



Burden of disease attributable to high body mass index: an analysis of data from the Global Burden of Disease Study 2021

Xiao-Dong Zhou,^{a,bk} Qin-Fen Chen,^{b,bk} Wah Yang,^c Mauricio Zuluaga,^d Giovanni Targher,^{e,f} Christopher D. Byrne,^g Luca Valenti,^{h,j} Fei Luo,^j Christos S. Katsouras,^k Omar Thaher,^l Anoop Misra,^m Karim Ataya,ⁿ Rodolfo J. Oviedo,^o Alice Pik-Shan Kong,^{p,q} Khalid Alswat,^r Amedeo Lonardo,^s Yu Jun Wong,^{t,u} Adam Abu-Abeid,^v Hazem Al Momani,^w Arshad Ali,^x Gabriel Alejandro Molina,^y Olivia Szepletowski,^z Nozim Adxamovich Jumaev,^{aa} Mehmet Celal Kizilkaya,^{ab} Octavio Viveiros,^{ac} Carlos Jesus Toro-Huamanchumo,^{ad,ae,af} Kenneth Yuh Yen Kok,^{ag} Oral Ospanov,^{ah} Syed Imran Abbas,^{ai} Andrew Gerard Robertson,^{aj} Yasser Fouad,^{ak} Christos S. Mantzoros,^{al,bj} Huijie Zhang,^{am} Nahum Méndez-Sánchez,^{an} Silvia Sookoian,^{ao,ap,aq} Wah-Kheong Chan,^{ar} Sombat Treeprasertsuk,^{as} Leon Adams,^{at,au} Ponsiano Ocama,^{av} John D. Ryan,^{aw} Nilanka Perera,^{ax} Ala I. Sharara,^{ay} Said A. Al-Busafi,^{az} Christopher Kenneth Opio,^{ba} Manuel Garcia,^{bb} Michelle Ching Lim-Loo,^{bc} Elena Ruiz-Úcar,^{bd} Arun Prasad,^{be} Anna Casajoana,^{bf} Tamer N. Abdelbaki,^{bg} and Ming-Hua Zheng^{bh,bi,*}

^aDepartment of Cardiovascular Medicine, The Heart Center, The First Affiliated Hospital of Wenzhou Medical University, Wenzhou, China

^bMedical Care Center, The First Affiliated Hospital of Wenzhou Medical University, Wenzhou, China

^cDepartment of Metabolic and Bariatric Surgery, The First Affiliated Hospital of Jinan University, Guangzhou, China

^dDepartment of Surgery, Universidad del Valle, Cali, Valle del Cauca, Colombia, United States

^eDepartment of Medicine, University of Verona, Verona, Italy

^fMetabolic Diseases Research Unit, IRCCS Sacro Cuore-Don Calabria Hospital, Negrar di Valpolicella, Italy

^gSouthampton National Institute for Health and Care Research Biomedical Research Centre, University Hospital Southampton, and University of Southampton, Southampton General Hospital, Southampton, UK

^hDepartment of Pathophysiology and Transplantation, Università degli Studi di Milano, Milan, Italy

ⁱPrecision Medicine, Biological Resource Center Unit, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan, Italy

^jDepartment of Cardiovascular Medicine, The Second Xiangya Hospital, Central South University, Changsha, China

^kFirst Department of Cardiology, University Hospital of Ioannina and Faculty of Medicine, School of Health Sciences, University of Ioannina, Ioannina, 45110, Greece

^lDepartment of Surgery, Marien Hospital Herne, University Hospitals of the Ruhr University of Bochum, Herne, NRW, Germany

^mFortis-CDOC Center of Excellence for Diabetes, Metabolic Diseases, and Endocrinology, National Diabetes Obesity and Cholesterol Foundation and Diabetes Foundation, New Delhi, India

ⁿDepartment of Bariatric Surgery, University of Montreal, Montreal, Quebec, Canada

