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**4/1/24**

ABSI in the Medical Literature:

Allometric Anthropometric Research Publications:

**ABSI references to 3/24:**[**https://drjessekrakauer.com/absi.html**](https://drjessekrakauer.com/absi.html)

**https://en.wikipedia.org/wiki/Body\_shape\_index**

**ABSI = WC weight-2/3height5/6 = WC/(BMI2/3height1/2)**

**A1. Krakauer NY, Krakauer JC. A new body shape index predicts mortality hazard independently of body mass index. PLoS One. 2012;7(7):e39504. doi: 10.1371/journal.pone.0039504. Epub 2012 Jul 18. PMID: 22815707; PMCID: PMC3399847.**

**Annotation: A body shape index (ABSI) is a power law based on weight and height that normalizes waist circumference (WC) for weight and height. In a large USA population sample, mortality increased significantly with ABSI and independently from BMI.  Since publication, over 360,000 views to this article and over 600 citations have been reported at the PLoS One web site.**

**A2. Krakauer NY, Krakauer JC. Dynamic association of mortality hazard with body shape. PLoS One. 2014 Feb 20;9(2):e88793. doi: 10.1371/journal.pone.0088793. PMID: 24586394; PMCID: PMC3930607.**

**In a British population study we found that elevated ABSI predicted mortality up to 20 years later. We also show that the direction of change in ABSI over time predicted mortality, with rise in ABSI leading to higher mortality. We also show that ABSI predicts mortality better than BMI, height/ WC ratio and WC/ hip circumference ratio.**

**A3. Krakauer NY, Krakauer JC (2014) Expansion of Waist Circumference in Medical Literature: Potential Clinical Application of a Body Shape Index. J Obes Weight Loss Ther 4:216. doi:10.4172/2165-7904.1000216**

**We show how BMI has become synonymous with obesity in the medical literature. We review a number of studies where ABSI could contribute to evaluation including “locomotive” disorders in the elderly, diabetes prediction, indications for bariatric surgery and others.**

**A4. Krakauer JC, Krakauer NY. Combining Body Mass and Shape Indices in Clinical Practice. Case Rep Med. 2016;2016:1526175. doi: 10.1155/2016/1526175. Epub 2016 Feb 29. PMID: 27034680; PMCID: PMC4789401**.

**Several case reports from the author’s endocrine practice are presented to illustrate clinical use of ABSI in combination with BMI.**

**A5. Krakauer NY, Krakauer JC. An Anthropometric Risk Index Based on**

**Combining Height, Weight, Waist, and Hip Measurements. J Obes. 2016;2016:8094275. doi: 10.1155/2016/8094275. Epub 2016 Oct 18. PMID: 27830087; PMCID: PMC5088335.**

**Annotation: HI  (Hip Index)  is a power law of hip circumference for a given  BMI.  We propose an anthropometric risk index (ARI) which allows the combination of risk prediction from the 4 measures: Height, BMI, ABSI, HI.  ARI predicted risk  more strongly than single anthropometric indices and was shown to perform well in risk prediction when applied to a second large population survey with cardiovascular and mortality  outcomes. [ARI can be computed with or without Hip Index]**

**A6. Krakauer NY, Krakauer JC. Anthropometrics, Metabolic Syndrome, and Mortality Hazard (2018). Journal of Obesity. 2018;2018:9241904. doi:10.1155/2018/9241904.**

**Annotation: For NHANES data, ARI was found to be positively correlated with each component of MS, suggesting connections between the two entities as measures of cardio-metabolic risk. ARI and MS were both significant predictors of mortality hazard. Although the association of ARI with mortality hazard was stronger than that of MS, a combined model with both ARI and MS score as predictors improved predictive ability over either construct in isolation.  {note ARI can be computed with or without hip circumference}**

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**A7. Krakauer NY, Krakauer JC. Association of Body Shape Index (ABSI) with Hand Grip Strength. Int J Environ Res Public Health. 2020 Sep 17;17(18):E6797. doi: 10.3390/ijerph17186797. PMID: 32957738.**

**A8. Krakauer, N.Y.; Krakauer, J.C. Association of X-ray Absorptiometry Body Composition Measurements with Basic Anthropometrics and Mortality Hazard. Int. J. Environ. Res. Public Health 2021, 18, 7927.**

**Annotation: This study brings together allometric anthropometrics and body composition.  Remarkably, directly measured body composition parameters such as %fat can be accurately predicted from height, BMI and ABSI, and overall mortality risk is better predicted by anthropometrics than by body composition.  However, both low limb non-fat tissue (skeletal muscle) and high trunk non fat tissue (perhaps a marker of enlarged internal organs) predict mortality.  The allometric methods in this paper allow combination of body composition and anthropometrics to better estimate mortality risk**

**A9. Krakauer NY, Krakauer JC. Diet Composition, Anthropometrics, and Mortality Risk. Int J Environ Res Public Health. 2022 Oct 8;19(19):12885. doi: 10.3390/ijerph191912885. PMID: 36232184; PMCID: PMC9566505. (ARIC)**

**Major studies for citation**

**Christakoudi S, Tsilidis KK, Muller DC, et al. A Body Shape Index (ABSI) achieves better mortality risk stratification than alternative indices of abdominal obesity: results from a large European cohort. *Sci Rep*. 2020;10(1):14541. Published 2020 Sep 3. doi:10.1038/s41598-020-71302-5**

**Annotation: Gold standard UK Biobank data, and advanced biostatistics A series of companion papers now published by the first author covering associations with cancer, cancer genetics, body composition, gonadal steroids and common biochemistry and hematology parameters.**

**Nagayama D, Sugiura T, Choi SY, Shirai K. Various Obesity Indices and Arterial Function Evaluated with CAVI - Is Waist Circumference Adequate to Define Metabolic Syndrome? Vasc Health Risk Manag. 2022 Sep 12;18:721-733. doi: 10.2147/VHRM.S378288. PMID: 36120718; PMCID: PMC9480599**.

**Nagayama D, Fujishiro K, Watanabe Y, Yamaguchi T, Suzuki K, Saiki A, Shirai K. A Body Shape Index (ABSI) as a Variant of Conicity Index Not Affected by the Obesity Paradox: A Cross-Sectional Study Using Arterial Stiffness Parameter. J Pers Med. 2022 Dec 5;12(12):2014. doi: 10.3390/jpm12122014. PMID: 36556235; PMCID: PMC9783005.**

Reviews

**R1. Ji M, Zhang S, An R.**[**Effectiveness of A Body Shape Index (ABSI) in predicting chronic diseases and mortality: a systematic review and meta-analysis.**](https://www.ncbi.nlm.nih.gov/pubmed/29349876)**Obes Rev. 2018 Jan 19. doi: 10.1111/obr.12666. [Epub ahead of print] Review. PubMed PMID: 29349876.**

**R2. Krakauer NY, Krakauer JC.**[**Untangling Waist Circumference and Hip Circumference from Body Mass Index with a Body Shape Index, Hip Index, and Anthropometric Risk Indicator.**](https://www.ncbi.nlm.nih.gov/pubmed/29649376)**Metab Syndr Relat Disord. 2018 May;16(4):160-165. doi: 10.1089/met.2017.0166. Epub 2018 Mar 13. PubMed PMID: 29649376.**

**R3. Churilla JR.**[**Anthropometrics and Allometry: Beyond Body Mass Index.**](https://www.ncbi.nlm.nih.gov/pubmed/29584551)**Metab Syndr Relat Disord. 2018 Mar 27. doi: 10.1089/met.2018.0031. [Epub ahead of print] PubMed PMID: 29584551.**

**R4. Krakauer NY,Krakauer JC. The New Anthropometrics and Abdominal Obesity: A BodyShape Index, Hip Index, and Anthropometric Risk Index, Chapter 2 in Nutrition in the Prevention and Treatment of Abdominal Obesity. 2019 Elsevier** [**https://doi.org/10.1016/B978-0-12-816093-0.00002-1free**](https://doi.org/10.1016/B978-0-12-816093-0.00002-1free) **at**[**https://nirkrakauer.net/papers/anthropometrics\_chapter\_2018.pdf**](https://nirkrakauer.net/papers/anthropometrics_chapter_2018.pdf)

**The original ABSI calculator and risk instrument is available at:** [**https://nirkrakauer.net/sw/absi-calculator.html**](https://nirkrakauer.net/sw/absi-calculator.html)**​**

**The ABSI calculator with Hip Index and risk instrument is available at:**

**https://nirkrakauer.net/sw/ari-calculator.html**

Collaborations

**C1. Mameli C, Krakauer JC, Krakauer NY, Bosetti A, Ferrari CM, Schneider L, Borsani B, Arrigoni S, Pendezza E, Zuccotti GV. Effects of a multidisciplinary weight loss intervention in overweight and obese children and adolescents: 11 years of experience. PLoS One. 2017 Jul 13;12(7):e0181095. doi: 10.1371/journal.pone.0181095. PMID: 28704494; PMCID: PMC5509286**.

**C2. Consalvo V, Krakauer JC, Krakauer NY, Canero A, Romano M, Salsano V. ABSI (A Body Shape Index) and ARI (Anthropometric Risk Indicator) in Bariatric Surgery. First Application on a Bariatric Cohort and Possible Clinical Use. Obes Surg. 2018 Jul;28(7):1966-1973. doi: 10.1007/s11695-018-3117-z. PMID: 29376202.**

**C3. Bertoli S, Leone A, Krakauer NY, Bedogni G, Vanzulli A, Redaelli VI, De Amicis R, Vignati L, Krakauer JC, Battezzati A. Association of Body Shape Index (ABSI) with cardio-metabolic risk factors: A cross-sectional study of 6081 Caucasian adults. PLoS One. 2017 Sep 25;12(9):e0185013. doi: 10.1371/journal.pone.0185013. PMID: 28945809; PMCID: PMC5612697.**

**C4. Mameli C, Krakauer NY, Krakauer JC, Bosetti A, Ferrari CM, Moiana N, et al. (2018) The association between a body shape index and cardiovascular risk in overweight and obese children and adolescents. PLoS ONE 13(1): e0190426. https://doi.org/10.1371/journal.pone.0190426**

**C5. Gomez-Peralta F, Abreu C, Cruz-Bravo M, Alcarria E, Gutierrez-Buey G, Krakauer NY, Krakauer JC. Relationship between "a body shape index (ABSI)" and body composition in obese patients with type 2 diabetes. Diabetol Metab Syndr. 2018 Mar 20;10:21. doi: 10.1186/s13098-018-0323-8. PMID: 29568333; PMCID: PMC5859756..**

**C6. Gallè F, Krakauer JC, Krakauer NY, Valerio G, Liguori G. Can an Exercise-Based Educational and Motivational Intervention be Durably Effective in Changing Compliance to Physical Activity and Anthropometric Risk in People with Type 2 Diabetes? A Follow-Up Study. Int J Environ Res Public Health. 2019 Feb 27;16(5):701. doi: 10.3390/ijerph16050701. PMID: 30818773; PMCID: PMC6427192.**

**C 7. Hoermann R, Fui MNT, Krakauer JC, Krakauer NY, Grossmann M. A body shape index (ABSI) reflects body composition changes in response to testosterone treatment in obese men. Int J Obes (Lond). 2019 Nov;43(11):2210-2216. doi: 10.1038/s41366-018-0311-y. Epub 2019 Jan 8. PMID: 30622310.**

**C 8. Anoop S, Krakauer J, Krakauer N, Misra A. A Body shape index significantly predicts MRI-defined abdominal adipose tissue depots in non-obese Asian Indians with type 2 diabetes mellitus. BMJ Open Diabetes Res Care. 2020 Oct;8(1):e001324. doi: 10.1136/bmjdrc-2020-001324. PMID: 33051279; PMCID: PMC7554502.**

**C 9.** **Corbatón-Anchuelo A, Krakauer JC, Serrano-García I, Krakauer NY, Martínez-Larrad MT, Serrano-Ríos M. A Body Shape Index (ABSI) and Hip Index (HI) Adjust Waist and Hip Circumferences for Body Mass Index, But Only ABSI Predicts High Cardiovascular Risk in the Spanish Caucasian Population. Metab Syndr Relat Disord. 2021 Mar 11. doi: 10.1089/met.2020.0129. Epub ahead of print. PMID: 33709800.**

**C10. Ferreira HS, Soares ML, Krakauer NY, Santos EA, Krakauer JC, Uchôa TC, Santos TR, Dos Anjos LA. What is the best anthropometric predictor for identifying higher risk for cardiovascular diseases in afro-descendant Brazilian women? A cross-sectional population-based study. Am J Hum Biol. 2022 Mar;34(3):e23652. doi: 10.1002/ajhb.23652. Epub 2021 Jul 22. PMID: 34292635.**

**C 11.Kjaergaard AD, Krakauer J, Krakauer N, Teumer A, Winkler TW, Ellervik C. Allometric body shape indices, T2D and kidney function: A two-sample Mendelian randomization study. Diabetes Obes Metab. 2023 Feb 28. doi: 10.1111/dom.15037. Epub ahead of print. PMID: 36855799.**

**C12. Nagayama D, Krakauer JC, Krakauer NY, Sugiura T, Watanabe Y, Shimizu K, Saiki A, Suzuki K, Fujishiro K, Shirai K. Cumulative Cigarette Consumption is Associated with Cardio-Ankle Vascular Index (CAVI) Mediated by Abdominal Obesity Assessed by A Body Shape Index (ABSI): A Cross-Sectional Study. J Atheroscler Thromb. 2023 May 18. doi: 10.5551/jat.64221. Epub ahead of print. PMID: 37197950.**

ABSI in the Medical Literature:

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| 1. | **Abete I, Arriola L, Etxezarreta N, Mozo I, Moreno-Iribas C, Amiano P, Egüés N, Goyenechea E, Lopez de Munain A, Martinez M, Travier N, Navarro C, Chirlaque MD, Tormo MJ, Gavrila D, Huerta JM, Sánchez MJ, Molina-Montes E, Requena M, Jiménez-Hernández MD, Ardanaz E, Barricarte A, Quiros JR, Rodriguez L, Dorronsoro M. Association between different obesity measures and the risk of stroke in the EPIC Spanish cohort. Eur J Nutr. 2015 Apr;54(3):365-75. doi: 10.1007/s00394-014-0716-x. Epub 2014 Jun 6. PMID: 24903807.** |
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| 2. | **Biolo G, Di Girolamo FG, Breglia A, Chiuc M, Baglio V, Vinci P, Toigo G, Lucchin L, Jurdana M, Pražnikar ZJ, Petelin A, Mazzucco S, Situlin R. Inverse relationship between "a body shape index" (ABSI) and fat-free mass in women and men: Insights into mechanisms of sarcopenic obesity. Clin Nutr. 2015 Apr;34(2):323-7. doi: 10.1016/j.clnu.2014.03.015. Epub 2014 Apr 13. PMID: 24814384.** |
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| 3. | **Haghighatdoost F, Sarrafzadegan N, Mohammadifard N, Asgary S, Boshtam M, Azadbakht L. Assessing body shape index as a risk predictor for cardiovascular diseases and metabolic syndrome among Iranian adults. Nutrition. 2014 Jun;30(6):636-44. doi: 10.1016/j.nut.2013.10.021. Epub 2013 Nov 1. PMID: 24800666**. |
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| 4. | **Cheung YB. "A Body Shape Index" in middle-age and older Indonesian population: scaling exponents and association with incident hypertension. PLoS One. 2014 Jan 15;9(1):e85421. doi: 10.1371/journal.pone.0085421. PMID: 24454862; PMCID: PMC3893209.** |
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| 5. | **Eom BW, Joo J, Yoon HM, Ryu KW, Kim YW, Lee JH. A body shape index has a good correlation with postoperative complications in gastric cancer surgery. Ann Surg Oncol. 2014 Apr;21(4):1115-22. doi: 10.1245/s10434-013-3409-4. Epub 2013 Dec 4. PMID: 24306666.** |
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| 6. | **Song X, Jousilahti P, Stehouwer CD, Söderberg S, Onat A, Laatikainen T, Yudkin JS, Dankner R, Morris R, Tuomilehto J, Qiao Q. Comparison of various surrogate obesity indicators as predictors of cardiovascular mortality in four European populations. Eur J Clin Nutr. 2013 Dec;67(12):1298-302. doi: 10.1038/ejcn.2013.203. Epub 2013 Oct 23. PMID: 24149442.** |
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| 7. | .**He S, Chen X. Could the new body shape index predict the new onset of diabetes mellitus in the Chinese population? PLoS One. 2013;8(1):e50573. doi: 10.1371/journal.pone.0050573. Epub 2013 Jan 30. PMID: 23382801; PMCID: PMC3559745.** |
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| 8. | **Duncan MJ, Mota J, Vale S, Santos MP, Ribeiro JC. Associations between body mass index, waist circumference and body shape index with resting blood pressure in Portuguese adolescents. Ann Hum Biol. 2013 Mar;40(2):163-7. doi: 10.3109/03014460.2012.752861. Epub 2013 Jan 18. PMID: 23327095.** |
| 9. | **Bozorgmanesh M, Sardarinia M, Hajsheikholeslami F, Azizi F, Hadaegh F. CVD-predictive performances of "a body shape index" versus simple anthropometric measures: Tehran lipid and glucose study. Eur J Nutr. 2016 Feb;55(1):147-57. doi: 10.1007/s00394-015-0833-1. Epub 2015 Jan 18. PMID: 25596850.** |

10. **Xu Y, Yan W, Cheung YB. Body shape indices and cardiometabolic risk in adolescents. Ann Hum Biol. 2015 Jan;42(1):70-5. doi: 10.3109/03014460.2014.903998. Epub 2014 Apr 15. PMID: 24734976.. (corr with A1c)**

# 11. Malara M, Kęska A, Tkaczyk J, Lutosławska G. Body shape index versus body mass index as correlates of health risk in young healthy sedentary men. J Transl Med. 2015 Feb 27;13:75. doi: 10.1186/s12967-015-0426-z. PMID: 25890016; PMCID: PMC4355423. (insulin level non HDL, 114 men)

# 12. Wierup Ia, Carlsson AC, Wändell P, Riserus U, Ärnlöv J, Borné Y. Low anthropometric measures and mortality--results from the Malmö Diet and Cancer Study. Ann Med. 2015 Jun;47(4):325-31. doi: 10.3109/07853890.2015.1042029. Epub 2015 May 18. PMID: 25982798.

