

ORIGINAL RESEARCH

Risk-Attributable Burden of Ischemic Heart Disease in 137 Low- and Middle-Income Countries From 2000 to 2019

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BACKGROUND: Ischemic heart disease (IHD) imposes the greatest disease burden globally, especially in low- and middle-income countries (LMICs). We aim to examine the population-attributable fraction and risk-attributable death and disability-adjusted life years (DALYs) for IHD in 137 low- and middle-income countries.

METHODS AND RESULTS: Using comparative risk assessment framework from the 2019 Global Burden of Disease study, the population-attributable fraction and IHD burden (death and DALYs) attributable to risk factors in low-income countries, lower-middle-income countries (LMCs), and upper-middle-income countries were assessed from 2000 to 2019. In 2019, the population-attributable fraction (%) of IHD deaths in relation to all modifiable risk factors combined was highest in lower-middle-income countries (94.2; 95% uncertainty interval, 91.9–96.2), followed by upper-middle-income countries (93.5; 90.4–95.8) and low-income countries (92.5; 90.0–94.7). There was a >13-fold difference between Peru and Uzbekistan in age-standardized rates (per 100 000) of attributable death (44.3 versus 660.4) and DALYs (786.7 versus 10506.1). Dietary risks accounted for the largest proportion of IHD's behavioral burden in low- and middle-income countries, primarily attributable to diets low in whole grains. High systolic blood pressure and high low-density lipoprotein cholesterol remained the 2 leading causes of DALYs, with the former topping the list in 116 countries, while the latter led in 21 of the 137 countries. Compared with 2000 to 2010, the increases in risk-attributable deaths and DALYs among upper-middle income countries were slower from 2010 to 2019, while the trends in low-income countries and lower-middle income countries were opposite.

CONCLUSIONS: IHD's attributable burden remains high in low- and middle-income countries. Considerable heterogeneity was observed among different income-classified regions and countries.

Key Words: death ■ disability-adjusted life years ■ ischemic heart disease ■ low- and middle-income countries ■ risk factors

Ischemic heart disease (IHD) is the leading contributor to deaths and disability-adjusted life years (DALYs) globally, especially in low- and middle-income countries (LMICs); most deaths and DALYs are attributable to potentially modifiable risk factors.¹ IHD is projected to remain a serious threat, because widespread drivers including demographic shifts, environmental risks, and harmful lifestyles, steadily present challenges to its control and prevention.^{2,3} Evidence has indicated that

rising income inequality accelerates health disparities between countries.^{4,5} Tracking discrepancies in attributable burden (death and DALYs) across income-classified regions and countries at varying economic levels is necessary to prioritize resource allocation and devise tailored regulations in concordance with the Sustainable Development Goals' target 3, which advocates for context-specific initiatives to reduce premature mortality caused by IHD and diminish related risks.⁶

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CLINICAL PERSPECTIVE

What Is New?

- Using the updated comparative risk assessment framework from the 2019 Global Burden of Disease study, we provided the first income-classified region-, country-, sex-, and age-specific assessment of ischemic heart disease (IHD) burden attributable to risk clusters and risk factors among 137 low- and middle-income countries from 2000 to 2019.
- Most global risk-attributable deaths and DALYs for IHD occurred in low- and middle-income countries, with a substantial geographic discrepancy observed across the 137 individual countries.
- A diverging trend in IHD burden between middle-income countries and low-income countries during the 2010 to 2019 period compared with 2000 to 2010.

What Are the Clinical Implications?

- Preventive interventions reducing behavioral and metabolic risks will be more effective in managing IHD burden for middle-income countries, while interventions to reduce environmental risks should be implemented in low-income countries.
- More investments in managing preventable IHD burden are needed considering the substantial geographical income discrepancies across the 137 low- and middle-income countries.

Nonstandard Abbreviations and Acronyms

| | |
|--------------|---|
| DALYs | disability-adjusted life years |
| GBD | Global Burden of Disease |
| IHD | ischemic heart disease |
| LICs | low-income countries |
| LMCs | lower-middle-income countries |
| LMICs | low- and middle-income countries |
| MICs | middle-income countries |
| PAF | population-attributable fraction |
| PURE | Prospective Urban Rural Epidemiology |
| TMREL | theoretical minimum risk exposure level |
| UMCs | upper-middle-income countries |

A critical starting point is to quantify the magnitude of avoidable IHD burden associated with modifiable risks across LMICs, where limited economic development may decrease the availability of health services. However, previous studies regarding the attributable

IHD burden were restricted to single countries with small populations,⁷⁻⁹ limited time frames lacking temporal trends,⁵ incomprehensive analyses containing a small number of risk factors,^{5,10,11} and inconsistent methods.^{8,12} Moreover, most studies have paid disproportionately little attention to LMICs^{13,14} and have failed to provide systematic estimates that account for economic disparities among countries. The Global Burden of Diseases (GBD)¹ study can fill the above gaps, as it provides the most up-to-date estimates on metrics of multiple diseases associated with specific risks. However, detailed data on the IHD burden resulting from specific risk factors remain inadequate.