^oNacogdoches Center for Metabolic & Weight Loss Surgery, Nacogdoches Medical Center, Nacogdoches, TX, United States

^pDepartment of Medicine and Therapeutics, The Chinese University of Hong Kong, Hong Kong SAR, China

^qHong Kong Institute of Diabetes and Obesity, The Chinese University of Hong Kong, Hong Kong SAR, China

^rLiver Disease Research Center, Department of Medicine, College of Medicine, King Saud University, Riyadh, Saudi Arabia

^sDepartment of Internal Medicine, Ospedale Civile di Baggiovara (-2023), Azienda Ospedaliero-Universitaria di Modena, Modena, Italy

^tDepartment of Gastroenterology & Hepatology, Changi General Hospital, Singapore

^uLiver Unit, Division of Gastroenterology & Hepatology, University of Alberta, Edmonton, Canada

^vDivision of Surgery, Tel Aviv Sourasky Medical Center Affiliated to Tel Aviv University, Tel Aviv, Israel

^wWeight Management Unit, Royal NMC Hospital, Khalifa City, Abu Dhabi, United Arab Emirates

^xMetabolic and Bariatric, Fatima8h hospital, Tehran, Iran

^yDepartment of Surgery, USFQ (Universidad San Francisco), Quito, Pichincha, Ecuador

^zDepartment of Surgery, Ashford and St Peter's Hospital, Chertsey, Surrey, United Kingdom

^{aa}Department Surgical Diseases, Tashkent Medical Academy, Tashkent, Almazar, Uzbekistan

^{ab}Department of Metabolic and Bariatric Surgery, Acibadem Atakent University Hospital, Istanbul, Turkey

^{ac}Department of Metabolic and Bariatric Surgery, Hospital Lusíadas Amadora, Amadora, Lisbon, Portugal

^{ad}Universidad San Ignacio de Loyola, Lima, Peru

^{ae}O'BEMET Center for Obesity and Metabolic Health, Lima, Peru

^{af}Nutrition and Health Innovation Research Institute, School of Medical and Health Sciences, Edith Cowan University, Western Australia, Australia

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*Corresponding author. MAFLD Research Center, Department of Hepatology, The First Affiliated Hospital of Wenzhou Medical University, Wenzhou, China.

E-mail address: zhengmh@wmu.edu.cn (M.-H. Zheng).

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^{bk}Co-first authors.