# 13. Fujita M, Sato Y, Nagashima K, Takahashi S, Hata A (2015) Predictive Power of a Body Shape Index for Development of Diabetes, Hypertension, and Dyslipidemia in Japanese Adults: A Retrospective Cohort Study. PLoS ONE 10(6): e0128972. doi:10.1371/journal.pone.0128972

15. Oslopov V.N., Bogoyavlenskaya O.V. Body Shape Index — a Novel Premature Death Risk Factor. *Kazan Med Zh.* 2015; 96 (2): 253-256. doi:10.17750/KMJ2015-253 (In Russ.)

16. **Gurecká R, Koborová I, Šebek J, Šebeková K. Presence of Cardiometabolic Risk Factors Is Not Associated with Microalbuminuria in 14-to-20-Years Old Slovak Adolescents: A Cross-Sectional, Population Study. PLoS One. 2015 Jun 5;10(6):e0129311. doi: 10.1371/journal.pone.0129311. PMID: 26046923; PMCID: PMC4489371.**

17. **Achim Peters, Bruce S. McEwen (2015, Stress habituation, body shape and cardiovascular mortality. Neuroscience & Biobehavioral Reviews** [**doi:10.1016/j.neubiorev.2015.07.001**](http://dx.doi.org/10.1016/j.neubiorev.2015.07.001)

**18. Dhana K, Kavousi M, Ikram MA, Tiemeier HW, Hofman A, Franco OH. Body shape index in comparison with other anthropometric measures in prediction of total and cause-specific mortality. J Epidemiol Community Health. 2016 Jan;70(1):90-6. doi: 10.1136/jech-2014-205257. Epub 2015 Jul 9. PMID: 26160362.**

19. **Chang Y, Guo X, Chen Y, Guo L, Li Z, Yu S, Yang H, Sun Y. A body shape index and body roundness index: two new body indices to identify diabetes mellitus among rural populations in northeast China. BMC Public Health. 2015 Aug 19;15:794. doi: 10.1186/s12889-015-2150-2. PMID: 26286520; PMCID: PMC4544789**.

20. **Dhana K, Ikram MA, Hofman A, Franco OH, Kavousi M. Anthropometric measures in cardiovascular disease prediction: comparison of laboratory-based versus non-laboratory-based model. Heart. 2015 Mar;101(5):377-83. doi: 10.1136/heartjnl-2014-306704. Epub 2014 Dec 11. PMID: 25502814.**

21 **Kabat GC, Xue X, Kamensky V, Lane D, Bea JW, Chen C, Qi L, Stefanick ML, Chlebowski RT, Wactawski-Wende J, Wassertheil-Smoller S, Rohan TE. Risk of breast, endometrial, colorectal, and renal cancers in postmenopausal women in association with a body shape index and other anthropometric measures. Cancer Causes Control. 2015 Feb;26(2):219-229. doi: 10.1007/s10552-014-0501-4. Epub 2014 Nov 28. Erratum in: Cancer Causes Control. 2017 Jul 27;: PMID: 25430815.**

22 **Sowmya S, Thomas T, Bharathi AV, Sucharita S. A body shape index and heart rate variability in healthy indians with low body mass index. J Nutr Metab. 2014;2014:865313. doi: 10.1155/2014/865313. Epub 2014 Oct 2. PMID: 25371818; PMCID: PMC4202247.**

23. **Brown RC, Tey SL, Gray AR, Chisholm A, Smith C, Fleming E, Parnell W. Association of Nut Consumption with Cardiometabolic Risk Factors in the 2008/2009 New Zealand Adult Nutrition Survey. Nutrients. 2015 Sep 8;7(9):7523-42. doi: 10.3390/nu7095351. PMID: 26371037; PMCID: PMC4586546.**

24 **Rondanelli M, Klersy C, Perna S, Faliva MA, Montorfano G, Roderi P, Colombo I, Corsetto PA, Fioravanti M, Solerte SB, Rizzo AM. Effects of two-months balanced diet in metabolically healthy obesity: lipid correlations with gender and BMI-related differences. Lipids Health Dis. 2015 Oct 29;14:139. doi: 10.1186/s12944-015-0131-1. PMID: 26511930; PMCID: PMC4625883. (ABSI lower with diet, standard lipid profile worse)**

25**. Rahman SA, Adjeroh D (2015) Surface-Based Body Shape Index and Its Relationship with All-Cause Mortality. PLoS ONE 10(12): e0144639. doi:10.1371/journal.pone.0144639**

# 7. Traissac et al.(2015) Abdominal vs. overall obesity among women in a nutrition transition context: geographic and socio-economic patterns of abdominal-only obesity in Tunisia. Population Health Metrics (2015) 13:1 DOI: 10.1186/s12963-015-0035-3 no ABSI

# 28. [Effects of new body shape index on prevalence of diabetes mellitus and fasting blood glucose] ZHONGHUA YI XUE ZA ZHI 95(14):1066-9 · MARCH 2015

1. **Xia C, Amador C, Huffman J, Trochet H, Campbell A, Porteous D; Generation Scotland; Hastie ND, Hayward C, Vitart V, Navarro P, Haley CS. Pedigree- and SNP-Associated Genetics and Recent Environment are the Major Contributors to Anthropometric and Cardiometabolic Trait Variation. PLoS Genet. 2016 Feb 2;12(2):e1005804. doi: 10.1371/journal.pgen.1005804. Erratum in: PLoS Genet. 2017 Feb 14;13(2):e1006608. PMID: 26836320; PMCID: PMC4737500.**
2. [Suchert V](http://www.ncbi.nlm.nih.gov/pubmed/?term=Suchert%20V%5bAuthor%5d&cauthor=true&cauthor_uid=26854729) ,[Hanewinkel R](http://www.ncbi.nlm.nih.gov/pubmed/?term=Hanewinkel%20R%5bAuthor%5d&cauthor=true&cauthor_uid=26854729%22), [Isensee B](http://www.ncbi.nlm.nih.gov/pubmed/?term=Isensee%20B%5bAuthor%5d&cauthor=true&cauthor_uid=26854729). (2016) Screen time, weight status and the self-concept of physical attractiveness in adolescents. 48:11-17. doi: 10.1016/j.adolescence.2016.01.005. [Epub ahead of print] – abstract no ABSI
3. **Tay L, Ding YY, Leung BP, Ismail NH, Yeo A, Yew S, Tay KS, Tan CH, Chong MS. Sex-specific differences in risk factors for sarcopenia amongst community-dwelling older adults. Age (Dordr). 2015 Dec;37(6):121. doi: 10.1007/s11357-015-9860-3. Epub 2015 Nov 25. PMID: 26607157; PMCID: PMC5005859.**
4. **Vaziri Y, Bulduk S, Shadman Z, Bulduk EO, Hedayati M, Koc H, Er F, Erdogan CS. Lean Body Mass as a Predictive Value of Hypertension in Young Adults, in Ankara, Turkey. Iran J Public Health. 2015 Dec;44(12):1643-54. PMID: 26811815; PMCID: PMC4724737. (R2 = 0 for ABSI,BP!)**
5. **Bouchi R, Asakawa M, Ohara N, Nakano Y, Takeuchi T, Murakami M, Sasahara Y, Numasawa M, Minami I, Izumiyama H, Hashimoto K, Yoshimoto T, Ogawa Y. Indirect measure of visceral adiposity 'A Body Shape Index' (ABSI) is associated with arterial stiffness in patients with type 2 diabetes. BMJ Open Diabetes Res Care. 2016 Mar 18;4(1):e000188. doi: 10.1136/bmjdrc-2015-000188. PMID: 27026809; PMCID: PMC4800068.**
6. **Chen S, Guo X, Yu S, Zhou Y, Li Z, Sun Y. Anthropometric Indices in Adults: Which Is the Best Indicator to Identify Alanine Aminotransferase Levels? Int J Environ Res Public Health. 2016 Feb 18;13(2):226. doi: 10.3390/ijerph13020226. PMID: 26901214; PMCID: PMC4772246. (ABSI men = women sic)**
7. **Thomson CA, Garcia DO, Wertheim BC, Hingle MD, Bea JW, Zaslavsky O, Caire-Juvera G, Rohan T, Vitolins MZ, Thompson PA, Lewis CE. Body shape, adiposity index, and mortality in postmenopausal women: Findings from the Women's Health Initiative. Obesity (Silver Spring). 2016 May;24(5):1061-9. doi: 10.1002/oby.21461. Epub 2016 Mar 15. PMID: 26991923; PMCID: PMC5014350.**
8. Sözmen K, Ünal B , Sakarya S , Dinç G , Yardım N , Keskinkılıç B , Ergör G.(2016), Türkiye’de Antropometrik Ölçüm Yöntemlerinin Kardiyovasküler Hastalık Riski İle İlişkisi 43 (1): 99-106 doi: 10.5798/diclemedj.0921.2016.01.0646
9. **Ratti F, D'Alessandro V, Cipriani F, Giannone F, Catena M, Aldrighetti L. Influence of body habitus on feasibility and outcome of laparoscopic liver resections: a prospective study. J Hepatobiliary Pancreat Sci. 2016 Jun;23(6):373-81. doi: 10.1002/jhbp.350. Epub 2016 May 3. PMID: 27037539.**
10. **Dhana K, Koolhaas CM, Schoufour JD, Rivadeneira F, Hofman A, Kavousi M, Franco OH. Association of anthropometric measures with fat and fat-free mass in the elderly: The Rotterdam study. Maturitas. 2016 Jun;88:96-100. doi: 10.1016/j.maturitas.2016.03.018. Epub 2016 Apr 1. Erratum in: Maturitas. 2017 Jun;100:92. PMID: 27105706.**
11. **Akbarzadeh M, Moghimbeigi A, Mahjub H, Soltanian AR, Daneshpour M, Morris N. Trajectories of Change in Obesity among Tehranian Families: Multilevel Latent Growth Curve Modeling. Int J Family Med. 2016;2016:2639624. doi: 10.1155/2016/2639624. Epub 2016 Mar 3. PMID: 27042349; PMCID: PMC4794597**.
12. **Hardy DS, Stallings DT, Garvin JT, Gachupin FC, Xu H, Racette SB. Anthropometric discriminators of type 2 diabetes among White and Black American adults. J Diabetes. 2017 Mar;9(3):296-307. doi: 10.1111/1753-0407.12416. Epub 2016 Jul 12. PMID: 27106521; PMCID: PMC5079832.**
13. Martin, Mandee E., "COMPARISON OF QUICK METHODS FOR DETERMINING BODY COMPOSITION IN FEMALE COLLEGIATE ATHLETES AND OBESE FEMALES" (2016). Theses and Dissertations--Dietetics and Human Nutrition. Paper 41. http://uknowledge.uky.edu/foodsci\_etds/41
14. Madden A.M. & Smith S. (2014) Body composition and morphological assessment of nutritional status in adults: a **review** of anthropometric variables. J Hum Nutr Diet doi: 10.1111/jhn.12278
15. **Sardarinia, Mahsa, et al. "Mortality prediction of a body shape index versus traditional anthropometric measures in an Iranian population: Tehran Lipid and Glucose Study." *Nutrition* 33 (2017): 105-112.**
16. **Chung W, Park CG, Ryu O-H (2016) Association of a New Measure of Obesity with Hypertension and Health-Related Quality of Life. PLoS ONE 11(5): e0155399. doi:10.1371/journal.pone.0155399 http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0155399#pone-0155399-t003**
17. **Lucas C Welch,  William Horn,  Sridevi Krishnan,  Kathleen Kishimura,  Excel Que, Evelyn Holguin,  and Nancy L Keim (2016) The Value of Anthropometric Indices for Identifying Women with Features of Metabolic Syndrome. The FASEB Journal 30 (1) Supplementlb258 Abstract only**
18. **Kaan Sözmen, Belgin Ünal, Sibel Sakarya, Gönül Dinç, Nazan Yardım, Bekir Keskinkılıç, Gül Ergör (2016) Association of Anthropometric Measurement Methods with Cardiovascular Disease Risk in Turkey. Dicle Medical Journal 43 (1): 99-106. doi: 10.5798/diclemedj.0921.2016.01.0646 in Turkish, English abstract**
19. **Löffler-Wirth H, Willscher E, Ahnert P, Wirkner K, Engel C, Loeffler M, Binder H. Novel Anthropometry Based on 3D-Bodyscans Applied to a Large Population Based Cohort. PLoS One. 2016 Jul 28;11(7):e0159887. doi: 10.1371/journal.pone.0159887. PMID: 27467550; PMCID: PMC4965021.**
20. **Fatema K, Rahman B, Zwar NA, Milton AH, Ali L. Short-term predictive ability of selected cardiovascular risk prediction models in a rural Bangladeshi population: a case-cohort study. BMC Cardiovasc Disord. 2016 May 26;16(1):105. doi: 10.1186/s12872-016-0279-2. PMID: 27386836; PMCID: PMC4937534.**
21. **Tian S, Zhang X, Xu Y, Dong H. Feasibility of body roundness index for identifying a clustering of cardiometabolic abnormalities compared to BMI, waist circumference and other anthropometric indices: the China Health and Nutrition Survey, 2008 to 2009. Medicine (Baltimore). 2016 Aug;95(34):e4642. doi: 10.1097/MD.0000000000004642. PMID: 27559964; PMCID: PMC5400331.**
22. **Mondelli, Mauro, Curti, Stefania, Mattioli, Stefano, Aretini, Alessandro, Ginanneschi, Federica, Greco, Giuseppe, Farioli, Andrea (2016) Associations Between Body Anthropometric Measures and Severity of Carpal Tunnel Syndrome. Archives of Physical Medicine and Rehabilitation.97(9) 1456 - 1464, doi: 10.1016/j.apmr.2016.03.028**
23. **Behboudi-Gandevani S, Ramezani Tehrani F, Cheraghi L, Azizi F. Could "a body shape index" and "waist to height ratio" predict insulin resistance and metabolic syndrome in polycystic ovary syndrome? Eur J Obstet Gynecol Reprod Biol. 2016 Oct;205:110-4. doi: 10.1016/j.ejogrb.2016.08.011. Epub 2016 Aug 9. PMID: 27579518.**
24. **He S, Zheng Y, Wang H, Chen X.**[**Assessing the relationship between a body shape index and mortality in a group of middle-aged men.**](https://www.ncbi.nlm.nih.gov/pubmed/27663543)**Clin Nutr. 2017 Oct;36(5):1355-1359. doi: 10.1016/j.clnu.2016.09.003. Epub 2016 Sep 14. PubMed PMID: 27663543.**
25. **Nevill, A. M., Duncan, M. J., Lahart, I. M. and Sandercock, G. R. (2016), Scaling waist girth for differences in body size reveals a new improved index associated with cardiometabolic risk. Scand J Med Sci Sports. doi:10.1111/sms.12780**
26. **Mondelli M, Farioli A, Mattioli S, Aretini A, Ginanneschi F, Greco G, Curti S. Severity of Carpal Tunnel Syndrome and Diagnostic Accuracy of Hand and Body Anthropometric Measures. PLoS One. 2016 Oct 21;11(10):e0164715. doi: 10.1371/journal.pone.0164715. PMID: 27768728; PMCID: PMC5074522**.
27. **Clark DO, Unroe KT, Xu H, Keith NR, Callahan CM, Tu W. Sex and Race Differences in the Relationship between Obesity and C-Reactive Protein. Ethn Dis. 2016 Apr 21;26(2):197-204. doi: 10.18865/ed.26.2.197. PMID: 27103770; PMCID: PMC4836900**.
28. **Chang Y, Guo X, Guo L, Li Z, Li Y, Sun Y. The feasibility of two new anthropometric indices to identify hypertension in rural China: A cross-sectional study. Medicine (Baltimore). 2016 Nov;95(44):e5301. doi: 10.1097/MD.0000000000005301. PMID: 27858905; PMCID: PMC5591153.**
29. **Wu TW, Hung CL, Liu CC, Wu YJ, Wang LY, Yeh HI. Associations of Cardiovascular Risk Factors with Carotid Intima-Media Thickness in Middle-Age Adults and Elders. J Atheroscler Thromb. 2017 Jul 1;24(7):677-686. doi: 10.5551/jat.37895. Epub 2016 Nov 18. PMID: 27874838; PMCID: PMC5517541.**
30. **Lek N, Yan W, Zhang Y, Wang Q, Cheung YB. Indices of central and general obesity and cardiometabolic risk among adolescents in three ethnic groups in north-west China. Ann Hum Biol. 2016;43(1):18-24. doi: 10.3109/03014460.2015.1014418. Epub 2015 Oct 2. PMID: 26431471.**
31. **Thomson CA, Garcia DO, Wertheim BC, Hingle MD, Bea JW, Zaslavsky O, Caire-Juvera G, Rohan T, Vitolins MZ, Thompson PA, Lewis CE. Body shape, adiposity index, and mortality in postmenopausal women: Findings from the Women's Health Initiative. Obesity (Silver Spring). 2016 May;24(5):1061-9. doi: 10.1002/oby.21461. Epub 2016 Mar 15. PMID: 26991923; PMCID: PMC5014350.**
32. **Liu PJ, Ma F, Lou HP, Zhu YN. Comparison of the ability to identify cardiometabolic risk factors between two new body indices and waist-to-height ratio among Chinese adults with normal BMI and waist circumference. Public Health Nutr. 2017 Apr;20(6):984-991. doi: 10.1017/S1368980016003281. Epub 2016 Dec 19. PMID: 27989263.**
33. **Zerf, M. (2017). Obesity degrees and their relationships with weakness of musculoskeletal system among the obese housewife. *Saudi Journal of Sports Medicine*, *17*(1), 7.**
34. **Mohammed, Z., Ali, B., Idris, M. M., Hamzaoui, H., & Messaliti, L. (2016). Impact of fat mass distribution body shapes on muscles strength and the joints pain. *BLDE University Journal of Health Sciences*, *1*(2), 81.**
35. **Janghorbani M, Aminorroaya A, Amini M. Comparison of Different Obesity Indices for Predicting Incident Hypertension. High Blood Press Cardiovasc Prev. 2017 Jun;24(2):157-166. doi: 10.1007/s40292-017-0186-3. Epub 2017 Feb 4. PMID: 28160265**.
36. **Zaid M, Ameer F, Munir R, Rashid R, Farooq N, Hasnain S, Zaidi N. Anthropometric and metabolic indices in assessment of type and severity of dyslipidemia. J Physiol Anthropol. 2017 Feb 28;36(1):19. doi: 10.1186/s40101-017-0134-x. Erratum in: J Physiol Anthropol. 2017 Nov 22;36(1):40. PMID: 28241855**; **PMCID: PMC5330152**
37. .**Hardy DS, Stallings DT, Garvin JT, Gachupin FC, Xu H, Racette SB. Anthropometric discriminators of type 2 diabetes among White and Black American adults. J Diabetes. 2017 Mar;9(3):296-307. doi: 10.1111/1753-0407.12416. Epub 2016 Jul 12. PMID: 27106521; PMCID: PMC5079832.**
38. Zerf Mohammed, Atouti Noureddine, Ben Farouk Abdullah. Abdominal obesity and their association with total body: fat distribution and composition. Case of Algerian teenager male high school students. Physical education of students, 2017;21(3):146–151. doi:10.15561/20755279.2017.0308
39. **Sato Y, Fujimoto S, Konta T, Iseki K, Moriyama T, Yamagata K, et al. (2017) Body shape index: Sex-specific differences in predictive power for all-cause mortality in the Japanese population. PLoS ONE 12(5): e0177779. https://doi.org/10.1371/journal.pone.0177779**
40. **Park JK, Lim Y, Lee H, Kim TJ, Choi YH, Min YW, Min BH, Lee JH, Rhee PL, Kim JJ. Comparison of anthropometric measurements associated with the risk of endoscopic erosive esophagitis: A cross-sectional study. Obes Res Clin Pract. 2017 Nov-Dec;11(6):694-702. doi: 10.1016/j.orcp.2017.04.005. Epub 2017 Apr 25. PMID: 28455224.**
41. [**Jia Zhang**](javascript:void(0);)**,**[**Lizheng Fang**](javascript:void(0);)[**Lifeng Qiu**](javascript:void(0);)[**Lijuan Huang**](javascript:void(0);)[**Wenhua Zhu**](javascript:void(0);)**,** [**Yunsong Yu**](javascript:void(0);)**. (2017) Comparison of the ability to identify arterial stiffness between two new anthropometric indices and classical obesity indices in Chinese adults.** [**http://www.atherosclerosis-journal.com/article/S0021-9150(17)30280-0/fulltext**](http://www.atherosclerosis-journal.com/article/S0021-9150(17)30280-0/fulltext)
42. **Boniface, D; A new obesity measure based on relative waist circumference – how useful is it?(2013) David R Boniface. Eur J Public Health 2013; 23 (suppl\_1): ckt126.033. doi: 10.1093/eurpub/ckt126.033**
43. **Grant JF, Chittleborough CR, Shi Z, Taylor AW. The association between A Body Shape Index and mortality: Results from an Australian cohort. PLoS One. 2017 Jul 31;12(7):e0181244. doi: 10.1371/journal.pone.0181244. PMID: 28759582; PMCID: PMC5536270.**
44. **RÃ¸nn,PF, Lucas M, Laouan S, Elhadji A et al. The obesity-associated risk of cardiovascular disease and all-cause mortality is not lower in Inuit compared to Europeans: A cohort study of Greenlandic Inuit, Nunavik Inuit and Danes. doi: 10.1016/j.atherosclerosis.2017.08.011 http://dx.doi.org/10.1016/j.atherosclerosis.2017.08.011-2017/08/22**
45. Mohammed Z (2017) Anthropometrics Parameter and Their Superior to Predict the Risks Pain Joints Associated with Body Weight among Sportswomen. J Morphol Anat 1: 105