Understanding the modifiable risk factors that drive disease is a necessary global priority to prevent health loss. Our study is an attempt to provide such detailed data. In order to document the burden of IHD that results from modifiable risk factors, we regionally and nationally monitored the disparities in population-attributable fraction (PAF), as well as the burden of IHD attributable to both risk clusters and 27 individual risk factors from 2000 to 2019. In response to the Sustainable Development Goals' target to "leave no one behind by 2030,"⁶ this study's results will help inform governments of tailored strategies to mitigate preventable IHD burden in 137 LMICs.

METHODS

The data that support the findings of this study are publicly available via the Global Health Data Exchange website (<http://www.healthdata.org>). We conformed to Guidelines for Accurate and Transparent Health Estimates Reporting recommendations to ensure the transparency and reproducibility of results (Data S1). Ethics approval and consent to participate were not applicable to this study.

Overview

The 2019 GBD study provided age-sex-specific mortality, years lived with disability, years of life lost, and DALYs for 369 diseases and injuries, and 87 risk factors in 204 countries and territories from 1990 to 2019.^{1,15-17} To quantify the epidemiologic transitions for individual risk factors and risk clusters by income-classified region, country, sex, age, cause, and year, the updated comparative risk assessment framework was established as a causal web of modifiable risk factors leading to health outcomes.¹ Compared with previous GBD studies,^{18,19} the 2019 GBD study developed new approaches to better estimate the exposure to risk factors by integrating globally accessible data from multiple epidemiologic studies, which included updated high-quality meta-analyses, randomized controlled trials, cohort studies, case-control studies, and

other observational studies, providing major updates about dietary and metabolic risks.¹ The GBD study used unified and standard methods to ensure the results were comparable and regionally and nationally representative. The detailed methodology of the risk assessments has been provided elsewhere.¹

All data obtained in the present study were publicly available at the Institute for Health Metrics and Evaluation website and can be accessed with open online tools (<http://www.healthdata.org/results/data-visualizations>; <http://ghdx.healthdata.org/gbd-resultstool>).²⁰ IHD is defined as per the *International Classification of Diseases, Tenth Revision (ICD-10)* with diagnosis codes I20–I25.¹⁷

Modifiable Risk Factors for IHD

According to the GBD study criteria, IHD-related individual risk factors and risk clusters were classified into 5 hierarchical levels (0–4). All potentially modifiable risk factors combined were defined as level 0. In level 1, clusters of behavioral, environmental, and metabolic risk factors were assessed. Detailed clusters of risks (ie, air pollution, other environmental risks, tobacco, and dietary risks) were included in level 2. Twenty-seven risk-IHD pairs in causal relationships were established in level 4, where deaths and DALY-based PAFs for individual risk factors were ranked. These risk factors include ambient particulate matter pollution, household air pollution from solid fuels, lead exposure, smoking, secondhand smoke, diets low in fruits/vegetables/legumes/whole grains/nuts and seeds/fiber/seafood-derived omega-3 fatty acids/polyunsaturated fatty acids, diets high in red meat/processed meat/sugar-sweetened beverages/trans fatty acids/sodium, low physical activity, high systolic blood pressure, high low-density lipoprotein (LDL) cholesterol, high fasting plasma glucose, high body mass index, impaired kidney function, high temperature, and low temperature. There were 1 cluster (particulate matter pollution) and 19 individual risk factors at level 3.¹

Statistical Analysis

The Bayesian meta-regression model DisMod-MR 2.1 was used as the main method to estimate the prevalence of nonfatal diseases, and the Cause of Death Ensemble Model was used to appraise cause-specific mortality.^{16,17} To explore potential trends of specific risk factors, improved spatiotemporal Gaussian process regression was applied to synthesize all available data.¹ DALYs are the sum of years lived with disability, which is based on cause-specific prevalence and disability weight, and years of life lost attributable to premature mortality, which is calculated by multiplying age-sex-specific deaths by global standard life expectancy.¹⁵

The detailed methodology for estimating disease burden in the above metrics was published previously.^{15–17} To characterize the temporal trends across income-classified regions and countries, age-standardized rates (per 100 000) were computed using the global age-standard population constructed by the World Health Organization.