- ^{ag}Pengiran Anak Puteri Rashidah Sa'adatul Bolkiah Institute of Health Sciences, Universiti Brunei Darussalam, Bandar Seri Begawan, Brunei-Muara, Brunei
- ^{ah}Surgical Disease and Bariatric Surgery, Astana Medical University, Astana, Aqmola, Kazakhstan
- ^{aj}Department of Metabolic and Bariatric Surgery, Iranian Hospital Dubai, Dubai, United Arab Emirates
- ^{aj}Department of Upper Gastrointestinal Surgery, Royal Infirmary Edinburgh, Edinburgh, United Kingdom
- ^{ak}Department of Gastroenterology, Hepatology and Endemic Medicine, Faculty of Medicine, Minia University, Minia, Egypt
- ^{al}Department of Medicine, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, USA
- ^{am}Department of Endocrinology and Metabolism, Nanfang Hospital, Southern Medical University, Guangzhou, China
- ^{an}Liver Research Unit, Medica Sur Clinic & Foundation, Mexico City, Mexico
- ^{ao}Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Buenos Aires, Argentina
- ^{ap}Faculty of Health Science, Maimónides University, Buenos Aires, Argentina
- ^{aq}Clinical and Molecular Hepatology, Translational Health Research Center (CENITRES), Maimónides University, Buenos Aires, Argentina
- ^{ar}Gastroenterology and Hepatology Unit, Department of Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia
- ^{as}Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand
- ^{at}Department of Hepatology, Sir Charles Gairdner Hospital, Perth, Australia
- ^{au}Medical School, The University of Western Australia, Perth, Australia
- ^{av}Department of Medicine, Makerere University of College of Health Sciences, Kampala, Uganda
- ^{aw}Department of Hepatology, RCSI School of Medicine and Medical Sciences, Dublin/Beaumont Hospital, Dublin, Ireland
- ^{ax}Department of Medicine, University of Sri Jayewardenepura, Nugegoda, Sri Lanka
- ^{ay}Division of Gastroenterology and Hepatology, Department of Internal Medicine, American University of Beirut Medical Center, Beirut, Lebanon
- ^{az}Department of Medicine, College of Medicine and Health Sciences, Sultan Qaboos University, Muscat, Oman
- ^{ba}Department of Medicine, Aga Khan University, Nairobi, Kenya
- ^{bb}Department of Metabolic and Bariatric Surgery, Tu Opcion Bariatrica/Swiss Hospital, Monterrey, Mexico
- ^{bc}Department of Surgery, Chinese General Hospital and Medical Center, Manila, Philippines
- ^{bd}Department of Metabolic, Bariatric and Endocrine Surgery, Fuenlabrada University Hospital, Madrid, Spain
- ^{be}Surgical Gastroenterology, Bariatric and Robotic Surgery, Indraprastha Apollo Hospital, New Delhi, India
- ^{bf}Departament of Esophagogastric and Bariatric Surgery, Hospital del Mar de Barcelona, Barcelona, Spain
- ^{bg}Department of General Surgery, Alexandria University Faculty of Medicine, Alexandria, Egypt
- ^{bh}MAFLD Research Center, Department of Hepatology, The First Affiliated Hospital of Wenzhou Medical University, Wenzhou, China
- ^{bi}Key Laboratory of Diagnosis and Treatment for the Development of Chronic Liver Disease in Zhejiang Province, Wenzhou, China
- ^{bj}Section of Endocrinology, Boston VA Healthcare System, Harvard Medical School, Boston, MA, USA

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Correction to Figure 4 Caption

In the original paper, the caption for Figure 4A mistakenly labels “DALYs” (Disability-Adjusted Life Years) when it should read “deaths.” This error was due to a typographical oversight. The corrected title is as follows: Figure 4: (A) Age-standardized death rates attributable to high BMI in 2021; (B) Age-standardized DALY rates attributable to high BMI in 2021.

Correction to Table 1

In the original paper, [Table 1](#) contains misaligned age-standardized death values for causes of death compared to the Global Burden of Disease (GBD) study. This error was caused by a shift in data rows, resulting in incorrect automatic entries where values intended for Age-standardized DALYs (e.g., 0.36) were mistakenly populated in the Age-standardized death column. Consequently, values such as 0.36, 1.36, 2.36, 3.36, and so forth were incorrectly filled into the age-standardized death data. A corrected version of [Table 1](#) is attached for reference, with all values realigned to accurately reflect the original GBD data.

Impact on Data Interpretation

These corrections ensure accurate representation of the data but do not change the overall conclusions of the paper.