**He S, Zheng Y, Chen X. Assessing a new hip index as a risk predictor for diabetes mellitus. J Diabetes Investig. 2018 Jul;9(4):799-805. doi: 10.1111/jdi.12756. Epub 2017 Nov 17. PMID: 28963756; PMCID: PMC6031512.**

1. **Amador C, Xia C, Nagy R, Campbell A, Porteous D, Smith BH, Hastie N, Vitart V, Hayward C, Navarro P, Haley CS. Regional variation in health is predominantly driven by lifestyle rather than genetics. Nat Commun. 2017 Oct 6;8(1):801. doi: 10.1038/s41467-017-00497-5. PMID: 28986520; PMCID: PMC5630587.**
2. **Mona El-Awady, Neveen Abed, A Body Shape Index Versus Body Mass Index in the Assessment of Nutritional Status Among Egyptian Primary School Children Infected with Intestinal Helminthiasis, *Science Journal of Public Health*. Special Issue:Malnutrition in Developing Countries. Vol. 5, No. 5-1, 2017, pp. 13-18. doi: 10.11648/j.sjph.s.2017050501.13**
3. **Han C, Liu Y, Sun X, Luo X, Zhang L, Wang B, Ren Y, Zhou J, Zhao Y, Zhang D, Liu X, Zhang M, Hu D. Prediction of a new body shape index and body adiposity estimator for development of type 2 diabetes mellitus: The Rural Chinese Cohort Study. Br J Nutr. 2017 Nov;118(10):771-776. doi: 10.1017/S0007114517002859. Epub 2017 Nov 16. PMID: 29143718.**
4. **Maessen MF, Eijsvogels TM, Verheggen RJ, Hopman MT, Verbeek AL, de Vegt F. Entering a new era of body indices: the feasibility of a body shape index and body roundness index to identify cardiovascular health status. PLoS One. 2014 Sep 17;9(9):e107212. doi: 10.1371/journal.pone.0107212. PMID: 25229394; PMCID: PMC4167703**. **(anthropometric measures self reported)**
5. **Tay L, Leung BP, Wee S, Tay KS, Ali N, Chan M, Lim WS. Association of nutrition and immune-endocrine dysfunction with muscle mass and performance in cognitively impaired older adults. Arch Gerontol Geriatr. 2018 Mar-Apr;75:20-27. doi: 10.1016/j.archger.2017.11.008. Epub 2017 Nov 16. PMID: 29172062. – no absi in abstract**
6. **Tripolino C, Irace C, Carallo C, Scavelli FB, Gnasso A. Body fat and blood rheology: Evaluation of the association between different adiposity indices and blood viscosity. Clin Hemorheol Microcirc. 2017;65(3):241-248. doi: 10.3233/CH-16172. PMID: 27716654. ( abstract – ABSI result not given )**
7. **Godoroja DD, Cioc DA. Identification of significant obstructive sleep apnoea in the obese patient: development of the novel DX-OSA score. Rom J Anaesth Intensive Care. 2016 Oct;23(2):111-121. doi: 10.21454/rjaic.7518/232.dxo. PMID: 28913484; PMCID: PMC5505384**. **(ROC with ABSI – not referenced)**
8. **Rezende FA, Ribeiro AQ, Mingoti SA, Pereira PF, Marins JC, Priore SE, Franceschini SC. Anthropometric patterns of adiposity, hypertension and diabetes mellitus in older adults of Viçosa, Brazil: A population-based study. Geriatr Gerontol Int. 2018 Apr;18(4):584-591. doi: 10.1111/ggi.13219. Epub 2018 Jan 2. PMID: 29292569.**
9. **Afsar B, Elsurer R, Kirkpantur A.**[**Body shape index and mortality in hemodialysis patients.**](https://www.ncbi.nlm.nih.gov/pubmed/23830741)**Nutrition. 2013 Oct;29(10):1214-8. doi: 10.1016/j.nut.2013.03.012. Epub 2013 Jul 4. PubMed PMID: 23830741.**
10. **Fu S, Luo L, Ye P, Liu Y, Zhu B, Bai Y, Bai J. The abilities of new anthropometric indices in identifying cardiometabolic abnormalities, and influence of residence area and lifestyle on these anthropometric indices in a Chinese community-dwelling population. Clin Interv Aging. 2014 Jan 15;9:179-89. doi: 10.2147/CIA.S54240. PMID: 24477219; PMCID: PMC3897240.**
11. **Santos DA, Silva AM, Matias CN, Magalhães JP, Minderico CS, Thomas DM, Sardinha LB. Utility of novel body indices in predicting fat mass in elite athletes. Nutrition. 2015 Jul-Aug;31(7-8):948-54. doi: 10.1016/j.nut.2015.02.003. Epub 2015 Feb 19. PMID: 26059366**.
12. Gawrys W, Zyska A, Ślęzak A. Anthropometric indicators and their applications for assessing population’s health condition. Hygeia Public Health 2017, 52(1): 41-47 review – not in pub med
13. **Gentile M, Iannuzzo G, Mattiello A, Rubba F, Panico S, Rubba P. Association between body shape index and small dense LDL particles in a cohort of mediterranean women: findings from Progetto ATENA. J Clin Biochem Nutr. 2017 Sep;61(2):130-134. doi: 10.3164/jcbn.17-13. Epub 2017 Aug 11. PMID: 8955130; PMCID: PMC5612817**.
14. **Isaura ER, Chen YC, Yang SH.**[**The Association of Food Consumption Scores, Body Shape Index, and Hypertension in a Seven-Year Follow-Up among Indonesian Adults: A Longitudinal Study.**](https://www.ncbi.nlm.nih.gov/pubmed/29361793)**Int J Environ Res Public Health. 2018 Jan 22;15(1). pii: E175. doi: 10.3390/ijerph15010175. PubMed PMID: 29361793.**
15. **Zhang K, Zhao Q, Li Y, Zhen Q, Yu Y, Tao Y, Cheng Y, Liu Y.**[**Feasibility of anthropometric indices to identify dyslipidemia among adults in Jilin Province: a cross-sectional study.**](https://www.ncbi.nlm.nih.gov/pubmed/29357896)**Lipids Health Dis. 2018 Jan 22;17(1):16. doi: 10.1186/s12944-017-0648-6. PubMed PMID: 29357896.**
16. **Wang F, Chen Y, Chang Y, Sun G, Sun Y. New anthropometric indices or old ones: which perform better in estimating cardiovascular risks in Chinese adults. BMC Cardiovasc Disord. 2018 Jan 30;18(1):14. doi: 10.1186/s12872-018-0754-z. PMID: 29378513; PMCID: PMC5789564.**
17. **Fuseini AM, Rahimi MH, Mollahosseini M, Yekaninejad MS, Maghbooli Z, Mirzaei K. The Association Between Dietary Glycemic Index and Glycemic Load and a Body Shape and Fat Distribution Among Apparently Healthy Iranian Adults. J Am Coll Nutr. 2018 Jul;37(5):415-422. doi: 10.1080/07315724.2017.1416312. Epub 2018 Mar 13. PMID: 29533150**.
18. **Hatami H, Montazeri SA, Hashemi N, Ramezani Tehrani F. Optimal Cutoff Points for Anthropometric Variables to Predict Insulin Resistance in Polycystic Ovary Syndrome. Int J Endocrinol Metab. 2017 Jul 30;15(4):e12353. doi: 10.5812/ijem.12353. PMID: 29344030; PMCID: PMC5750677.**
19. **Choi JR, Ahn SV, Kim JY, Koh SB, Choi EH, Lee GY, Jang YE. Comparison of various anthropometric indices for the identification of a predictor of incident hypertension: the ARIRANG study. J Hum Hypertens. 2018 Apr;32(4):294-300. doi: 10.1038/s41371-018-0043-4. Epub 2018 Mar 27. PMID: 29581555.**
20. **Wang Q, Xu L, Li J, Sun L, Qin W, Ding G, Zhu J, Zhang J, Yu Z, Xie S. Association of Anthropometric Indices of Obesity with Hypertension in Chinese Elderly: An Analysis of Age and Gender Differences. Int J Environ Res Public Health. 2018 Apr 19;15(4):801. doi: 10.3390/ijerph15040801. PMID: 29671813; PMCID: PMC5923843.**
21. **Lee DY, Lee MY, Sung KC.**[**Prediction of Mortality with A Body Shape Index in Young Asians: Comparison with Body Mass Index and Waist Circumference.**](https://www.ncbi.nlm.nih.gov/pubmed/29719128)**Obesity (Silver Spring). 2018 May 2. doi: 10.1002/oby.22193. [Epub ahead of print] PubMed PMID: 29719128.**
22. **Zhang K, Zhao Q, Li Y, Zhen Q, Yu Y, Tao Y, Cheng Y, Liu Y. Feasibility of anthropometric indices to identify dyslipidemia among adults in Jilin Province: a cross-sectional study. Lipids Health Dis. 2018 Jan 22;17(1):16. doi: 10.1186/s12944-017-0648-6. PMID: 29357896; PMCID: PMC5778621.**
23. **Barazzoni R, Gortan Cappellari G, Semolic A, Ius M, Zanetti M, Gabrielli A, Vinci P, Guarnieri G, Simon G. Central adiposity markers, plasma lipid profile and cardiometabolic risk prediction in overweight-obese individuals. Clin Nutr. 2019 Jun;38(3):1171-1179. doi: 10.1016/j.clnu.2018.04.014. Epub 2018 May 8. PMID: 29779870. (per abstract neg study/not accessed due to charge )**
24. **Tran NTT, Blizzard CL, Luong KN, Truong NLV, Tran BQ, Otahal P, Nelson M, Magnussen C, Gall S, Bui TV, Srikanth V, Au TB, Ha ST, Phung HN, Tran MH, Callisaya M. The importance of waist circumference and body mass index in cross-sectional relationships with risk of cardiovascular disease in Vietnam. PLoS One. 2018 May 29;13(5):e0198202. doi: 10.1371/journal.pone.0198202. PMID: 29813112; PMCID: PMC5973604.**
25. **Beraldo RA, Meliscki GC, Silva BR, Navarro AM, Bollela VR, Schmidt A, Foss-Freitas MC. Anthropometric measures of central adiposity are highly concordant with predictors of cardiovascular disease risk in HIV patients. Am J Clin Nutr. 2018 Jun 1;107(6):883-893. doi: 10.1093/ajcn/nqy049. PMID: 29868914.**
26. **Huang HH, Yeh C, Chen JC, Lee TH, Chen SC, Lee WJ, Chen CY. Does bariatric surgery influence plasma levels of fetuin-A and leukocyte cell-derived chemotaxin-2 in patients with type 2 diabetes mellitus? PeerJ. 2018 Jun 12;6:e4884. doi: 10.7717/peerj.4884. PMID: 29910974; PMCID: PMC6003398.**
27. **Isaura ER, Chen YC, Yang SH. Pathways from Food Consumption Score to Cardiovascular Disease: A Seven-Year Follow-Up Study of Indonesian Adults. Int J Environ Res Public Health. 2018 Jul 24;15(8):1567. doi: 10.3390/ijerph15081567. PMID: 30042353; PMCID: PMC6121947.**
28. **Moon S, Park JH, Ryu OH, Chung W. Effectiveness of Z-score of log-transformed A Body Shape Index (LBSIZ) in predicting cardiovascular disease in Korea: the Korean Genome and Epidemiology Study. Sci Rep. 2018 Aug 14;8(1):12094. doi: 10.1038/s41598-018-30600-9. PMID: 30108276; PMCID: PMC6092353**.
29. **Wu F, Ho V, Fraser BJ, Schmidt MD, Dwyer T, Venn AJ, Magnussen CG. Predictive utility of childhood anthropometric measures on adult glucose homeostasis measures: a 20-year cohort study. Int J Obes (Lond). 2018 Oct;42(10):1762-1770. doi: 10.1038/s41366-018-0177-z. Epub 2018 Aug 17. PMID: 30120428.**
30. **Lee DH, Keum N, Hu FB, Orav EJ, Rimm EB, Willett WC, Giovannucci EL. Comparison of the association of predicted fat mass, body mass index, and other obesity indicators with type 2 diabetes risk: two large prospective studies in US men and women. Eur J Epidemiol. 2018 Nov;33(11):1113-1123. doi: 10.1007/s10654-018-0433-5. Epub 2018 Aug 16. PMID: 30117031.**
31. **Lee DH, Keum N, Hu FB, Orav EJ, Rimm EB, Willett WC, Giovannucci EL. Comparison of the association of predicted fat mass, body mass index, and other obesity indicators with type 2 diabetes risk: two large prospective studies in US men and women. Eur J Epidemiol. 2018 Nov;33(11):1113-1123. doi: 10.1007/s10654-018-0433-5. Epub 2018 Aug 16. PMID: 30117031.**
32. **Yang J, Wang F, Wang J, Han X, Hu H, Yu C, Yuan J, Yao P, Miao X, Wei S, Wang Y, Chen W, Liang Y, Guo H, Zhang X, Zheng D, Tang Y, Yang H, He M. Using different anthropometric indices to assess prediction ability of type 2 diabetes in elderly population: a 5 year prospective study. BMC Geriatr. 2018 Sep 17;18(1):218. doi: 10.1186/s12877-018-0912-2. PMID: 30223783; PMCID: PMC6142386**..
33. **Chau K, Girerd N, Bozec E, Ferreira JP, Duarte K, Nazare JA, Laville M, Benetos A, Zannad F, Boivin JM, Rossignol P. Association between abdominal adiposity and 20-year subsequent aortic stiffness in an initially healthy population-based cohort. J Hypertens. 2018 Oct;36(10):2077-2084. doi: 10.1097/HJH.0000000000001796. PMID: 29878971.**
34. **Zhao Q, Zhang K, Li Y, Zhen Q, Shi J, Yu Y, Tao Y, Cheng Y, Liu Y. Capacity of a body shape index and body roundness index to identify diabetes mellitus in Han Chinese people in Northeast China: a cross-sectional study. Diabet Med. 2018 Nov;35(11):1580-1587. doi: 10.1111/dme.13787. Epub 2018 Aug 20. PMID: 30059165.**
35. **Wang S, Peng R, Liang S, Dong K, Nie W, Yang Q, Ma N, Zhang J, Wang K, Song C. Comparison of adiposity indices in relation to prehypertension by age and gender: A community-based survey in Henan, China. Clin Cardiol. 2018 Dec;41(12):1583-1592. doi: 10.1002/clc.23086. Epub 2018 Dec 5. PMID: 30284305; PMCID: PMC6489780.**
36. **Loy SL, Cheung YB, Soh SE, Ng S, Tint MT, Aris IM, Bernard JY, Chong YS, Godfrey KM, Shek LP, Tan KH, Lee YS, Tan HH, Chern BSM, Lek N, Yap F, Chan SY, Chi C, Chan JKY. Female adiposity and time-to-pregnancy: a multiethnic prospective cohort. Hum Reprod. 2018 Nov 1;33(11):2141-2149. doi: 10.1093/humrep/dey300. PMID: 30285230; PMCID: PMC6201836. (ABSI ns)**
37. **Motamed N, Rabiee B, Hemasi GR, Ajdarkosh H, Khonsari MR, Maadi M, Keyvani H, Zamani F. Body Roundness Index and Waist-to-Height Ratio are Strongly Associated With Non-Alcoholic Fatty Liver Disease: A Population-Based Study. Hepat Mon. 2016 Aug 14;16(9):e39575. doi: 10.5812/hepatmon.39575. PMID: 27822266; PMCID: PMC5091031.(Table 3)**
38. **Cansanção K, Silva Monteiro L, Carvalho Leite N, Dávalos A, Tavares do Carmo MDG, Arantes Ferreira Peres W. Advanced Liver Fibrosis Is Independently Associated with Palmitic Acid and Insulin Levels in Patients with Non-Alcoholic Fatty Liver Disease. Nutrients. 2018 Oct 29;10(11):1586. doi: 10.3390/nu10111586. PMID: 30380656; PMCID: PMC6266910. (absi ns)**
39. **Park Y, Kim NH, Kwon TY, Kim SG.**[**A novel adiposity index as an integrated predictor of cardiometabolic disease morbidity and mortality.**](https://www.ncbi.nlm.nih.gov/pubmed/30425288)**Sci Rep. 2018 Nov 13;8(1):16753. doi: 10.1038/s41598-018-35073-4. PubMed PMID: 30425288.**
40. **Gomez-Marcos MA, Gomez-Sanchez L, Patino-Alonso MC, Recio-Rodriguez JI, Gomez-Sanchez M, Rigo F, Marti R, Agudo-Conde C, Ramos R, Rodriguez-Sanchez E, Maderuelo-Fernandez JA, Garcia-Ortiz L; MARK Group. A body shape index and vascular structure and function in Spanish adults (MARK study): A cross-sectional study. Medicine (Baltimore). 2018 Nov;97(47):e13299. doi: 10.1097/MD.0000000000013299. PMID: 30461641; PMCID: PMC6392544.**
41. **Chung W, Park JH, Ryu OH, Yu JM, Yoo HJ, Moon S. Association of Z-Score of the Log-Transformed A Body Shape Index with Cardiovascular Disease in People Who Are Obese but Metabolically Healthy: The Korea National Health and Nutrition Examination Survey 2007-2010. J Obes Metab Syndr. 2018 Sep 30;27(3):158-165. doi: 10.7570/jomes.2018.27.3.158. PMID: 31089558; PMCID: PMC6504195.**