Estimation of the Attributable Burden

The relative risks for risk-IHD pairs were determined by multinational prospective studies.¹ Under the comparative risk assessment framework, counterfactual analysis was employed to estimate the theoretical minimum risk exposure level (TMREL) that represented the optimal level of risk factor exposure (Table S1). PAF was the avoidable proportion of the IHD burden that may occur if the exposure to a specific risk factor could be reduced to the TMREL in a general population. PAF was estimated using incorporated data of relative risks for risk-IHD pairs, the exposure level of the risk factor, and the TMREL.¹¹ The PAF for each individual risk factor was calculated either directly or with mediation adjustments, and calculations for risk clusters took into consideration the interaction between risk factors. The negative values of PAF imply a beneficial effect of risk exposure (alcohol use) on IHD risks. Further details of the PAF calculation methodology are specified in Data S2.

Based on the following formula, the attributable burden for IHD in a given year, age, sex, and location was calculated by multiplying the burden metric (such as absolute deaths and DALYs) by the corresponding PAF:

$$AB = \sum_{i=1}^n \text{Death}_i(\text{DALYs}_i) \text{PAF}_i$$

where *AB* is the attributable burden (deaths and DALYs) for risk factor *i* in a given population. The detailed calculation process for the risk-attributable IHD burden is demonstrated in the analytical flowchart in Figure S1.

Geographic Estimation

Based on income levels categorized by the World Bank, a total of 137 LMICs were stratified into 3 groups, with 31, 47, and 59 countries classified as low-income countries (LICs), lower-middle-income countries (LMCs), and upper-middle-income countries (UMCs), respectively (Table S2).

Uncertainty Interval

For deaths and DALYs, the corresponding 95% uncertainty intervals were calculated using the 2.5th and

97.5th estimates in posterior simulation of 1000 ordered draws, with the aim of examining uncertain distributions deriving from random and systematic errors.

RESULTS

PAF and IHD Attributable Burden in 2019

Overall Modifiable Risk Factors

Income-Classified Region

In 2019, the PAF (%) of deaths for all modifiable risk factors was highest in LMCs (94.2; 95% uncertainty interval, 91.9–96.2), followed by LICs (92.5; 90.0–94.7) and UMCs (93.5; 90.4–95.8); the risk-attributable proportion for DALYs ranged from 93.0% in LICs to 94.7% in LMCs. A total of 8.54 (7.81–9.14) million deaths from IHD were attributable to potentially modifiable risk factors globally, with 3.42 (3.07–3.71) million, 3.19 (2.89–3.48) million, and 0.28 (0.24–0.33) million in UMCs, LMCs, and LICs, respectively (Table 1). There were wide variations in age-standardized risk-attributable death and DALY rates for IHD across income-classified regions (Figure 1A and 1C; Tables S3 and S4).

Country Specific

The PAF (%) of DALYs from overall modifiable risk factors varied from 87.4 (84.1–90.4) in Ethiopia (in LICs) to 97.4 (96.4–98.2) in Iraq (in UMCs) (Table S5). A >13-fold difference in age-standardized rates (per 100 000) of attributable deaths and DALYs persisted among the 137 LMICs in 2019, with the lowest rates (44.3; 32.9–57.3 and 786.7; 579.7–1025.2) found in Peru (in UMCs) and the highest (660.4; 588.5–734.1 and 10506.1; 9231.9–11896.1) found in Uzbekistan (in LMCs). The second- and third-leading age-standardized risk-attributable rates (per 100 000) occurred in Azerbaijan (in UMCs; 423.2; 370.7–476.8) and Tajikistan (in LICs; 410.2; 349.0–479.8) for mortality, and in Solomon Islands (in LMCs; 10199.5; 8153.9–12273.7) and Nauru (in UMCs; 7946.1; 6402.3–9674.6) for DALYs (Tables S6 and S7).

Age and Sex Specific

In 2019, the proportions of IHD deaths and DALYs attributable to overall risk factors were higher in men than in women among LMICs (Table S8). The largest risk-attributable proportion of deaths and DALYs was in the 50- to 69-year-old age group; this was true for LICs, LMCs, and UMCs (Tables S9 and S10). Age-standardized risk-attributable death and DALY rates for IHD were much higher among men than women, with the male-to-female ratio ranging from 1.31 and 1.47 in LICs to 1.48 and 1.77 in UMCs (Figure 1D; Tables S11 and S12).

Clusters of Risk Factors

Income-Classified Region

The proportion of IHD deaths and DALYs attributable to risk factors at level 1 varied with income. A cluster of metabolic risk factors was the leading cause of risk-attributable IHD burden among LMICs, with the proportion in LMCs and UMCs being higher than that in LICs. Environmental risks had a greater impact on IHD deaths and DALYs in LICs (41.7%; 38.1%–45.9% of deaths; 44.8%; 41.2%–48.9% of DALYs) than in LMCs (35.2%; 32.0%–38.2% of deaths and 38.7%; 35.4%–41.9% of DALYs), or UMCs (27.8%; 24.7%–31.0% of deaths and 30.4%; 27.2%–33.8% of DALYs). Conversely, behavioral risk factors accounted for increasingly large proportions of IHD DALYs as income levels increased (Table 1).

