faktörler gösterilmektedir.

Tablo 1. Diyabet riskini arttıran faktörler

Yaşam tarzı faktörleri	Sosyal ve çevresel faktörler
Beden kitle indeksi (BKİ), vücut yağ dağılımı	Sosyoekonomik durum (gelir, eğitim, meslek)
Lif, fitokimyasal ve bitkisel gıdalardan zayıf diyet	Fiziksel çevre
Uzun süre televizyon izleme/hareketsiz zaman,	Gıda ortamı
Sigara	Sosyal yapı
Şekerle tatlandırılmış içeceklerin düzenli tüketimi	Sağlık hizmetlerine erişim
Trafik, hava kirliliği	
Kısa süreli ve kalitesiz uyku	
Stres/depresyon	

¹ Uzm. Dr., Halk sağlığı uzmanı, glz.1986@outlook.com



KAYNAKLAR

1. IDF. *Diabetes atlas 10th edition*. Available from: <https://diabetesatlas.org/>. (Accessed 17th April 2022).
2. WHO. *Diagnosis and management of type 2 diabetes*. Available from: <https://www.who.int/publications/i/item/who-ucn-ncd-20.1>. (Accessed 17th April 2022).
3. Petersmann A, Nauck M, Müller-Wieland D, et al. Classification and diagnosis of diabetes mellitus. *Experimental and Clinical Endocrinology & Diabetes*. 2018;126(7): 406-410. doi: 10.1055/a-0584-6223.
4. American Diabetes Association Professional Practice Committee. 2. Classification and diagnosis of diabetes: standards of medical care in diabetes-2022. *Diabetes Care*. 2022;45(Suppl 1): S17-S38. doi: 10.2337/dc22-S002.
5. Dendup T, Feng X, Clingan S, et al. Environmental risk factors for developing type 2 diabetes mellitus: a systematic review. *International Journal of Environmental Research and Public Health*. 2018;15(1): 78. doi:10.3390/ijerph15010078.
6. Kolb H, Martin S. Environmental/lifestyle factors in the pathogenesis and prevention of type 2 diabetes. *BMC Medicine*. 2017;15(1): 131. doi: 10.1186/s12916-017-0901-x.
7. Zheng Y, Ley SH, Hu FB. Global aetiology and epidemiology of type 2 diabetes mellitus and its complications. *Nature Reviews Endocrinology*. 2018;14(2): 88-98. doi: 10.1038/nrendo.2017.151.
8. American Diabetes Association Professional Practice Committee. 3. Prevention or delay of type 2 diabetes and associated comorbidities: standards of medical care in diabetes-2022. *Diabetes Care*. 2022;45(Suppl 1): S39-S45. doi: 10.2337/dc22-S003.
9. WHO. *Obesity and overweight*. Available from: <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>. (Accessed 17th April 2022).
10. Vang A, Singh PN, Lee JW, et al. Meats, processed meats, obesity, weight gain and occurrence of diabetes among adults: findings from adventist health studies. *Annals of Nutrition and Metabolism*. 2008;52(2): 96–104. <https://doi.org/10.1159/000121365>.
11. Chiu THT, Pan WH, Lin MN, et al. Vegetarian diet, change in dietary patterns, and diabetes risk: a prospective study. *Nutrition & Diabetes*. 2018;8(1): 12. doi: 10.1038/s41387-018-0022-4.
12. Schwingshackl L, Hoffmann G, Lampousi AM, et al. Food groups and risk of type 2 diabetes mellitus: a systematic review and meta-analysis of prospective studies. *European Journal of Epidemiology*. 2017;32(5): 363-375. doi: 10.1007/s10654-017-0246-y.
13. Olfert MD, Wattick RA. Vegetarian diets and the risk of diabetes. *Current Diabetes Reports*. 2018;18(11): 101. doi: 10.1007/s11892-018-1070-9.
14. Sievenpiper JL, Chan CB, Dworatzek PD, et al. Nutrition Therapy. *Canadian Journal of Diabetes*. 2018;42 (Suppl 1): S64-S79. doi: 10.1016/j.cjcd.2017.10.009.
15. Lee S, Washburn DJ, Colwell B, et al. Examining social determinants of undiagnosed diabetes in Namibia and South Africa using a behavioral model of health services use. *Diabetes Research and Clinical Practice*. 2021;175: 108814. doi: 10.1016/j.diabres.2021.108814.
16. Hill-Briggs F, Adler NE, Berkowitz SA, et al. Social determinants of health and diabetes: a scientific review. *Diabetes Care*. 2020;44(1): 258–279. doi: 10.2337/dci20-0053.
17. WHO. *Global report on diabetes*. Available from: <https://www.who.int/publications/i/item/9789241565257>. (Accessed 17th April 2022).
18. Hyun MK, Park JH, Kim KH, et al. Incidence and risk factors for progression to diabetes mellitus: a retrospective cohort study. *International Journal of Environmental Research and Public Health*. 2021;19(1): 123. doi: 10.3390/ijerph19010123.