**Amirabdollahian F, Haghighatdoost F. Anthropometric Indicators of Adiposity Related to Body Weight and Body Shape as Cardiometabolic Risk Predictors in British Young Adults: Superiority of Waist-to-Height Ratio. J Obes. 2018 Nov 1;2018:8370304. doi: 10.1155/2018/8370304. PMID: 30515323; PMCID: PMC6236774. ABSI 0.0003?? – paper ignored**

**Ashtary-Larky D, Daneghian S, Alipour M, Rafiei H, Ghanavati M, Mohammadpour R, Kooti W, Ashtary-Larky P, Afrisham R. Waist Circumference to Height Ratio: Better Correlation with Fat Mass Than Other Anthropometric Indices During Dietary Weight Loss in Different Rates. Int J Endocrinol Metab. 2018 Aug 28;16(4):e55023. doi: 10.5812/ijem.55023. PMID: 30464770; PMCID: PMC6216320.**

**Soltanifar M, Karunanayake C, Khadka D, Henderson R, Konehnck N, et al. (2019) Is A Body Shape Index (ABSI) Predictive of Lung Function?. Int J Respir Pulm Med 6:101. doi.org/10.23937/2378-3516/1410101 Annotation; “ABSI may be considered as a key predictor for spirometric lung functions in men and women for Canadian First Nation Populations with more significant results in men.”**

**Haslacher H, Fallmann H, Waldhäusl C, Hartmann E, Wagner OF, Waldhäusl WK. Obesity: outcome of standardized life-style change in a rehabilitation clinic. An observational study. Diabetes Metab Syndr Obes. 2019 May 27;12:813-820. doi: 10.2147/DMSO.S197495. PMID: 31213867; PMCID: PMC6549422.**

**Bawadi H, Abouwatfa M, Alsaeed S, Kerkadi A, Shi Z. Body Shape Index Is a Stronger Predictor of Diabetes. Nutrients. 2019 May 7;11(5):1018. doi: 10.3390/nu11051018. PMID: 31067681; PMCID: PMC6566958.**

**Hu L, Hu G, Huang X, Zhou W, You C, Li J, Li P, Wu Y, Wu Q, Wang Z, Gao R, Bao H, Cheng X. Different adiposity indices and their associations with hypertension among Chinese population from Jiangxi province. BMC Cardiovasc Disord. 2020 Mar 5;20(1):115. doi: 10.1186/s12872-020-01388-2. PMID: 32138664; PMCID: PMC7059680.**

**Khan SH, Shahid R, Fazal N, Ijaz A. Comparison of Various Abdominal Obesity Measures for Predicting Metabolic Syndrome, Diabetes, Nephropathy, and Dyslipidemia. J Coll Physicians Surg Pak. 2019 Dec;29(12):1159-1164. doi: 10.29271/jcpsp.2019.12.1159. PMID: 31839087. 233 subjects**

**Nascimento-Souza MA, Lima-Costa MF, Peixoto SV. "A body shape index" and its association with arterial hypertension and diabetes mellitus among Brazilian older adults: National Health Survey (2013). Cad Saude Publica. 2019 Aug 12;35(8):e00175318. doi: 10.1590/0102-311X00175318. PMID: 31411274.**

**Zamaninour N, Ansar H, Pazouki A, Kabir A. Relationship Between Modified Body Adiposity Index and A Body Shape Index with Biochemical Parameters in Bariatric Surgery Candidates. Obes Surg. 2020 Mar;30(3):901-909. doi: 10.1007/s11695-019-04256-x. PMID: 31898041.**

**Tee JYH, Gan WY, Lim PY. Comparisons of body mass index, waist circumference, waist-to-height ratio and a body shape index (ABSI) in predicting high blood pressure among Malaysian adolescents: a cross-sectional study. BMJ Open. 2020 Jan 12;10(1):e032874. doi: 10.1136/bmjopen-2019-032874. PMID: 31932391; PMCID: PMC7044891.**

# Leone A, Vizzuso S, Brambilla P, Mameli C, Ravella S, De Amicis R, Battezzati A, Zuccotti G, Bertoli S, Verduci E. Evaluation of Different Adiposity Indices and Association with Metabolic Syndrome Risk in Obese Children: Is there a Winner? Int J Mol Sci. 2020 Jun 8;21(11):4083. doi: 10.3390/ijms21114083. PMID: 32521608; PMCID: PMC7313019.

**Zhao W, Tong JJ, Cao YT, Li JH. A Linear Relationship Between a Body Shape Index and Risk of Incident Type 2 Diabetes: A Secondary Analysis Based on a Retrospective Cohort Study in Japan. Diabetes Metab Syndr Obes. 2020 Jun 22;13:2139-2146. doi: 10.2147/DMSO.S256031. PMID: 32606872; PMCID: PMC7319528**.

**Cameron AJ, Romaniuk H, Orellana L, Dallongeville J, Dobson AJ, Drygas W, Ferrario M, Ferrieres J, Giampaoli S, Gianfagna F, Iacoviello L, Jousilahti P, Kee F, Moitry M, Niiranen TJ, Pająk A, Palmieri L, Palosaari T, Satu M, Tamosiunas A, Thorand B, Toft U, Vanuzzo D, Veikko S, Veronesi G, Wilsgaard T, Kuulasmaa K, Söderberg S. Combined Influence of Waist and Hip Circumference on Risk of Death in a Large Cohort of European and Australian Adults. J Am Heart Assoc. 2020 Jul 7;9(13):e015189. doi: 10.1161/JAHA.119.015189. Epub 2020 Jun 30. PMID: 32602397; PMCID: PMC7670538.**

**Cho HW, Chung W, Moon S, Ryu OH, Kim MK, Kang JG. Effect of Sarcopenia and Body Shape on Cardiovascular Disease According to Obesity Phenotypes. Diabetes Metab J. 2021 Mar;45(2):209-218. doi: 10.4093/dmj.2019.0223. Epub 2020 Jul 10. PMID: 32662256; PMCID: PMC8024159**.

**Nagayama D, Watanabe Y, Yamaguchi T, et al. New index of abdominal obesity, a body shape index, is BMI-independently associated with systemic arterial stiffness in real-world Japanese population  [published online ahead of print, 2020 Aug 24]. *Int J Clin Pharmacol Ther*. 2020;10.5414/CP203778. doi:10.5414/CP203778**

**Tian T, Zhang J, Zhu Q, Xie W, Wang Y, Dai Y. Predicting value of five anthropometric measures in metabolic syndrome among Jiangsu Province, China. BMC Public Health. 2020 Aug 31;20(1):1317. doi: 10.1186/s12889-020-09423-9. PMID: 32867710; PMCID: PMC7457352.**

**Christakoudi S, Tsilidis KK, Muller DC, et al. A Body Shape Index (ABSI) achieves better mortality risk stratification than alternative indices of abdominal obesity: results from a large European cohort. *Sci Rep*. 2020;10(1):14541. Published 2020 Sep 3. doi:10.1038/s41598-020-71302-5**

**Annotation: Gold standard UK Biobank data, and advanced biostatistics A series of companion papers now published by the first author covering associations with cancer, cancer genetics, body composition, gondal steroids and common biochemistry and hematology parameters.**

**Xu T, Wang B, Cao L, Qiu W, Zhang Z, Chen A, Chen W. Associations of Gain in Weight-Related Anthropometric Indices with a Marker of Lipid Peroxidation: A Cohort Study Among Urban Adults in China. *Diabetes Metab Syndr Obes*. 2020;13:2877-2887**[**https://doi.org/10.2147/DMSO.S259194**](https://doi.org/10.2147/DMSO.S259194)

**Zhou W, Wang Y, Gu X, Feng ZP, Lee K, Peng Y, Barszczyk A. Importance of general adiposity, visceral adiposity and vital signs in predicting blood biomarkers using machine learning. Int J Clin Pract. 2020 Aug 8:e13664. doi: 10.1111/ijcp.13664. Epub ahead of print. PMID: 32770817.**

**Jayedi A, Soltani S, Zargar MS, Khan TA, Shab-Bidar S. Central fatness and risk of all cause mortality: systematic review and dose-response meta-analysis of 72 prospective cohort studies. BMJ. 2020 Sep 23;370:m3324. doi: 10.1136/bmj.m3324. PMID: 32967840; PMCID: PMC7509947.**

**Davis TME, Peters KE, Chubb SAP, Adams LA, Jeffrey GP, Davis WA. Changes in the Epidemiology of Hepatobiliary Disease Complicating Type 2 Diabetes over 25 Years: The Fremantle Diabetes Study. J Clin Med. 2020 Oct 24;9(11):E3409. doi: 10.3390/jcm9113409. PMID: 33114323.**

**Parente EB, Mutter S, Harjutsalo V, Ahola AJ, Forsblom C, Groop PH. Waist-height ratio and waist are the best estimators of visceral fat in type 1 diabetes. Sci Rep. 2020 Oct 29;10(1):18575. doi: 10.1038/s41598-020-75667-5. PMID: 33122731; PMCID: PMC7596092.**

**Bellafronte NT, Sizoto GR, Vega-Piris L, Chiarello PG, Cuadrado GB. Bed-side measures for diagnosis of low muscle mass, sarcopenia, obesity, and sarcopenic obesity in patients with chronic kidney disease under non-dialysis-dependent, dialysis dependent and kidney transplant therapy. PLoS One. 2020 Nov 20;15(11):e0242671. doi: 10.1371/journal.pone.0242671. PMID: 33216775.**

**Moon S, Kim YJ, Yu JM, Kang JG, Chung HS. Z-score of the log-transformed A Body Shape Index predicts low muscle mass in population with abdominal obesity: The U.S. and Korea National Health and Nutrition Examination Survey. PLoS One. 2020 Nov 24;15(11):e0242557. doi: 10.1371/journal.pone.0242557. PMID: 33232343.**

**Ching YK, Chin YS, Appukutty M, Gan WY, Chan YM. Comparisons of conventional and novel anthropometric obesity indices to predict metabolic syndrome among vegetarians in Malaysia. Sci Rep. 2020 Nov 30;10(1):20861. doi: 10.1038/s41598-020-78035-5. PMID: 33257810; PMCID: PMC7705716.**

# Chiu TH, Huang YC, Chiu H, Wu PY, Chiou HC, Huang JC, Chen SC. Comparison of Various Obesity-Related Indices for Identification of Metabolic Syndrome: A Population-Based Study from Taiwan Biobank. Diagnostics (Basel). 2020 Dec 12;10(12):E1081. doi: 10.3390/diagnostics10121081. PMID: 33322810.

# Leone A, Vizzuso S, Brambilla P, Mameli C, Ravella S, De Amicis R, Battezzati A, Zuccotti G, Bertoli S, Verduci E. Evaluation of Different Adiposity Indices and Association with Metabolic Syndrome Risk in Obese Children: Is there a Winner? Int J Mol Sci. 2020 Jun 8;21(11):4083. doi: 10.3390/ijms21114083. PMID: 32521608; PMCID: PMC7313019.

# Oh CM, Park JH, Chung HS, Yu JM, Chung W, Kang JG, Moon S. Effect of body shape on the development of cardiovascular disease in individuals with metabolically healthy obesity. Medicine (Baltimore). 2020 Sep 18;99(38):e22036. doi: 10.1097/MD.0000000000022036. PMID: 32957321; PMCID: PMC7505363.

# Ardesch FH, Ruiter R, Mulder M, Lahousse L, Stricker BHC, Kiefte-de Jong JC. The Obesity Paradox in Lung Cancer: Associations With Body Size Versus Body Shape. Front Oncol. 2020 Nov 10;10:591110. doi: 10.3389/fonc.2020.591110. PMID: 33244459; PMCID: PMC7683800.

# Borisenkov MF, Popov SV, Pecherkina AA, Dorogina OI, Martinson EA, Vetosheva VI, Gubin DG, Solovieva SV, Turovinina EF, Symaniuk EE. Food addiction in young adult residents of Russia: Associations with emotional and anthropometric characteristics. Eur Eat Disord Rev. 2020 Jul;28(4):465-472. doi: 10.1002/erv.2731. Epub 2020 Mar 7. PMID: 32144879. (no relationship ABSI ?zscores)

# Parra-Soto S, Malcomson FC, Ho FK, Pell JP, Sharp L, Mathers JC, Celis-Morales C. Associations of A Body Shape Index (ABSI) with Cancer Incidence, All-Cause, and at 23 Sites-Findings from the UK Biobank Prospective Cohort Study. Cancer Epidemiol Biomarkers Prev. 2022 Feb;31(2):315-324. doi: 10.1158/1055-9965.EPI-21-0591. Epub 2021 Nov 30. PMID: 34853021.

# Aoki KC, Mayrovitz HN. Utility of a Body Shape Index Parameter in Predicting Cardiovascular Disease Risks. Cureus. 2022 Apr 6;14(4):e23886. doi: 10.7759/cureus.23886. PMID: 35541302; PMCID: PMC9083219.

# Kolena B, Petrovičová I, Šidlovská M, Hlisníková H, Bystričanová L, Wimmerová S, Trnovec T. Occupational Hazards and Risks Associated with Phthalates among Slovakian Firefighters. Int J Environ Res Public Health. 2020 Apr 5;17(7):2483. doi: 10.3390/ijerph17072483. PMID: 32260494; PMCID: PMC7178246.

## Bijari, Bita (Bijari, Bita) ; Kazemi, Toba (Kazemi, Toba) ; Kafi, Melika (Kafi, Melika)

## The Associations between Body Shape Index and Dyslipidemia and Diabetes in Cardiovascular Patients. International Cardiovascular Research Journal . Jun2022, Vol. 16 Issue 2, p67-71.

# Nascimento-Souza MA, Mambrini JVM, Peixoto SV, Lima-Costa MF. Association between "a body shape index" and mortality: Bambuí Cohort Study of Aging, Brazil. Cad Saude Publica. 2021 Jan 11;37(1):e00016020. doi: 10.1590/0102-311X00016020. PMID: 33440407.

# Nkwana MR, Monyeki KD, Lebelo SL. Body Roundness Index, A Body Shape Index, Conicity Index, and Their Association with Nutritional Status and Cardiovascular Risk Factors in South African Rural Young Adults. Int J Environ Res Public Health. 2021 Jan 1;18(1):281. doi: 10.3390/ijerph18010281. PMID: 33401502; PMCID: PMC7795753.

**Baumeister SE, Schlecht I, Trabert B, Nolde M, Meisinger C, Leitzmann MF. Anthropometric risk factors for ovarian cancer in the NIH-AARP Diet and Health Study. Cancer Causes Control. 2021 Mar;32(3):231-239. doi: 10.1007/s10552-020-01377-y. Epub 2021 Jan 22. PMID: 33481137; PMCID: PMC7870624.**

# Nam Lyong Kang. New Obesity Index Associated with Fitness Among Korean Adults. International Journal of Clinical and Experimental Medical Sciences. Vol. 7, No. 1, 2021, pp. 5-12. doi: 10.11648/j.ijcems.20210701.12

## Tabary M, Cheraghian B, Mohammadi Z, Rahimi Z, Naderian MR, Danehchin L, Paridar Y, Abolnejadian F, Noori M, Mard SA, Masoudi S, Araghi F, Shayesteh AA, Poustchi H. Association of anthropometric indices with cardiovascular disease risk factors among adults: a study in Iran. Eur J Cardiovasc Nurs. 2021 May 22;20(4):358-366. doi: 10.1093/eurjcn/zvaa007. PMID: 33620478.