	1990		2021		Relative change in age-standardized death rate, 1990–2021 (95% CI)
	No. death cases (95% UI)	Age-standardized death rates per 100,000 (95% UI)	No. death cases (95% UI)	Age-standardized death rates per 100,000 (95% UI)	
Global	1,459,533 (723,043–2,287,052)	40.90 (19.87–64.16)	3,709,063 (1,847,840–5,658,334)	44.23 (22.01–67.64)	0.08 (0.01–0.15)
Sex					
Female	828,147 (407,103–1,302,480)	41.57 (20.18–65.25)	2,013,089 (979,000–3,076,045)	43.26 (21.08–66.05)	0.04 (–0.03 to 0.12)
Male	631,386 (315,453–988,214)	39.03 (19.35–60.80)	1,695,974 (861,972–2,635,343)	44.90 (23.01–70.17)	0.15 (0.06–0.23)
SDI					
Low SDI	70,040 (42,195–110,220)	32.89 (20.11–51.01)	204,362 (114,078–318,520)	43.22 (24.93–66.40)	0.31 (0.14–0.50)
Low-middle SDI	177,919 (100,108–281,095)	31.91 (18.22–49.61)	671,617 (349,426–1,011,204)	49.59 (26.29–74.99)	0.55 (0.35–0.74)
Middle SDI	306,277 (185,062–452,734)	33.78 (20.37–50.30)	1,126,388 (581,131–1,700,642)	44.80 (23.60–67.57)	0.33 (0.10–0.46)
High-middle SDI	430,095 (194,645–685,431)	48.62 (22.28–77.66)	904,396 (417,515–1,428,690)	46.71 (21.70–73.63)	–0.04 (–0.12 to 0.05)
High SDI	472,370 (199,898–767,235)	43.07 (18.21–69.90)	797,416 (368,146–1,253,107)	35.13 (16.59–54.47)	–0.18 (–0.24 to –0.07)
Causes					
Cardiovascular diseases	863,066 (477,898–1,316,551)	24.43 (13.63–37.3)	1,904,239 (1,072,732–2,864,242)	22.77 (12.87–34.24)	–0.07 (–0.14 to 0.02)
Chronic respiratory diseases	38,041 (16,523–59,933)	1.00 (0.43–1.58)	62,363 (26,317–100,543)	0.74 (0.31–1.19)	–0.26 (–0.35 to –0.14)
Diabetes and kidney diseases	330,122 (170,826–489,762)	9.01 (4.53–13.57)	1,142,121 (602,169–1,666,047)	13.51 (7.14–19.81)	0.50 (0.39–0.64)
Digestive diseases	21,103 (4725–35,436)	0.63 (0.14–1.06)	46,716 (10,268–79,844)	0.58 (0.13–0.98)	–0.09 (–0.19 to 0.12)
Neoplasms	137,353 (57,450–225,297)	3.66 (1.51–6.03)	356,738 (146,116–581,012)	4.18 (1.71–6.8)	0.14 (0.07–0.20)
Neurological disorders	31,577 (–1617 to 142,814)	1.22 (–0.07 to 5.43)	139,439 (–21,838 to 580,290)	1.79 (–0.27 to 7.44)	0.47 (–0.47 to 2.67)
Respiratory infections and tuberculosis	38,272 (8106–107,542)	0.94 (0.20–2.62)	57,447 (12,864–150,517)	0.67 (0.15–1.75)	–0.29 (–0.40 to –0.08)
Regions					
Southeast Asia, East Asia, and Oceania	209,280 (133,212–314,962)	21.31 (13.51–31.76)	843,126 (434,145–1,321,468)	32.18 (16.72–50.06)	0.51 (0.03–0.87)
Central Europe, Eastern Europe, and Central Asia	313,169 (127,541–516,522)	70.50 (28.19–116.6)	482,197 (206,766–766,422)	73.46 (31.57–116.87)	0.04 (–0.06 to 0.18)
High-income	495,925 (211,655–800,301)	41.52 (17.71–67.04)	815,587 (370,336–1,288,209)	33.19 (15.69–51.55)	–0.20 (–0.25 to –0.09)
Latin America and Caribbean	121,529 (62,408–183,615)	58.07 (30.04–87.81)	390,581 (200,873–593,116)	63.83 (32.60–97.11)	0.10 (0.01–0.19)