19. Magliano DJ, Chen L, Islam RM, et al. Trends in the incidence of diagnosed diabetes: a multi-country analysis of aggregate data from 22 million diagnoses in high-income and middle-income settings. *The Lancet Diabetes & Endocrinology*. 2021; 9(4): 203-211.
20. Jha RP, Shri N, Patel P, et al. Correction to: Trends in the diabetes incidence and mortality in India from 1990 to 2019: a joinpoint and age-period-cohort analysis. *Journal of Diabetes & Metabolic Disorders*. 2021;20(2): 1741. doi: 10.1007/s40200-021-00865-5.
21. Xie L, Zhao X, Zhang B, et al. Epidemiology and risk factors for diabetes in the suburbs of Beijing: a retrospective cohort study. *BMJ Open*. 2021;11(3): e041526. doi: 10.1136/bmjopen-2020-041526.
22. Hyun MK, Park JH, Kim KH, et al. Incidence and risk factors for progression to diabetes mellitus: a retrospective cohort study. *International Journal of Environmental Research and Public Health*. 2021;19(1): 123. doi: 10.3390/ijerph19010123.
23. Carstensen B, Rønn PF, Jørgensen ME. Prevalence, incidence and mortality of type 1 and type 2 diabetes in Denmark 1996-2016. *BMJ Open Diabetes Research & Care*. 2020;8(1): e001071. doi: 10.1136/bmj-drc-2019-001071.
24. Butler AM. Social determinants of health and racial/ethnic disparities in type 2 diabetes in youth. *Current Diabetes Reports*. 2017;17(8): 60. doi: 10.1007/s11892-017-0885-0.
25. WHO. *The top 10 causes of death*. Available from: <https://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death>. (Accessed 17th April 2022).
26. Sağlık Bakanlığı. *Bulaşıcı Olmayan Hastalıkların Risk Faktörleri Prevalansı Araştırması, 2017*. (18.04.2022 tarihinde www.hsgm.gov.tr adresinden ulaşılmıştır).
27. Esen I, Okdemir D. Trend of type 1 diabetes incidence in children between 2009 and 2019 in Elazığ, Turkey. *Pediatric Diabetes*. 2020;21(3): 460-465. doi: 10.1111/pedi.12984.
28. Demirbilek H, Özbek MN, Baran RT. Incidence of type 1 diabetes mellitus in Turkish children from the southeastern region of the country: a regional report. *Journal of Clinical Research in Pediatric Endocrinology*. 2013;5(2): 98-103. doi: 10.4274/Jcrpe.954.
29. WHO. *Global health estimates: Leading causes of DALYs*. Available from: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/global-health-estimates-leading-causes-of-dalys>. (Accessed 17th April 2022).
30. WHO. *Global health estimates: leading causes of death*. Available from: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>. (Accessed 17th April 2022).
31. TÜİK. *Türkiye sağlık araştırması, 2019*. (18.04.2022 tarihinde <https://data.tuik.gov.tr/Bulten/Index?p=Türkiye-Saglik-Arastirmasi-2019-33661> adresinden ulaşılmıştır).
32. WHO. *Diabetes Turkey 2016 country profile*. Available from: <https://www.who.int/publications/m/item/diabetes-tur-country-profile-2016>. (Accessed 17th April 2022).
33. Sağlık Bakanlığı. *Türkiye beslenme ve sağlık araştırması (TBSA), 2019*. (18.04.2022 tarihinde <https://gtbd.org.tr/turkiye-beslenme-ve-saglik-arastirmasi-2019-yayimlandi/> adresinden ulaşılmıştır).
34. WHO. *Prevalence of obesity among children and adolescents, BMI > +2 standard deviations above the median (crude estimate) (%)*. Available from: <https://www.who.int/data/gho/data/indicators>. (Accessed 17th April 2022).
35. Sağlık Bakanlığı. *Türkiye çocukluk çağı şişmanlık araştırması COSI-TUR, 2016*. (18.04.2022 tarihinde www.hsgm.gov.tr adresinden ulaşılmıştır).
36. Duan D, Kengne AP, Echouffo-Tcheugui JB. Screening for diabetes and prediabetes. *Endocrinology and Metabolism Clinics of North America*. 2021;50(3): 369-385. doi: 10.1016/j.ecl.2021.05.002.



37. Lovic D, Piperidou A, Zografou I, et al. The growing epidemic of diabetes mellitus. *Current Vascular Pharmacology*. 2020;18(2): 104-109. doi: 10.2174/1570161117666190405165911.
38. Paddison CAM, Eborall HC, French DP, et al. Predictors of anxiety and depression among people attending diabetes screening: A prospective cohort study embedded in the ADDITION (Cambridge) randomized control trial. *British Journal of Health Psychology*. 2011;16(1): 213-226.
39. Jonas DE, Crotty K, Yun JDY, et al. Screening for prediabetes and type 2 diabetes: updated evidence report and systematic review for the US Preventive Services Task Force. *JAMA*. 2021;326(8): 744-760. doi: 10.1001/jama.2021.10403.
40. Diabetes Canada Clinical Practice Guidelines Expert Committee, Ekoe JM, Goldenberg R, Katz P. Screening for Diabetes in Adults. *Can J Diabetes*. 2018 Apr;42 Suppl 1:S16-S19. doi: 10.1016/j.cjcd.2017.10.004.
41. Shubrook JH, Chen W, Lim A. Evidence for the prevention of type 2 diabetes mellitus. *The Journal of the American Osteopathic Association*. 2018;118(11): 730-737. doi: 10.7556/jaoa.2018.158.