## Farahmand M, Ramezani Tehrani F, Rahmati M, Azizi F. Anthropometric Indices and Age at Natural Menopause: A 15-Year Follow-up Population-Based Study. Int J Endocrinol Metab. 2021 Aug 5;19(4):e109285. doi: 10.5812/ijem.109285. PMID: 35043051; PMCID: PMC8761485.

## Body Adiposity Indicators Are Associated to Triglyceride/Glucose Index in Community-Dwelling Older Adults

**Aging Medicine and Healthcare 2020;11(4):123-128. doi:10.33879/AMH.114.2020.04009**

**Zhang Y, Li B, Liu N, Wang P, He J. Evaluation of Different Anthropometric Indicators for Screening for Nonalcoholic Fatty Liver Disease in Elderly Individuals. Int J Endocrinol. 2021 Jan 27;2021:6678755. doi: 10.1155/2021/6678755. PMID: 33574841; PMCID: PMC7861948. (nil for absi?)**

# Wilczyński M, Domańska-Senderowska D, Kassassir-Ćwiklak SA, Janas Ł, Malinowski A, Wilczyński JR. A body shape index (ABSI) and endometrial pathology. Women Health. 2021 Mar;61(3):313-321. doi: 10.1080/03630242.2021.1881697. Epub 2021 Feb 8. PMID: 33550945.

# Wu Y, Li H, Tao X, Fan Y, Gao Q, Yang J. Optimised anthropometric indices as predictive screening tools for metabolic syndrome in adults: a cross-sectional study. BMJ Open. 2021 Jan 31;11(1):e043952. doi: 10.1136/bmjopen-2020-043952. PMID: 33518525; PMCID: PMC7853002. (ABSI not included in analysis)

# Xu J, Zhang L, Wu Q, Zhou Y, Jin Z, Li Z, Zhu Y. Body roundness index is a superior indicator to associate with the cardio-metabolic risk: evidence from a cross-sectional study with 17,000 Eastern-China adults. BMC Cardiovasc Disord. 2021 Feb 16;21(1):97. doi: 10.1186/s12872-021-01905-x. PMID: 33593274; PMCID: PMC7885560.

**Does Physical Activity Level Affect Homocysteine and Obesity Variables in Women with Cardiovascular Disease? July 2021,** [**Medical Laboratory Journal**](https://www.researchgate.net/journal/Medical-Laboratory-Journal-2538-4449)**15(4):21-27 DOI:**[**10.52547/mlj.15.4.21**](http://dx.doi.org/10.52547/mlj.15.4.21) **(Physical activity and ABSI)**

# upto

# Vizzuso S, Del Torto A, Dilillo D, Calcaterra V, Di Profio E, Leone A, Gilardini L, Bertoli S, Battezzati A, Zuccotti GV, Verduci E. Visceral Adiposity Index (VAI) in Children and Adolescents with Obesity: No Association with Daily Energy Intake but Promising Tool to Identify Metabolic Syndrome (MetS). Nutrients. 2021 Jan 28;13(2):413. doi: 10.3390/nu13020413. PMID: 33525454; PMCID: PMC7911630.

# Jochems SHJ, Wood AM, Häggström C, Orho-Melander M, Stattin P, Stocks T. Waist circumference and a body shape index and prostate cancer risk and mortality. Cancer Med. 2021 Mar 12. doi: 10.1002/cam4.3827. Epub ahead of print. PMID: 33710775.

# Deng G, Yin L, Li K, Hu B, Cheng X, Wang L, Zhang Y, Xu L, Xu S, Zhu L, Shao J, Hao X, Zhou J, Tang J, Li W, Jiang Y, Cheng X. Relationships between anthropometric adiposity indexes and bone mineral density in a cross-sectional Chinese study. Spine J. 2021 Feb;21(2):332-342. doi: 10.1016/j.spinee.2020.10.019. Epub 2020 Oct 20. PMID: 33091612.

# Bazyar H, Zare Javid A, Bavi Behbahani H, Moradi F, Moradi Poode B, Amiri P. Consumption of melatonin supplement improves cardiovascular disease risk factors and anthropometric indices in type 2 diabetes mellitus patients: a double-blind, randomized, placebo-controlled trial. Trials. 2021 Mar 25;22(1):231. doi: 10.1186/s13063-021-05174-z. PMID: 33766084.

# Kwak BO, Lim J, Chung S. Body Shape Indices in Adolescents Based on the 2009-2012 Korea National Health and Nutrition Examination Survey. Children (Basel). 2021 Oct 7;8(10):894. doi: 10.3390/children8100894. PMID: 34682159; PMCID: PMC8534381.

# Kasaeian, A., Hemati, Z., Heshmat, R. *et al.* Association of a body shape index and hip index with cardiometabolic risk factors in children and adolescents: the CASPIAN-V study. *J Diabetes Metab Disord* (2021). <https://doi.org/10.1007/s40200-021-00743-0>

# Guo X, Ding Q, Liang M. Evaluation of Eight Anthropometric Indices for Identification of Metabolic Syndrome in Adults with Diabetes. Diabetes Metab Syndr Obes. 2021 Mar 30;14:1431-1443. doi: 10.2147/DMSO.S294244. PMID: 33833536; PMCID: PMC8019619.

# Anthropometric Parameter That Best Predicts the Relationship Between Obesity and Osteoporosis in Kidney Transplant Recipients

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# Ren Z, Zhao A, Wang Y, Meng L, Man-Yau Szeto I, Yang C, Wang M, Zhang J, Wu W, Wang P, Zhang Y. Association of serum 25-hydroxy vitamin D with obesity-related indices in Chinese adults: A cross-sectional study. Food Sci Nutr. 2021 Feb 26;9(4):2260-2268. doi: 10.1002/fsn3.2201. PMID: 33841842; PMCID: PMC8020955.

# Zhu XL, Chen ZH, Li Y, Yang PT, Liu L, Wu LX, Wang YQ. Associations of vitamin D with novel and traditional anthropometric indices according to age and sex: a cross-sectional study in central southern China. Eat Weight Disord. 2020 Dec;25(6):1651-1661. doi: 10.1007/s40519-019-00803-8. Epub 2019 Nov 14. PMID: 31728924.

# Huang YC, Huang JC, Lin CI, Chien HH, Lin YY, Wang CL, Liang FW, Dai CY, Chuang HY. Comparison of Innovative and Traditional Cardiometabolic Indices in Estimating Atherosclerotic Cardiovascular Disease Risk in Adults. Diagnostics (Basel). 2021 Mar 28;11(4):603. doi: 10.3390/diagnostics11040603. PMID: 33800660; PMCID: PMC8067018.

**Kiremitli T, Kiremitli S, Ulug P, Dinc K, Uzel K, Arslan YK. Are the body shape index, the body roundness index and waist-to-hip ratio better than BMI to predict recurrent pregnancy loss? Reprod Med Biol. 2021 May 21;20(3):327-333. doi: 10.1002/rmb2.12388. PMID: 34262401; PMCID: PMC8254164.**

# Calcaterra V, Verduci E, Schneider L, Cena H, De Silvestri A, Vizzuso S, Vinci F, Mameli C, Zuccotti G. Sex-Specific Differences in the Relationship between Insulin Resistance and Adiposity Indexes in Children and Adolescents with Obesity. Children (Basel). 2021 May 26;8(6):449. doi: 10.3390/children8060449. PMID: 34073195.

# Vandoni M, Lovecchio N, Carnevale Pellino V, Codella R, Fabiano V, Rossi V, Zuccotti GV, Calcaterra V. Self-Reported Physical Fitness in Children and Adolescents with Obesity: A Cross-Sectional Analysis on the Level of Alignment with Multiple Adiposity Indexes. Children. 2021; 8(6):476. <https://doi.org/10.3390/children8060476>

# Nosrati-Oskouie M, Arefinia S, Eslami Hasan Abadi S, Norouzy A, Khedmatgozar H, Aghili-Moghaddam NS, Alinezhad-Namaghi M, Shadmand Foumani Moghadam MR, Rezvani R. Evaluation of non-invasive arterial stiffness parameters and their relationship with physical activity, anthropometric indices and lipid profiles in healthy middle-aged adults: Results of the PERSIAN cohort study. Int J Clin Pract. 2021 Apr 29:e14275. doi: 10.1111/ijcp.14275. Epub ahead of print. PMID: 33914387.

# Christakoudi S, Tsilidis KK, Evangelou E, Riboli E. A Body Shape Index (ABSI), hip index, and risk of cancer in the UK Biobank cohort. Cancer Med. 2021 Aug;10(16):5614-5628. doi: 10.1002/cam4.4097. Epub 2021 Jul 1. PMID: 34196490; PMCID: PMC8366087.

**See Calibration of allometric body shape indices for UK Biobank participants, supplementary material pg 10**

# Christakoudi S, Evangelou E, Riboli E, Tsilidis KK. GWAS of allometric body-shape indices in UK Biobank identifies loci suggesting associations with morphogenesis, organogenesis, adrenal cell renewal and cancer. Sci Rep. 2021 May 21;11(1):10688. doi: 10.1038/s41598-021-89176-6. PMID: 34021172; PMCID: PMC8139988.

# Christakoudi S, Tsilidis KK, Evangelou E, Riboli E. Association of body-shape phenotypes with imaging measures of body composition in the UK Biobank cohort: relevance to colon cancer risk. BMC Cancer. 2021 Oct 15;21(1):1106. doi: 10.1186/s12885-021-08820-6. PMID: 34654381.

# Zhang RH, Zhou JB, Cai YH, Shu LP, Yang J, Wei W, Lecube A. Non-linear association of anthropometric measurements and pulmonary function. Sci Rep. 2021 Jul 16;11(1):14596. doi: 10.1038/s41598-021-93985-0. PMID: 34272443. Annotation “Furthermore, the associations between BMI and FEV1, as well as FVC, were reversed U-shape in both males and females. Similar non-linear association shape occurred in WC, PBF, BRI and ABSI. “

# Ou YL, Lee MY, Lin IT, Wen WL, Hsu WH, Chen SC. Obesity-related indices are associated with albuminuria and advanced kidney disease in type 2 diabetes mellitus. Ren Fail. 2021 Dec;43(1):1250-1258. doi: 10.1080/0886022X.2021.1969247. PMID: 34461808; PMCID: PMC8409948.

**Kwak BO, Lim J, Chung S. Body Shape Indices in Adolescents Based on the 2009-2012 Korea National Health and Nutrition Examination Survey. Children (Basel). 2021 Oct 7;8(10):894. doi: 10.3390/children8100894. PMID: 34682159; PMCID: PMC8534381.**

# Kajikawa M, Maruhashi T, Kishimoto S, Yamaji T, Harada T, Hashimoto Y, Han Y, Mizobuchi A, Aoki G, Yoshimura K, Chayama K, Goto C, Yusoff FM, Nakashima A, Higashi Y. A body shape index is associated with endothelial dysfunction in both men and women. Sci Rep. 2021 Sep 9;11(1):17873. doi: 10.1038/s41598-021-97325-0. PMID: 34504193; PMCID: PMC8429591.

# Ma X, Chen L, Hu W, He L. Association Between a Body Shape Index and Subclinical Carotid Atherosclerosis in Population Free of Cardiovascular and Cerebrovascular Diseases. J Atheroscler Thromb. 2021 Sep 4. doi: 10.5551/jat.62988. Epub ahead of print. PMID: 34483222.

**Otsui K. Association of a Body Shape Index as a Novel Anthropometric Indicator with Subclinical Atherosclerosis. J Atheroscler Thromb. 2022 May 20. doi: 10.5551/jat.ED201. Epub ahead of print. PMID: 35598983. (editorial)**

# Tsou MT, Chang YC, Hsu CP, Kuo YC, Yun CH, Huang WH, Hu KC, Liu CY, Chen YJ, Sung KT, Liu CC, Hung CL, Kuo JY, Chen TY, Hung TC, Yeh HI. Visceral adiposity index outperforms conventional anthropometric assessments as predictor of diabetes mellitus in elderly Chinese: a population-based study. Nutr Metab (Lond). 2021 Sep 25;18(1):87. doi: 10.1186/s12986-021-00608-6. PMID: 34563209.

**Calderón-García JF, Roncero-Martín R, Rico-Martín S, De Nicolás-Jiménez JM, López-Espuela F, Santano-Mogena E, Alfageme-García P, Sánchez Muñoz-Torrero JF. Effectiveness of Body Roundness Index (BRI) and a Body Shape Index (ABSI) in Predicting Hypertension: A Systematic Review and Meta-Analysis of Observational Studies. Int J Environ Res Public Health. 2021 Nov 4;18(21):11607. doi: 10.3390/ijerph182111607. PMID: 34770120; PMCID: PMC8582804.**

**Ge W, Yi L, Xiao C, Xiao Y, Liu J, Liang F, Yin J, Hu J. Effectiveness of a body shape index in predicting pediatric high blood pressure. Pediatr Res. 2021 Nov 16. doi: 10.1038/s41390-021-01844-5. Epub ahead of print. PMID: 34785781.**

# Zuo YQ, Gao ZH, Yin YL, Yang X, Feng PY. Association Between the Cardiometabolic Index and Hyperuricemia in an Asymptomatic Population with Normal Body Mass Index. *Int J Gen Med*. 2021;14:8603-8610 <https://doi.org/10.2147/IJGM.S340595>

# da Cunha de Sá-Caputo D, Sonza A, Coelho-Oliveira AC, Pessanha-Freitas J, Reis AS, Francisca-Santos A, dos Anjos EM, Paineiras-Domingos LL, de Rezende Bessa Guerra T, da Silva Franco A, Xavier VL, Barbosa e Silva CJ, Moura-Fernandes MC, Mendonça VA, Rodrigues Lacerda AC, da Rocha Pinheiro Mulder A, Seixas A, Sartorio A, Taiar R, Bernardo-Filho M. Evaluation of the Relationships between Simple Anthropometric Measures and Bioelectrical Impedance Assessment Variables with Multivariate Linear Regression Models to Estimate Body Composition and Fat Distribution in Adults: Preliminary Results. Biology. 2021; 10(11):1209. https://doi.org/10.3390/biology10111209

**Sugiura T, Dohi Y, Takagi Y, Yokochi T, Yoshikane N, Suzuki K, Tomiishi T, Nagami T, Iwase M, Takase H, Seo Y, Ohte N. A body shape index could serve to identify individuals with metabolic syndrome and increased arterial stiffness in the middle-aged population. Clin Nutr ESPEN. 2021 Dec;46:251-258. doi: 10.1016/j.clnesp.2021.10.001. Epub 2021 Oct 8. PMID: 34857205.**

# Kim B, Kim G, Kim E, Park J, Isobe T, Sakae T, Oh S. The A Body Shape Index Might Be a Stronger Predictor of Chronic Kidney Disease Than BMI in a Senior Population. International Journal of Environmental Research and Public Health. 2021; 18(24):12874. <https://doi.org/10.3390/ijerph182412874>

# Sasak, G., Basok, B. I., Basci, S., Kocanoglu, A., Bakan, A., & Isman, F. K. (2021). Can body shape index indicate obesity-associated inflammation and cardiovascular diseases in stage 3-4 chronic kidney disease patients?. *Ukrainian Journal of Nephrology and Dialysis*, (4(72), 60-66. <https://doi.org/10.31450/ukrjnd.4(72).2021.08>

**Bi H, Zhang Y, Qin P, Wang C, Peng X, Chen H, Zhao D, Xu S, Wang L, Zhao P, Lou Y, Hu F. Association of Chinese Visceral Adiposity Index and Its Dynamic Change With Risk of Carotid Plaque in a Large Cohort in China. J Am Heart Assoc. 2021 Dec 31:e022633. doi: 10.1161/JAHA.121.022633. Epub ahead of print. PMID: 34970911.**

**Nagayama D, Watanabe Y, Yamaguchi T, Suzuki K, Saiki A, Fujishiro K, Shirai K. Issue of Waist Circumference for the Diagnosis of Metabolic Syndrome Regarding Arterial Stiffness: Possible Utility of a Body Shape Index in Middle-Aged Nonobese Japanese Urban Residents Receiving Health Screening. Obes Facts. 2022 Jan 10:1-10. doi: 10.1159/000520418. Epub ahead of print. PMID: 35008086.**

**Nagayama D, Fujishiro K, Tsuda S, Watanabe Y, Yamaguchi T, Suzuki K, Saiki A, Shirai K. Enhanced prediction of renal function decline by replacing waist circumference with "A Body Shape Index (ABSI)" in diagnosing metabolic syndrome: a retrospective cohort study in Japan. Int J Obes (Lond). 2021 Nov 25. doi: 10.1038/s41366-021-01026-7. Epub ahead of print. PMID: 34824353.**

**Nagayama D, Watanabe Y, Yamaguchi T, Maruyama M, Saiki A, Shirai K, Tatsuno I. New index of abdominal obesity, a body shape index, is BMI-independently associated with systemic arterial stiffness in real-world Japanese population. Int J Clin Pharmacol Ther. 2020 Dec;58(12):709-717. doi: 10.5414/CP203778. PMID: 32831165.**

**Hsuan CF, Lin FJ, Lee TL, Yang KC, Tseng WK, Wu YW, Yin WH, Yeh HI, Chen JW, Wu CC; Taiwanese Secondary Prevention for Patients with AtheRosCLErotic Disease (T-SPARCLE) Registry Investigators. The waist-to-body mass index ratio as an anthropometric predictor for cardiovascular outcome in subjects with established atherosclerotic cardiovascular disease. Sci Rep. 2022 Jan 17;12(1):804. doi: 10.1038/s41598-021-04650-5. PMID: 35039542; PMCID: PMC8764082.**

# Ramírez-Marrero FA, Nazario CM, Rosario-Rosado RV, Schelske-Santos M, Mansilla-Rivera I, Nie J, Hernández-Santiago J, Freudenheim JL. Anthropometric measures and breast cancer risk among Hispanic women in Puerto Rico. Cancer Causes Control. 2022 Jul;33(7):971-981. doi: 10.1007/s10552-022-01585-8. Epub 2022 May 4. PMID: 35507195.