North Africa and Middle East	139,628 (80,646–204,715)	94.42 (54.85–138.13)	444,512 (248,383–651,458)	111.09 (62.99–165.05)	0.18 (0.05–0.30)
South Asia	91,954 (46,062–155,163)	16.58 (8.74–27.79)	448,678 (214,705–698,248)	31.70 (15.44–49.7)	0.91 (0.56–1.33)
Sub-Saharan Africa	88,048 (53,414–136,421)	45.76 (27.18–70.37)	284,382 (160,256–427,513)	67.34 (38.78–102.13)	0.47 (0.29–0.66)
World Bank Regions	825,830 (405,994–1,298,931)	24.19 (11.59–37.98)	3,701,337 (1,843,736–5,646,169)	44.19 (21.98–67.58)	0.83 (0.72–0.97)
WHO region	1,448,757 (717,769–2,270,841)	40.84 (19.84–64.08)	3,684,012 (1,835,234–5,618,806)	44.25 (22.01–67.65)	0.08 (0.01–0.15)
European Union	300,328 (130,095–482,020)	50.23 (21.68–80.72)	419,910 (198,142–672,566)	37.28 (17.88–59.34)	–0.26 (–0.32 to –0.15)
League of Arab States	93,700 (54,474–138,019)	101.80 (58.54–149.61)	314,703 (177,705–467,749)	130.76 (75.14–195.39)	0.28 (0.11–0.45)
Commonwealth	221,787 (107,464–356,741)	28.87 (14.05–46.35)	741,090 (356,775–1,136,519)	38.31 (18.41–59.14)	0.33 (0.20–0.48)
OECD Countries	608,719 (263,354–978,455)	45.88 (19.90–73.72)	1,077,196 (511,582–1,688,391)	39.26 (19.08–60.51)	–0.14 (–0.20 to –0.02)
G20	1,045,845 (498,668–1,651,416)	38.33 (17.91–60.41)	2,508,139 (1,216,695–3,877,430)	38.98 (18.96–60.30)	0.02 (–0.05 to 0.09)
African Union	151,517 (90,193–228,330)	60.15 (35.72–89.11)	491,144 (275,282–731,417)	86.48 (49.45–129.8)	0.44 (0.26–0.60)
Four World Regions	1,453,713 (720,260–2,278,004)	40.82 (19.84–64.04)	3,698,546 (1,842,234–5,642,121)	44.19 (21.98–67.58)	0.08 (0.01–0.15)
World Bank Income Levels	1,456,672 (721,695–2,282,563)	40.86 (19.86–64.11)	3,704,134 (1,845,217–5,650,715)	44.21 (21.99–67.61)	0.08 (0.01–0.15)
Nordic Region	14,360 (5312–23,981)	37.09 (13.88–61.66)	16,769 (7097–27,654)	25.05 (10.77–41.28)	–0.32 (–0.39 to –0.16)
Organization of Islamic Cooperation	244,516 (137,488–372,008)	52.41 (29.85–78.55)	806,667 (439,001–1,198,877)	71.57 (39.42–107.21)	0.37 (0.24–0.49)
Association of Southeast Asian Nations	53,733 (32,894–83,980)	21.96 (13.48–33.99)	222,760 (118,705–342,708)	35.86 (19.44–55.15)	0.63 (0.37–0.88)
Gulf Cooperation Council	7520 (3992–11,670)	105.29 (56.86–163.13)	35,910 (20,177–51,894)	137.46 (76.71–201.14)	0.31 (0.07–0.63)
Sahel Region	28,578 (16,831–44,670)	48.03 (28.28–74.92)	80,107 (44,088–123,263)	62.89 (34.89–96.41)	0.31 (0.10–0.56)
Health System Grouping Levels	1,456,701 (721,713–2,282,604)	40.86 (19.86–64.11)	3,704,180 (1,845,244–5,650,779)	44.21 (22–67.61)	0.08 (0.01–0.15)

Abbreviations: BMI, high body mass index; CI, confidence interval; SDI, Socio-demographic Index; UI, uncertainty intervals.

Table 1: Deaths and age-standardized death rates of high BMI in 1990 and 2021 and the temporal trend of age-standardized death rates from 1990 to 2021.