**Anto EO, Frimpong J, Boadu WIO, Tamakloe VCKT, Hughes C, Acquah B, Acheampong E, Asamoah EA, Opoku S, Appiah M, Tawiah A, Annani-Akollor ME, Wiafe YA, Addai-Mensah O, Obirikorang C. Prevalence of Cardiometabolic Syndrome and its Association With Body Shape Index and A Body Roundness Index Among Type 2 Diabetes Mellitus Patients: A Hospital-Based Cross-Sectional Study in a Ghanaian Population. Front Clin Diabetes Healthc. 2022 Feb 9;2:807201. doi: 10.3389/fcdhc.2021.807201. PMID: 36994331; PMCID: PMC10012128.**

**MaddodiS, GautamSK. Visceral obesity assessment in type 2 diabetes mellitus using a body shape index may be better as compared to body mass index. Int J Adv Med 2022;9:642-6. not in pub med**

**Cai S, Dong J, Cheng B, Zhang A, Sun J, Li M, Su Y, Bao Q, Zhu P, Wang S. Relationship of a new anthropometric index with left ventricular hypertrophy in hypertensive patients among the Han Chinese. BMC Cardiovasc Disord. 2022 Jan 26;22(1):16. doi: 10.1186/s12872-022-02463-6. PMID: 35081909.**

**Qiu S, Cai X, Yuan Y, Xie B, Sun Z, Wang D, Wu T. Muscle strength and prediabetes progression and regression in middle-aged and older adults: a prospective cohort study. J Cachexia Sarcopenia Muscle. 2022 Jan 23. doi: 10.1002/jcsm.12905. Epub ahead of print. PMID: 35068089.**

**Lugones-Sanchez C, Recio-Rodriguez JI, Agudo-Conde C, Repiso-Gento I, G Adalia E, Ramirez-Manent JI, Sanchez-Calavera MA, Rodriguez-Sanchez E, Gomez-Marcos MA, Garcia-Ortiz L; EVIDENT 3 Investigators. Long-term Effectiveness of a Smartphone App Combined With a Smart Band on Weight Loss, Physical Activity, and Caloric Intake in a Population With Overweight and Obesity (Evident 3 Study): Randomized Controlled Trial. J Med Internet Res. 2022 Feb 1;24(2):e30416. doi: 10.2196/30416. PMID: 35103609.**

**Ou YL, Lee MY, Lin IT, Wen WL, Hsu WH, Chen SC. Obesity-related indices are associated with albuminuria and advanced kidney disease in type 2 diabetes mellitus. Ren Fail. 2021 Dec;43(1):1250-1258. doi: 10.1080/0886022X.2021.1969247. PMID: 34461808; PMCID: PMC8409948.**

**Hacıağaoğlu N, Öner C, Çetin H, Şimşek EE. Body Shape Index and Cardiovascular Risk in Individuals With Obesity. Cureus. 2022 Jan 14;14(1):e21259. doi: 10.7759/cureus.21259. PMID: 35178315; PMCID: PMC8843105.**

**Wu T, Wei B, Song YP, Zhang XH, Yan YZ, Wang XP, Ma JL, Keerman M, Zhang JY, He J, Ma RL, Guo H, Rui DS, Guo SX. Predictive power of A Body Shape Index and traditional anthropometric indicators for cardiovascular disease:a cohort study in rural Xinjiang, China. Ann Hum Biol. 2022 Mar 7:1-23. doi: 10.1080/03014460.2022.2049874. Epub ahead of print. PMID: 35254201.**

**Kim S, Choi SY, Lee H, Kim JJ, Park HE. Sex and Age Differences in the Impact of Metabolic Syndrome and Its Components including A Body Shape Index on Arterial Stiffness in the General Population. J Atheroscler Thromb. 2022 Mar 31. doi: 10.5551/jat.63371. Epub ahead of print. PMID: 35354700.**

**Kolena B, Hlisníková H, Kečkéšová Ľ, Šidlovská M, Trnovec T, Petrovičová I. Risk of Abdominal Obesity Associated with Phthalate Exposure of Nurses. Toxics. 2022 Mar 18;10(3):143. doi: 10.3390/toxics10030143. PMID: 35324768; PMCID: PMC8951402**.

# Shirani P, Omidvar N, Eini-Zinab H, PoorEbrahim F, Rezazadeh A. Association of Body Fat Distribution Indices and Dietary Adequacy Ratio in (Body Shape Index and Waist-to-Height Ratio) in Free-Living Elderly in Tehran City, 2018–2019. Iranian J Nutr Sci Food Technol 2021; 16 (1) :13-25 URL: <http://nsft.sbmu.ac.ir/article-1-3014-en.html>

# Huang S-H, Chen S-C, Geng J-H, Wu D-W, Li C-H. Metabolic Syndrome and High-Obesity-Related Indices Are Associated with Poor Cognitive Function in a Large Taiwanese Population Study Older than 60 Years. Nutrients. 2022; 14(8):1535. <https://doi.org/10.3390/nu14081535>

# NAGANO, F. E. Z. .; ALMEIDA, C. C. P. de; MAGALHÃES, T. A.; CERCI, R. J.; SILVA, M. M. F. da; LIMA JUNIOR, E. A Body Shape Index and Pulse Wave Velocity: strong markers of coronary artery calcification in dyslipidemic patients. Research, Society and Development, *[S. l.]*, v. 11, n. 5, p. e17711528190, 2022. DOI: 10.33448/rsd-v11i5.28190.

# Yi, X., Ling, J., Meng, H. *et al.* Lipid Accumulation Product Predicts Diabetes Remission After Bariatric Surgery in Chinese Patients with BMI < 35 kg/m2: a Multicenter Cohort Study. *OBES SURG* (2022). https://doi.org/10.1007/s11695-022-06003-1

# Althea Medical Journal. 2022;9(1)19 Body Mass Index, a Body Shape Index, and Waist-to-Height Ratio in Predicting Elevated Blood Pressure

# Wu S, Hsu L-A, Teng M-S, Chou H-H, Ko Y-L. Differential Genetic and Epigenetic Effects of the *KLF14* Gene on Body Shape Indices and Metabolic Traits. International Journal of Molecular Sciences. 2022; 23(8):4165. <https://doi.org/10.3390/ijms23084165>

# Kim, B.; Kim, G.-m.; Kim, E.; Park, J.; Isobe, T.; Mori, Y.; Oh, S. The Anthropometric Measure ‘A Body Shape Index’ May Predict the Risk of Osteoporosis in Middle-Aged and Older Korean People. Int. J. Environ. Res. Public Health 2022, 19, 4926. <https://doi.org/10.3390/ijerph19084926> “However, because studies investigating the association between ABSI and osteoporosis and assessing the predictability of ABSI for osteoporosis have involved only three different ethnicities in Korea, China, and Turkey, further studies involving other ethnic groups are essential to confirm the conclusions in the present study.”

# Lotfi K, Hassanzadeh Keshteli A, Saneei P, Afshar H, Esmaillzadeh A and Adibi P (2022) A Body Shape Index and Body Roundness Index in Relation to Anxiety, Depression, and Psychological Distress in Adults. *Front. Nutr.* 9:843155. doi: 10.3389/fnut.2022.843155

# Mozafarinia, M., Heidari-Beni, M., Abbasi, B. *et al.* Association between dietary fat quality indices with anthropometric measurements in children and adolescents. *BMC Pediatr* 22, 244 (2022). <https://doi.org/10.1186/s12887-022-03307-0>

# Ramírez-Marrero, F.A., Nazario, C.M., Rosario-Rosado, R.V. *et al.* Anthropometric measures and breast cancer risk among Hispanic women in Puerto Rico. *Cancer Causes Control* (2022). https://doi.org/10.1007/s10552-022-01585-8

# Anthropometric Indicators as a Tool for Diagnosis of Obesity and Other Health Risk Factors: A Literature Review

# Christakoudi, S., Riboli, E., Evangelou, E. *et al.* Associations of body shape index (ABSI) and hip index with liver, metabolic, and inflammatory biomarkers in the UK Biobank cohort. *Sci Rep* 12, 8812 (2022). <https://doi.org/10.1038/s41598-022-12284-4>

**Christakoudi S, Riboli E, Evangelou E, Tsilidis KK. Associations of body shape phenotypes with sex steroids and their binding proteins in the UK Biobank cohort. Sci Rep. 2022 Jun 24;12(1):10774. doi: 10.1038/s41598-022-14439-9. PMID: 35750890; PMCID: PMC9232606.**

**Bigman G, Ryan AS. Healthy Eating Index-2015 Is Associated with Grip Strength among the US Adult Population. Nutrients. 2021 Sep 25;13(10):3358. doi: 10.3390/nu13103358. PMID: 34684359; PMCID: PMC8540420.**

**Minetto MA, Pietrobelli A, Busso C, Bennett JP, Ferraris A, Shepherd JA, Heymsfield SB. Digital Anthropometry for Body Circumference Measurements: European Phenotypic Variations throughout the Decades. Journal of Personalized Medicine. 2022; 12(6):906. https://doi.org/10.3390/jpm12060906**

# Liu XC, Liu YS, Guan HX, Feng YQ, Kuang J. Comparison of six anthropometric measures in discriminating diabetes: A cross-sectional study from the National Health and Nutrition Examination Survey. J Diabetes. 2022 Jul;14(7):465-475. doi: 10.1111/1753-0407.13295. Epub 2022 Jul 16. PMID: 35841213; PMCID: PMC9310044.

**Lee H, Chung HS, Kim YJ, Choi MK, Roh YK, Chung W, Yu JM, Oh CM, Moon S. Association between body shape index and risk of mortality in the United States. Sci Rep. 2022 Jul 4;12(1):11254. doi: 10.1038/s41598-022-15015-x. PMID: 35788633; PMCID: PMC9253149.**

**Shirai K. Should the Definition of Metabolic Syndrome be Reconsidered from the Aspect of Arterial Stiffness? J Atheroscler Thromb. 2022 Jul 1. doi: 10.5551/jat.ED209. Epub ahead of print. PMID: 35781276.**

# Su W-Y, Chen I-H, Gau Y-C, Wu P-Y, Huang J-C, Tsai Y-C, Chen S-C, Chang J-M, Hwang S-J, Chen H-C. Metabolic Syndrome and Obesity-Related Indices Are Associated with Rapid Renal Function Decline in a Large Taiwanese Population Follow-Up Study. Biomedicines. 2022; 10(7):1744. <https://doi.org/10.3390/biomedicines10071744>

**Qiao YS, Tang X, Chai YH, Gong HJ, Zhang X, Stehouwer CDA, Zhou JB. Association of Sarcopenia and A Body Shape Index With Overall and Cause-Specific Mortality. Front Endocrinol (Lausanne). 2022 Jul 5;13:839074. doi: 10.3389/fendo.2022.839074. PMID: 35865317; PMCID: PMC9294172.**

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**International Journal of Advances in Medicine  
Maddodi S et al. Int J Adv Med. 2022 Jun;9(6):642-646  
http://www.ijmedicine.com pISSN 2349-3925 | eISSN 2349-3933  
Original Research Article  
Visceral obesity assessment in type 2 diabetes mellitus using a body shape index may be better as compared to body mass index  
Suhas Maddodi\*, S. K. Gautam (150 pts, not in medline)  
in assessing cardiovascular risk.  
Keywords: Type 2 diabetes mellitus, Obesity, ABSI, BMI, Waist circumference, ABSI z score  
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\*Correspondence:  
Dr. Suhas Maddodi,  
E-mail: Suhasmaddodi6@gmail.com**

**Alghannam AF, Almasud AA, Alghnam SA, Alharbi DS, Aljubairi MS, Altalhi AS, Jan AM, Alothman SA. Prevalence of sarcopenia among Saudis and its association with lifestyle behaviors: Protocol for cross-sectional study. PLoS One. 2022 Aug 2;17(8):e0271672. doi: 10.1371/journal.pone.0271672. PMID: 35917305; PMCID: PMC9345358.**

**Nagayama D, Watanabe Y, Yamaguchi T, Suzuki K, Saiki A, Fujishiro K, Shirai K. Issue of Waist Circumference for the Diagnosis of Metabolic Syndrome Regarding Arterial Stiffness: Possible Utility of a Body Shape Index in Middle-Aged Nonobese Japanese Urban Residents Receiving Health Screening. Obes Facts. 2022;15(2):160-169. doi: 10.1159/000520418. Epub 2022 Jan 10. PMID: 35008086; PMCID: PMC9021625.**

# 

# Almodóvar-Rivera, I.A.; Rosario-Rosado, R.V.; Nazario, C.M.; Hernández-Santiago, J.; Ramírez-Marrero, F.A.; Nunez, M.; Maharaj, R.; Adams, P.; Martinez-Brockman, J.L.; Tessier-Sherman, B.; Nunez-Smith, M., on behalf of the ECHORN Writing Group. Development of the Anthropometric Grouping Index for the Eastern Caribbean Population Using the Eastern Caribbean Health Outcomes Research Network (ECHORN) Cohort Study Data. Int. J. Environ. Res. Public Health 2022, 19, 10415. <https://doi.org/10.3390/ijerph191610415>

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# and evaluate the OR for T2D risk.

**Tomažič A, Žvanut B, Grbac LV, Jurdana M. Identification of sarcopenic obesity in adults undergoing orthopaedic surgery: Relationship between "a body shape index" (ABSI) and fat-free mass. A cross -sectional study. PLoS One. 2022 Jun 22;17(6):e0269956. doi: 10.1371/journal.pone.0269956. PMID: 35731798; PMCID: PMC9216617.**

**Zhang Y, Gao W, Li B, Liu Y, Chen K, Wang A, Tang X, Yan L, Luo Z, Qin G, Chen L, Wan Q, Gao Z, Wang W, Ning G, Mu Y. The association between a body shape index and elevated urinary albumin-creatinine ratio in Chinese community adults. Front Endocrinol (Lausanne). 2022 Jul 28;13:955241. doi: 10.3389/fendo.2022.955241. PMID: 35966103; PMCID: PMC9365939.**

# .

# Lee M-R, Jung SM. Serum Folate Related to Five Measurements of Obesity and High-Sensitivity C-Reactive Protein in Korean Adults. Nutrients. 2022; 14(17):3461. https://doi.org/10.3390/nu14173461

# Santos CML, Brito MD, Castro PASV, Vries TP, Viana NL, Coelho MPP, Malheiro OB, Bering T, Gonzalez MC, Teixeira R, Cambraia RD, Rocha GA, Silva LD. Metabolic-associated fatty liver disease is associated with low muscle mass and strength in patients with chronic hepatitis B. World J Hepatol 2022; 14(8): 1652-1666 [DOI: [10.4254/wjh.v14.i8.1652](https://dx.doi.org/10.4254/wjh.v14.i8.1652)] (grip strength and sarcopenia)

**Yang Q, Liu Y, Jin Z, Liu L, Yuan Z, Xu D, Hong F. Evaluation of anthropometric indices as a predictor of diabetes in Dong and Miao ethnicities in China: A cross-sectional analysis of China Multi-Ethnic Cohort Study. PLoS One. 2022 Mar 11;17(3):e0265228. doi: 10.1371/journal.pone.0265228. PMID: 35275976; PMCID: PMC8916665.**

**Jian LY, Guo SX, Ma RL, He J, Rui DS, Ding YS, Li Y, Sun XY, Mao YD, He X, Liao SY, Guo H. Comparison of obesity-related indicators for identifying metabolic syndrome among normal-weight adults in rural Xinjiang, China. BMC Public Health. 2022 Sep 12;22(1):1730. doi: 10.1186/s12889-022-14122-8. PMID: 36096754.**

**Patriota P, Rezzi S, Guessous I, Marques-Vidal P. Association between anthropometric markers of adiposity, adipokines and vitamin D levels. Sci Rep. 2022 Sep 14;12(1):15435. doi: 10.1038/s41598-022-19409-9. PMID: 36104384; PMCID: PMC9474508.**

**Liu XC, Liu YS, Guan HX, Feng YQ, Kuang J. Comparison of six anthropometric measures in discriminating diabetes: A cross-sectional study from the National Health and Nutrition Examination Survey. J Diabetes. 2022 Jul;14(7):465-475. doi: 10.1111/1753-0407.13295. Epub 2022 Jul 16. PMID: 35841213; PMCID: PMC9310044.**

**Demir Ş, Kara Y, Melikoğlu M, Aydın K, Özderya A, Subaşı HE, Dabak MR, Temizkan Ş. New Anthropometric Measurements: Relationship to Thyroid Functions in Euthyroid Obese Subjects. Cureus. 2021 Dec 15;13(12):e20435. doi: 10.7759/cureus.20435. PMID: 35047272; PMCID: PMC8759458.**

# Abstract: ..TSH was found to be negatively correlated with ABSI (p = 0.006) .. Free T4 was not associated with any of the anthropometric measurements.While fT3 was determined to be positively correlated with ABSI (p = 0.008) and negatively correlated with PBF and BAI (p = 0.001, p = 0.002, respectively),…

# Iłowiecka K, Glibowski P, Libera J, Koch W. Changes in Novel Anthropometric Indices of Abdominal Obesity during Weight Loss with Selected Obesity-Associated Single-Nucleotide Polymorphisms: A Small One-Year Pilot Study. International Journal of Environmental Research and Public Health. 2022; 19(18):11837. <https://doi.org/10.3390/ijerph191811837>

**here**

**Meulmeester FL, Willems van Dijk K, Mooijaart SP, van Heemst D, Noordam R. The association of measures of body shape and adiposity with incidence of cardiometabolic disease from an ageing perspective. Geroscience. 2022 Sep 21. doi: 10.1007/s11357-022-00654-9. Epub ahead of print. PMID: 36129566.**

**Nagayama D, Sugiura T, Choi SY, Shirai K. Various Obesity Indices and Arterial Function Evaluated with CAVI - Is Waist Circumference Adequate to Define Metabolic Syndrome? Vasc Health Risk Manag. 2022 Sep 12;18:721-733. doi: 10.2147/VHRM.S378288. PMID: 36120718; PMCID: PMC9480599**.

**Komici K, D'Amico F, Verderosa S, Piomboni I, D'Addona C, Picerno V, Bianco A, Caiazzo A, Bencivenga L, Rengo G, Guerra G. Impact of Body Composition Parameters on Lung Function in Athletes. Nutrients. 2022 Sep 16;14(18):3844. doi: 10.3390/nu14183844. PMID: 36145219.**

# Yoshimura, Y.; Wakabayashi, H.; Nagano, F.; Matsumoto, A.; Shimazu, S.; Shiraishi, A.; Kido, Y.; Bise, T. The Applicability of the ESPEN and EASO-Defined Diagnostic Criteria for Sarcopenic Obesity in Japanese Patients after Stroke: Prevalence and Association with Outcomes. Nutrients 2022, 14, 4205. <https://doi.org/10.3390/nu14194205>

**Da Costa Silva BY, De Carvalho Sampaio HA, Shivappa N, Hébert J, Silva Albuquerque LD, Ferreira Carioca AA, Costa D'Almeida JA, Costa Maia CS, Pereira De Melo ML. Interactions between dietary inflammatory index, nutritional state and Multiple Sclerosis clinical condition. Clin Nutr ESPEN. 2018 Aug;26:35-41. doi: 10.1016/j.clnesp.2018.04.018. Epub 2018 May 18. PMID: 29908680.**

**Otaki Y, Watanabe T, Konta T, Watanabe M, Fujimoto S, Sato Y, Asahi K, Yamagata K, Tsuruya K, Narita I, Kasahara M, Shibagaki Y, Iseki K, Moriyama T, Kondo M, Watanabe T. A Body Shape Index and Aortic Disease-Related Mortality in Japanese General Population. J Atheroscler Thromb. 2022 Sep 7. doi: 10.5551/jat.63753. Epub ahead of print. PMID: 36070887.**

**Gažarová M, Bihari M, Lorková M, Lenártová P, Habánová M. The Use of Different Anthropometric Indices to Assess the Body Composition of Young Women in Relation to the Incidence of Obesity, Sarcopenia and the Premature Mortality Risk. Int J Environ Res Public Health. 2022 Sep 29;19(19):12449. doi: 10.3390/ijerph191912449. PMID: 36231748; PMCID: PMC9564835.**

**Gažarová M, Galšneiderová M, Mečiarová L. Obesity diagnosis and mortality risk based on a body shape index (ABSI) and other indices and anthropometric parameters in university students. Rocz Panstw Zakl Hig. 2019;70(3):267-275. doi: 10.32394/rpzh.2019.0077. PMID: 31515986.**

**Özlem K, Selçuk K. High ABSI values and association with AF recurrence after AF ablation: a prospective single-center study. Eur Rev Med Pharmacol Sci. 2022 Oct;26(19):7151-7160. doi: 10.26355/eurrev\_202210\_29901. PMID: 36263563.**

**Kuang M, Sheng G, Hu C, Lu S, Peng N, Zou Y. The value of combining the simple anthropometric obesity parameters, Body Mass Index (BMI) and a Body Shape Index (ABSI), to assess the risk of non-alcoholic fatty liver disease. Lipids Health Dis. 2022 Oct 20;21(1):104. doi: 10.1186/s12944-022-01717-8. PMID: 36266655.**

**Wu LD, Kong CH, Shi Y, Zhang JX, Chen SL. Associations between novel anthropometric measures and the prevalence of hypertension among 45,853 adults: A cross-sectional study. Front Cardiovasc Med. 2022 Nov 3;9:1050654. doi: 10.3389/fcvm.2022.1050654. PMID: 36407444; PMCID: PMC9669705.**

**Orsi E, Solini A, Penno G, Bonora E, Fondelli C, Trevisan R, Vedovato M, Cavalot F, Lamacchia O, Haxhi J, Nicolucci A, Pugliese G; Renal Insufficiency And Cardiovascular Events (RIACE) Study Group. Body mass index versus surrogate measures of central adiposity as independent predictors of mortality in type 2 diabetes. Cardiovasc Diabetol. 2022 Dec 2;21(1):266. doi: 10.1186/s12933-022-01706-2. PMID: 36461034.**

# Nagayama D, Fujishiro K, Watanabe Y, Yamaguchi T, Suzuki K, Saiki A, Shirai K. A Body Shape Index (ABSI) as a Variant of Conicity Index Not Affected by the Obesity Paradox: A Cross-Sectional Study Using Arterial Stiffness Parameter. Journal of Personalized Medicine. 2022; 12(12):2014. <https://doi.org/10.3390/jpm12122014>

**Al-Shami, I., Alkhalidy, H., Alnaser, K. *et al.* Assessing metabolic syndrome prediction quality using seven anthropometric indices among Jordanian adults: a cross-sectional study. *Sci Rep* 12, 21043 (2022).** [**https://doi.org/10.1038/s41598-022-25005-8**](https://doi.org/10.1038/s41598-022-25005-8)

**Abid F, Irfan M, Ali Z, Fatima U. Body Shape Index, Body Adiposity Index, and Body Roundness Index to Predict Cardiovascular Health Status. Pak J Med Dent. 2022;11(4): 55-60. doi: 10.36283/PJMD11-4/009**

**Ozturk EE, Yildiz H. Evaluation of different anthropometric indices for predicting metabolic syndrome. Eur Rev Med Pharmacol Sci. 2022 Nov;26(22):8317-8325. doi: 10.26355/eurrev\_202211\_30364. PMID: 36459015.**

**Nam KW, Kwon HM, Jeong HY, Park JH, Kwon H. Association of Body Shape Index with Cerebral Small Vessel Disease. Obes Facts. 2023;16(2):204-211. doi: 10.1159/000528701. Epub 2022 Dec 19. PMID: 36535265; PMCID: PMC10028365.**

**Xiong MF, He P, Chen YH, Cao RR, Lei SF. The effect of a body shape index (ABSI) and its interaction with low estimated glomerular filtration rate (eGFR) on osteoporosis in elderly Chinese. J Orthop Sci. 2022 Dec 20:S0949-2658(22)00331-1. doi: 10.1016/j.jos.2022.11.018. Epub ahead of print. PMID: 36550016.**

**Costo-Muriel C, Calderón-García JF, Rico-Martín S, Sánchez-Bacaicoa C, Escudero-Sánchez G, Galán-González J, Rodríguez-Velasco FJ, Muñoz-Torrero JFS. Association of subclinical carotid atherosclerosis assessed by high-resolution ultrasound with traditional and novel anthropometric indices. Curr Probl Cardiol. 2022 Dec 27:101574. doi: 10.1016/j.cpcardiol.2022.101574. Epub ahead of print. PMID: 36584728.**

# Rinkūnienė E, Petrulionytė E, Dženkevičiūtė V, Petrulionienė Ž, Senulytė A, Puronaitė R, Laucevičius A. Prevalence of Cardiovascular Risk Factors in Middle-Aged Lithuanian Men Based on Body Mass Index and Waist Circumference Group Results from the 2006-2016 Lithuanian High Cardiovascular Risk Prevention Program. Medicina (Kaunas). 2022 Nov 24;58(12):1718. doi: 10.3390/medicina58121718. PMID: 36556920; PMCID: PMC9785174.

# Suthahar N, Meems LMG, Withaar C, Gorter TM, Kieneker LM, Gansevoort RT, Bakker SJL, van Veldhuisen DJ, de Boer RA. Relative fat mass, a new index of adiposity, is strongly associated with incident heart failure: data from PREVEND. Sci Rep. 2022 Jan 7;12(1):147. doi: 10.1038/s41598-021-02409-6. PMID: 34996898; PMCID: PMC8741934.

# Li W, Wang Z, Li M, Xie J, Gong J, Liu N. Association between a body shape index and abdominal aortic calcification in general population: A cross-sectional study. Front Cardiovasc Med. 2023 Jan 10;9:1091390. doi: 10.3389/fcvm.2022.1091390. PMID: 36704474; PMCID: PMC9871763.

# Sun X, Cao L, Liu Y, Huang W, Pei C, Wang X, Feng S, Song B. Sex- and age-specific differences in associations of a body shape index with all-cause and cardiovascular death risks among US adults with diabetes. Nutr Metab Cardiovasc Dis. 2022 Nov 19:S0939-4753(22)00454-9. doi: 10.1016/j.numecd.2022.11.018. Epub ahead of print. PMID: 36642600. (Among US adults with DM from NHANES, ABSI exhibited a linear and positive relationship with total and CVD mortality risk, especially in men and younger patients.)

# Hazart J, Montel F, Gentes E, Lahaye C, Pouget M, Farigon N, Miolanne M, Mulliez A, Boirie Y. Body Mass Trajectory Affects the Long-Term Occurrence of Metabolic Syndrome in Adult Patients with Severe Obesity. Children (Basel). 2022 Dec 23;10(1):27. doi: 10.3390/children10010027. PMID: 36670578; PMCID: PMC9856911.

**Christakoudi S, Tsilidis KK, Evangelou E, Riboli E. Sex differences in the associations of body size and body shape with platelets in the UK Biobank cohort. Biol Sex Differ. 2023 Feb 22;14(1):12. doi: 10.1186/s13293-023-00494-y. PMID: 36814334; PMCID: PMC9945692.**

**Amiri M, Mousavi M, Azizi F, Ramezani Tehrani F. The relationship of reproductive factors with adiposity and body shape indices changes overtime: findings from a community-based study. J Transl Med. 2023 Feb 22;21(1):137. doi: 10.1186/s12967-023-04000-1. PMID: 36814308; PMCID: PMC9948339.**

**Yamashiro K, Yamaguchi N, Sagawa K, Tanei S, Ogata F, Nakamura T, Kawasaki N. Relationship of masked obesity to self-reported lifestyle habits, ideal body image, and anthropometric measures in Japanese university students: A cross-sectional study. PLoS One. 2023 Feb 21;18(2):e0281599. doi: 10.1371/journal.pone.0281599. PMID: 36809358; PMCID: PMC9943004.**

# Hozhabrnia A, Jambarsang S, Namayandeh SM. Cut-off values of obesity indices to predict coronary heart disease incidence by time-dependent receiver operating characteristic curve analysis in 10-year follow-up in study of Yazd Healthy Heart Cohort, Iran. ARYA Atheroscler. 2022 May;18(3):1-10. doi: 10.48305/arya.2022.24262. PMID: 36815958; PMCID: PMC9931948.

# Gui J, Li Y, Liu H, Guo LL, Li J, Lei Y, Li X, Sun L, Yang L, Yuan T, Wang C, Zhang D, Wei H, Li J, Liu M, Hua Y, Zhang L. Obesity- and lipid-related indices as a predictor of obesity metabolic syndrome in a national cohort study. Front Public Health. 2023 Feb 14;11:1073824. doi: 10.3389/fpubh.2023.1073824. PMID: 36875382; PMCID: PMC9980350. (sic)

# Chen BJ, Sluiman AJ, Khalid W, Strachan MWJ, Price JF. Risk of dementia associated with body mass index, changes in body weight and waist circumference in older people with type 2 diabetes: The Edinburgh Type 2 Diabetes Study. Diabet Med. 2023 Feb 8:e15063. doi: 10.1111/dme.15063. Epub ahead of print. PMID: 36756713.

**Zhang X, Ye R, Sun L, Liu X, Wang S, Meng Q, Chen X. Relationship between novel anthropometric indices and the incidence of hypertension in Chinese individuals: a prospective cohort study based on the CHNS from 1993 to 2015. BMC Public Health. 2023 Mar 6;23(1):436. doi: 10.1186/s12889-023-15208-7. PMID: 36879238; PMCID: PMC9990350. (under MS - HTN)**

# Wang SY, Zhang WS, Jiang CQ, Jin YL, Zhu T, Zhu F, Xu L. Association of novel and conventional obesity indices with colorectal cancer risk in older Chinese: a 14-year follow-up of the Guangzhou Biobank Cohort Study. BMC Cancer. 2023 Mar 29;23(1):286. doi: 10.1186/s12885-023-10762-0. PMID: 36991401. corr (ABSI,BMI) ~ 0.5, sic)

**Gui J, Li Y, Liu H, Guo LL, Li J, Lei Y, Li X, Sun L, Yang L, Yuan T, Wang C, Zhang D, Li J, Liu M, Hua Y, Zhang L. Obesity-and lipid-related indices as a predictor of hypertension in Mid-aged and Elderly Chinese: A Cross-sectional Study. Res Sq [Preprint]. 2023 Mar 28:rs.3.rs-2708175. doi: 10.21203/rs.3.rs-2708175/v1. PMID: 37034776; PMCID: PMC10081363**.

# Sun Y, Yan Y, Liao Y, Chu C, Guo T, Ma Q, Wang Y, Wang D, Jia H, Mu J. The new visceral adiposity index outperforms traditional obesity indices as a predictor of subclinical renal damage in Chinese individuals: a cross-sectional study. BMC Endocr Disord. 2023 Apr 7;23(1):78. doi: 10.1186/s12902-023-01330-5. PMID: 37029402; PMCID: PMC10080835.

# Ryu K, Suliman ME, Qureshi AR, Chen Z, Avesani CM, Brismar TB, Ripsweden J, Barany P, Heimbürger O, Stenvinkel P, Lindholm B. Central obesity as assessed by conicity index and a-body shape index associates with cardiovascular risk factors and mortality in kidney failure patients. Front Nutr. 2023 Mar 1;10:1035343. doi: 10.3389/fnut.2023.1035343. PMID: 36937338; PMCID: PMC10016612.

**Li Y, Gui J, Zhang X, Wang Y, Mei Y, Yang X, Liu H, Guo LL, Li J, Lei Y, Li X, Sun L, Yang L, Yuan T, Wang C, Zhang D, Wei H, Li J, Liu M, Hua Y, Zhang L. Predicting hypertension by obesity- and lipid-related indices in mid-aged and elderly Chinese: a nationwide cohort study from the China Health and Retirement Longitudinal Study. BMC Cardiovasc Disord. 2023 Apr 20;23(1):201. doi: 10.1186/s12872-023-03232-9. PMID: 37081416; PMCID: PMC10120116.**

**Wang H, Zhang Y, Liu Y, Li H, Xu R, Fu H, Yan C, Qu B. Comparison between traditional and new obesity measurement index for screening metabolic associated fatty liver disease. Front Endocrinol (Lausanne). 2023 Apr 21;14:1163682. doi: 10.3389/fendo.2023.1163682. PMID: 37152940; PMCID: PMC10160459.**

**Zeinalabedini M, Nasli-Esfahani E, Esmaillzadeh A and Azadbakht L (2023) How is healthy eating index-2015 related to risk factors for cardiovascular disease in patients with type 2 diabetes. Front. Nutr. 10:1201010. doi: 10.3389/fnut.2023.1201010**

**Mansoori A, Hosseini ZS, Ahari RK, Poudineh M, Rad ES, Zo MM, Izadi FS, Hoseinpour M, Miralizadeh A, Mashhadi YA, Hormozi M, Firoozeh MT, Hajhoseini O, Ferns G, Esmaily H, Mobarhan MG. Development of Data Mining Algorithms for Identifying the Best Anthropometric Predictors for Cardiovascular Disease: MASHAD Cohort Study. High Blood Press Cardiovasc Prev. 2023 May;30(3):243-253. doi: 10.1007/s40292-023-00577-2. Epub 2023 May 19. PMID: 37204657.**

**Anto EO, Boadu WIO, Korsah EE, Ansah E, Adua E, Frimpong J, Nyarkoa P, Tamakloe VCKT, Acheampong E, Asamoah EA, Opoku S, Afrifa-Yamoah E, Annani-Akollor ME, Obirikorang C. Unrecognized hypertension among a general adult Ghanaian population: An urban community-based cross-sectional study of prevalence and putative risk factors of lifestyle and obesity indices. PLOS Glob Public Health. 2023 May 24;3(5):e0001973. doi: 10.1371/journal.pgph.0001973. PMID: 37224164; PMCID: PMC10208459.**

**Gažarová M, Bihari M, Šoltís J. Fat and fat-free mass as important determinants of body composition assessment in relation to sarcopenic obesity. Rocz Panstw Zakl Hig. 2023;74(1):59-69. doi: 10.32394/rpzh.2023.0243. PMID: 37010407.**

**Chubb, S.A.P., Davis, W.A. & Davis, T.M.E. Serum bicarbonate concentration and the risk of death in type 2 diabetes: the Fremantle Diabetes Study Phase II. *Acta Diabetol* (2023). https://doi.org/10.1007/s00592-023-02130-y**

**Christakoudi, S., Tsilidis, K.K., Dossus, L. *et al.* A body shape index (ABSI) is associated inversely with post-menopausal progesterone-receptor-negative breast cancer risk in a large European cohort. *BMC Cancer* 23, 562 (2023).** [**https://doi.org/10.1186/s12885-023-11056-1**](https://doi.org/10.1186/s12885-023-11056-1)

**Ishida A, Taira H, Shinzato T, Ohya Y. Association between visceral fat mass and arterial stiffness among community-based screening participants. Hypertens Res. 2023 Jun 23. doi: 10.1038/s41440-023-01350-7. Epub ahead of print. PMID: 37353686.**

# Mirzababaei A, Abaj F, Khosravinia D, Ghorbani M, Valisoltani N, Clark CCT, Radmehr M, Mirzaei K. The mediatory effect of inflammatory markers on the association between a body shape index and body roundness index with cardiometabolic risk factor in overweight and obese women: a cross-sectional study. Front Nutr. 2023 Jun 9;10:1178829. doi: 10.3389/fnut.2023.1178829. PMID: 37360300; PMCID: PMC10288880.

# Gao H, Zhang Y, Chen LW, Gan H, Lu MJ, Huang B, Tong J, Geng ML, Huang K, Zhang C, Zhu BB, Shao SS, Zhu P, Tao FB. Associating phthalate exposure during pregnancy with preschooler's FMI, ABSI and BRI trajectories via putative mechanism pathways. Chemosphere. 2023 Jun 28:139300. doi: 10.1016/j.chemosphere.2023.139300. Epub ahead of print. PMID: 37391081.

# Harborg S, Feldt M, Cronin-Fenton D, Klintman M, Dalton SO, Rosendahl AH, Borgquist S. Obesity and breast cancer prognosis: pre-diagnostic anthropometric measures in relation to patient, tumor, and treatment characteristics. Cancer Metab. 2023 Jun 27;11(1):8. doi: 10.1186/s40170-023-00308-0. PMID: 37370158; PMCID: PMC10294507.

**Costo-Muriel C, Calderón-García JF, Rico-Martín S, Sánchez-Bacaicoa C, Escudero-Sánchez G, Galán-González J, Rodríguez-Velasco FJ, Sánchez Muñoz-Torrero JF. Association of Subclinical Carotid Atherosclerosis Assessed by High-Resolution Ultrasound With Traditional and Novel Anthropometric Indices. Curr Probl Cardiol. 2023 Apr;48(4):101574. doi: 10.1016/j.cpcardiol.2022.101574. Epub 2022 Dec 28. PMID: 36584728.**

**Mirzababaei A, Abaj F, Khosravinia D, Ghorbani M, Valisoltani N, Clark CCT, Radmehr M, Mirzaei K. The mediatory effect of inflammatory markers on the association between a body shape index and body roundness index with cardiometabolic risk factor in overweight and obese women: a cross-sectional study. Front Nutr. 2023 Jun 9;10:1178829. doi: 10.3389/fnut.2023.1178829. PMID: 37360300; PMCID: PMC10288880.**

**Yanwei Yin, Hanzhi Wu, Fangmeng Lei, Wenlin Lu, Yanqing Shen, Wenjing Hu, Xiaoxiao Liu, Xinhe Ye, Chengjian Yang. Relationship between Novel Anthropometric Indices and the Prevalence of Abdominal Aortic Calcification: A Large Cross-Sectional Study. *Rev. Cardiovasc. Med.* 2023, 24(12), 349.**[**https://doi.org/10.31083/j.rcm2412349**](https://doi.org/10.31083/j.rcm2412349) **NHANES!**

**Zhang X, Li G, Shi C, Tian Y, Zhang L, Zhang H, Sun Y. Comparison of conventional and unconventional obesity indices associated with new-onset hypertension in different sex and age populations. Sci Rep. 2023 May 13;13(1):7776. doi: 10.1038/s41598-023-34969-0. PMID: 37179428; PMCID: PMC10182979.**

**Yang, N.; Zhuo, J.; Xie, S.; Qu, Z.; Li, W.; Li, Z.; Guo, P.; Gao, M.; Qin, H.; Han, T. A Body Shape Index and Its Changes in Relation to All-Cause Mortality among the Chinese Elderly: A Retrospective Cohort Study. Nutrients 2023, 15, 2943.** [**https://doi.org/10.3390/nu15132943**](https://doi.org/10.3390/nu15132943)

**Wang Y, Zhang X, Li Y, Gui J, Mei Y, Yang X, Liu H, Guo LL, Li J, Lei Y, Li X, Sun L, Yang L, Yuan T, Wang C, Zhang D, Li J, Liu M, Hua Y, Zhang L. Predicting depressive symptom by cardiometabolic indicators in mid-aged and older adults in China: a population-based cross-sectional study. Front Psychiatry. 2023 Jun 7;14:1153316. doi: 10.3389/fpsyt.2023.1153316. PMID: 37351000; PMCID: PMC10282944.**

**Yang H, Zhang M, Nie J, Zhang M, Lu G, Chen R, He Q. Associations of obesity-related indices with prediabetes regression to normoglycemia among Chinese middle-aged and older adults: a prospective study. Front Nutr. 2023 May 19;10:1075225. doi: 10.3389/fnut.2023.1075225. PMID: 37275653; PMCID: PMC10235473.**

# Wei Zhou, Lingjuan Zhu, Yu Yu, Chao Yu, Huihui Bao, Xiaoshu Cheng,

# A Body Shape Index is positively associated with all-cause and cardiovascular disease mortality in the Chinese population with normal weight: A prospective cohort study, Nutrition, Metabolism and Cardiovascular Diseases,2023, <https://www.sciencedirect.com/science/article/pii/S0939475323001990>)

**Wang YJ, Zhang JC, Zhang YZ, Liu YH. Assessment of functional prognosis of anterior cruciate ligament reconstruction in athletes based on a body shape index. World J Clin Cases 2023; 11(19): 4567-4578 [DOI:** [**10.12998/wjcc.v11.i19.4567**](https://dx.doi.org/10.12998/wjcc.v11.i19.4567)**]**

# Pasqual E, O'Brien K, Rinaldi S, Sandler DP, Kitahara CM. Obesity, obesity-related metabolic conditions, and risk of thyroid cancer in women: results from a prospective cohort study (Sister Study). Lancet Reg Health Am. 2023 Jun 14;23:100537. doi: 10.1016/j.lana.2023.100537. PMID: 37346380; PMCID: PMC10279535.

# Association between dietary fatty acid patterns and obesity indices in Jordanian adults: A cross-sectional study, HELIYON (2023), doi: https://doi.org/10.1016/ j.heliyon.2023.e17938

# .

# Pasqual E, O'Brien K, Rinaldi S, Sandler DP, Kitahara CM. Obesity, obesity-related metabolic conditions, and risk of thyroid cancer in women: results from a prospective cohort study (Sister Study). Lancet Reg Health Am. 2023 Jun 14;23:100537. doi: 10.1016/j.lana.2023.100537. PMID: 37346380; PMCID: PMC10279535.

# Pan Q, Shen X, Li H, et al. Depression Score Mediate the Association between A Body Shape Index and Infertility in Overweight and Obesity Females, NHANES 2013-2018. Research Square; 2023. DOI: 10.21203/rs.3.rs-2735367/v1

# Eslami, M., Fakhrzadeh, H., Pourghazi, F. *et al.* The association between frailty and body composition among the elderly: Birjand Longitudinal Aging Study (BLAS). *J Diabetes Metab Disord* (2023). <https://doi.org/10.1007/s40200-023-01373-4> - only BMI associated

# Sánchez-Bacaicoa C, Santano-Mogena E, Rico-Martín S, Rey-Sánchez P, Juárez-Vela R, Sánchez Muñoz-Torrero JF, López-Espuela F, Calderón-García JF. Association between Asymptomatic Hyperuricemia with Adiposity Indices: A Cross-Sectional Study in a Spanish Population. Nutrients. 2023 Nov 16;15(22):4798. doi: 10.3390/nu15224798. PMID: 38004193; PMCID: PMC10675342.

# Ingleman J, Parker C, Coyer F. Exploring body morphology, sacral skin microclimate and pressure injury development and risk among patients admitted to an intensive care unit: A prospective, observational study. Intensive Crit Care Nurs. 2023 Dec 27:103604. doi: 10.1016/j.iccn.2023.103604. Epub ahead of print. PMID: 38155050.

# Li X, Chang X, Dang Y, Xue Y, Wang Q, Liu W, Yin T, Zhao Y, Zhang Y. Additive interactions between obesity and insulin resistance on hypertension in a Chinese rural population. BMC Public Health. 2023 Dec 15;23(1):2519. doi: 10.1186/s12889-023-17454-1. PMID: 38102585; PMCID: PMC10724980. For ABSI see appendix

# Abubakar, S. M., Shehu, A., & Gadanya, A. M. (2023). Comparison Between Urban and Rural of Anthropometry Indices in Women of Reproductive Age in Kano, Nigeria State. *Malaysian Journal of Applied Sciences*, *8*(1), 12-21. https://doi.org/10.37231/myjas.2023.8.1.336

# Hewage N, Wijesekara U, Perera R. Determining the best method for evaluating obesity and the risk for non-communicable diseases in women of childbearing age by measuring the body mass index, waist circumference, waist-to-hip ratio, waist-to-height ratio, A Body Shape Index, and hip index. Nutrition. 2023 Oct;114:112135. doi: 10.1016/j.nut.2023.112135. Epub 2023 Jun 16. PMID: 37453224.

# Ostrowska, J.; Samborowska, E.; Jaworski, M.; Toczyłowska, K.; Szostak-Węgierek, D. The Potential Role of SCFAs in Modulating Cardiometabolic Risk by Interacting with Adiposity Parameters and Diet. Nutrients 2024, 16, 266. <https://doi.org/10.3390/nu16020266>

# Liu X, Shi H, Shi Y, Wei H, Yuan X, Jiao Z, Wu T, Wang Z. Association between a body shape index and prostate cancer: a cross-sectional study of NHANES 2001-2018. Int Urol Nephrol. 2024 Jan 12. doi: 10.1007/s11255-023-03917-2. Epub ahead of print. PMID: 38214779.

# Christakoudi S, Tsilidis KK, Evangelou E, Riboli E. Interactions of obesity, body shape, diabetes and sex steroids with respect to prostate cancer risk in the UK Biobank cohort. Cancer Med. 2024 Jan 17. doi: 10.1002/cam4.6918. Epub ahead of print. PMID: 38234143.

**Boncan DAT, Yu Y, Zhang M, Lian J, Vardhanabhuti V. Machine learning prediction of hepatic steatosis using body composition parameters: A UK Biobank Study. NPJ Aging. 2024 Jan 9;10(1):4. doi: 10.1038/s41514-023-00127-z. PMID: 38195699; PMCID: PMC10776620. Has HI – protective!**

**Hayajneh AA, Alhusban IM, Rababa M, Al-Sabbah S, Bani-Hamad D, Al-Mugheed K, Al-Nusour EA, Alsatari ES. The association of traditional obesity parameters with the length of stay among patients with coronary artery disease: A cross-sectional study. Medicine (Baltimore). 2023 Dec 22;102(51):e36731. doi: 10.1097/MD.0000000000036731. PMID: 38134084; PMCID: PMC10735059.**

**Rontogianni MO, Bouras E, Aglago EK, Freisling H, Murphy N, Cotterchio M, Hampe J, Lindblom A, Pai RK, Pharoah PDP, Phipps AI, van Duijnhoven FJB, Visvanathan K, van Guelpen B, Li CI, Brenner H, Pellatt AJ, Ogino S, Gunter MJ, Peters U, Christakoudi S, Tsilidis KK. Allometric versus traditional body-shape indices and risk of colorectal cancer: a Mendelian randomization analysis. Int J Obes (Lond). 2024 Jan 31. doi: 10.1038/s41366-024-01479-6. Epub ahead of print. PMID: 38297030.**

**Murai N, Saito N, Oka R, Nii S, Nishikawa H, Suzuki A, Kodama E, Iida T, Mikura K, Imai H, Hashizume M, Tadokoro R, Sugisawa C, Iizaka T, Otsuka F, Ishibashi S, Nagasaka S. Body Roundness Index Is Better Correlated with Insulin Sensitivity than Body Shape Index in Young and Middle-Aged Japanese Persons. Metab Syndr Relat Disord. 2024 Jan 9. doi: 10.1089/met.2023.0175. Epub ahead of print. PMID: 38190317.**

**European Fittnes Badge–An Useful Instrument to Assess Health-Related Fitness and Mediation Effect of Physical Tests in Relation Between Sex/Age and Body Condition on a Romanian Students Sample Viorel Petru Ardelean 1,\*, Vasile Liviu Andrei 1 , Corina Dulceanu 1 , Claudiu Bulzan – preprint not peer reviewed**

**Eslami, M., Fakhrzadeh, H., Pourghazi, F. *et al.* The association between frailty and body composition among the elderly: Birjand Longitudinal Aging Study (BLAS). *J Diabetes Metab Disord* (2023).** [**https://doi.org/10.1007/s40200-023-01373-4**](https://doi.org/10.1007/s40200-023-01373-4) **ABSI not associated with frailty in this crossectional study.**

**Davis TME, Drinkwater JJ, Davis WA. Pulmonary Function Trajectories Over 6 Years and Their Determinants in Type 2 Diabetes: The Fremantle Diabetes Study Phase II. Diabetes Care. 2024 Jan 11:dc231726. doi: 10.2337/dc23-1726. Epub ahead of print. PMID: 38211617. See supplement for BMI, ABSI and PFT**

**Gebremedhin S, Bekele T. Evaluating the performance of a novel anthropometric index: weight adjusted for waist-to-height ratio (W-WHR) - for predicting cardiometabolic risk among adults in Addis Ababa. BMJ Open. 2024 Jan 12;14(1):e077646. doi: 10.1136/bmjopen-2023-077646. PMID: 38216188; PMCID: PMC10806638. A**

**Christakoudi S, Asimakopoulos AG, Riboli E, Tsilidis KK. Links between the genetic determinants of morning plasma cortisol and body shape: a two-sample Mendelian randomisation study. Sci Rep. 2024 Feb 8;14(1):3230. doi: 10.1038/s41598-024-53727-4. PMID: 38332183; PMCID: PMC10853188.**

**Pi Q, Xu J, Sha M, Liu X. Relationship between a body shape index and muscle strength index in Chinese university students: a cross-sectional survey. BMC Sports Sci Med Rehabil. 2024 Feb 15;16(1):48. doi: 10.1186/s13102-024-00837-1. PMID: 38360702; PMCID: PMC10870512.**

**Tylutka A, Morawin B, Walas Ł, Zembron-Lacny A. Does excess body weight accelerate immune aging? Exp Gerontol. 2024 Feb 15;187:112377. doi: 10.1016/j.exger.2024.112377. Epub ahead of print. PMID: 38346543.**

**Zhu B, Shi Y, Song N, Zhao S, Shen B, Wang J, Zhang W, Lu Y, Fang Y, Ding X, Li Y. Associations between metabolic profiles and incident CKD in the Chinese population aged 45-85 years. Int Urol Nephrol. 2024 Feb 17. doi: 10.1007/s11255-023-03916-3. Epub ahead of print. PMID: 38367131.**

**Stankute, I.; Dulskiene, V.; Kuciene, R. Associations between Neck Circumference, Mid-Upper Arm Circumference, Wrist Circumference, and High Blood Pressure among Lithuanian Children and Adolescents: A Cross-Sectional Study. Nutrients 2024, 16, 677. https://doi.org/10.3390/nu16050677**

**Hansen C, Davison B and Singh GR (2024) Small for gestational age and anthropometric body composition from early childhood to adulthood: the Aboriginal Birth Cohort study. *Front. Public Health*. 12:1349040. doi: 10.3389/fpubh.2024.1349040**

**Wang Y, Zhang X, Li Y, Gui J, Mei Y, Yang X, Liu H, Guo LL, Li J, Lei Y, Li X, Sun L, Yang L, Yuan T, Wang C, Zhang D, Li J, Liu M, Hua Y, Zhang L. Obesity- and lipid-related indices as a predictor of type 2 diabetes in a national cohort study. Front Endocrinol (Lausanne). 2024 Jan 31;14:1331739. doi: 10.3389/fendo.2023.1331739. PMID: 38356678; PMCID: PMC10864443.**

**Agius R, Pace NP, Fava S. Anthropometric and Biochemical Correlations of Insulin Resistance in a Middle-Aged Maltese Caucasian Population. J Nutr Metab. 2024 Feb 21;2024:5528250. doi: 10.1155/2024/5528250. PMID: 38420511; PMCID: PMC10901578.**

**Pi Q, Xu J, Sha M, Liu X. Relationship between a body shape index and muscle strength index in Chinese university students: a cross-sectional survey. BMC Sports Sci Med Rehabil. 2024 Feb 15;16(1):48. doi: 10.1186/s13102-024-00837-1. PMID: 38360702; PMCID: PMC10870512.**

**Gebremedhin S, Bekele T. Evaluating the performance of a novel anthropometric index: weight adjusted for waist-to-height ratio (W-WHR) - for predicting cardiometabolic risk among adults in Addis Ababa. BMJ Open. 2024 Jan 12;14(1):e077646. doi: 10.1136/bmjopen-2023-077646. PMID: 38216188; PMCID: PMC10806638.**

**Xiong MF, He P, Chen YH, Cao RR, Lei SF. The effect of a body shape index (ABSI) and its interaction with low estimated glomerular filtration rate (eGFR) on osteoporosis in elderly Chinese. J Orthop Sci. 2024 Jan;29(1):262-267. doi: 10.1016/j.jos.2022.11.018. Epub 2022 Dec 21. PMID: 36550016.**

**Sun Fei , Liu Min , Hu Shanshan , Xie Ruijie , Chen Huijuan , Sun Zhaona , Bi Huiya. Associations of weight-adjusted-waist index and depression with secondary infertility Frontiers in Endocrinology,  vol 5, 2024**

**Nazari M, Mirzaie K, Keshavarz S. Association between Lifelines Diet Score (LLDS) and some novel anthropometric indices, including Body Roundness Index (BRI), A Body Shape Index (ABSI), Visceral Adiposity Index (VAI), and Body Adiposity Index (BAI), in Iranian women: a cross-sectional study. BMC Womens Health. 2024 Mar 12;24(1):172. doi: 10.1186/s12905-024-03013-2. PMID: 38475785; PMCID: PMC10935923.**

**Tang L, Zeng L. Comparative efficacy of anthropometric indices in predicting 10-year ASCVD risk: insights from NHANES data. Front Cardiovasc Med. 2024 Feb 29;11:1341476. doi: 10.3389/fcvm.2024.1341476. PMID: 38486705; PMCID: PMC10937732.**

**Keles E, Kaya L, Yakşi N, Kaya Z, Tosun Ö. Impact of anthro-metabolic indices and gestational weight gain on maternal and neonatal outcomes: a prospective observational study. Rev Assoc Med Bras (1992). 2024 Mar 25;70(4):e20231101. doi: 10.1590/1806-9282.20231101. PMID: 38537008; PMCID: PMC10962266.**

**Hu X, Li X, Ye N, Zhou Z, Li G, Jiang F. Association of novel anthropometric indices with prevalence of kidney stone disease: a population-based cross-sectional study. Eur J Med Res. 2024 Mar 27;29(1):204. doi: 10.1186/s40001-024-01743-5. PMID: 38539239; PMCID: PMC10967179.**

**Davis TME, Tan E, Davis WA. Prevalence and prognostic significance of cardiac autonomic neuropathy in community-based people with type 2 diabetes: the Fremantle Diabetes Study Phase II. Cardiovasc Diabetol. 2024 Mar 18;23(1):102. doi: 10.1186/s12933-024-02185-3. PMID: 38500197; PMCID: PMC10949593.**

**Reges, O.; Test, T.; Dicker, D.; Karpati, T. Association of Waist Circumference and Body Mass Index Deciles Ratio with All-Cause Mortality: Findings from the National Health and Nutrition Examination Survey. Nutrients 2024, 16, 961.** [**https://doi.org/10.3390/nu16070961**](https://doi.org/10.3390/nu16070961)