PAFs of IHD burden for risk clusters at level 2 showed homogeneity among LMICs, with dietary risks representing the leading behavior risk cluster. The highest proportions of IHD deaths and DALYs attributable to air pollution were observed in LICs (34.6%; 31.2%–39.0% and 38.2%; 34.8%–42.4%, respectively), which were far above the 20.2% (17.9%–22.4%) of deaths and 24.9% (22.4%–27.5%) of DALYs attributable to air pollution at the global level. Among the LMICs, UMCs experienced the largest proportions of deaths and DALYs attributable to tobacco (24.2%; 22.8%–25.8% of deaths and 31.4%; 29.9%–33.0% of DALYs) and low physical activity (5.6%; 2.1%–11.4% of deaths and 4.5%; 1.6%–9.5% of DALYs) (Table 1).

Age and Sex Specific

Age- and sex-specific PAFs of deaths and DALYs showed homogeneity among LMICs. Clusters of environmental, behavioral, and metabolic risk factors accounted for higher proportions of deaths and DALYs in populations aged 25 to 59 years than in those aged ≥ 70 years, and PAFs for behavioral and metabolic risk factors were substantially greater than environmental risk PAFs across all age groups. In LMICs, the highest PAFs for behavioral risk factors occurred in people aged 35 to 39 years and decreased with age, and this PAF was higher in men than in women in >30-year-old age groups. For metabolic risk factors, higher PAFs in men were seen in those aged <44 years. This pattern was reversed after age 45 years in LICs, with a similar turn being observed in the 45- to 49-year-old age group in LMCs, and in those aged 50 to 54 years in UMCs. Conversely, women aged <49 years had higher PAFs for environmental risk factors in LICs, while in LMCs and UMCs men aged >65 years and >60 years had higher PAFs, respectively (Tables S13–S18).

Table 1. Deaths and DALYs for IHD Attributable to Modifiable Risk Factors, and PAF Both Globally and in Low- and Middle-Income Countries in 2019

| | Low-income | | | Lower-middle | | | Upper-middle | | | Globally | | |
|--|---|---------------------|------|---|---------------------|------|---|---------------------|------|---|---------------------|------|
| | Attributable number (in thousand) (95% UI*) | PAF (%) (95% UI) | Rank | Attributable number (in thousand) (95% UI*) | PAF (%) (95% UI) | Rank | Attributable number (in thousand) (95% UI*) | PAF (%) (95% UI) | Rank | Attributable number (in thousand) (95% UI*) | PAF (%) (95% UI) | Rank |
| Death | | | | | | | | | | | | |
| Environmental/occupational risks | 128.5 (106.9 to 153.0) | 41.7 (38.1 to 45.9) | | 1192.8 (1040.6 to 1350.6) | 35.2 (32.0 to 38.2) | | 1017.8 (865.2 to 1181.2) | 27.8 (24.7 to 31.0) | | 2615.8 (2296.2 to 2939.7) | 28.6 (25.8 to 31.6) | |
| Air pollution | 106.5 (87.8 to 127.6) | 34.6 (31.2 to 39.0) | | 928.0 (804.2 to 1049.6) | 27.4 (25.0 to 30.0) | | 689.5 (580.2 to 802.0) | 18.8 (16.6 to 21.1) | | 1843.2 (1605.7 to 2080.5) | 20.2 (17.9 to 22.4) | |
| Particulate matter pollution | 106.5 (87.8 to 127.6) | 34.6 (31.2 to 39.0) | | 928.0 (804.2 to 1049.6) | 27.4 (25.0 to 30.0) | | 689.5 (580.2 to 802.0) | 18.8 (16.6 to 21.1) | | 1843.2 (1605.7 to 2080.5) | 20.2 (17.9 to 22.4) | |
| Ambient particulate matter pollution | 22.6 (13.1 to 35.2) | 7.4 (4.2 to 11.2) | 11 | 612.9 (483.3 to 737.3) | 18.1 (14.8 to 21.2) | 4 | 580.2 (477.3 to 686.4) | 15.8 (13.5 to 18.0) | 7 | 1332.0 (1086.9 to 1557.2) | 14.6 (12.2 to 16.7) | 7 |
| Household air pollution from solid fuels | 83.9 (63.4 to 108.2) | 27.2 (21.8 to 33.6) | 3 | 315.1 (211.8 to 440.1) | 9.3 (6.4 to 12.8) | 10 | 109.2 (55.5 to 186.3) | 3.0 (1.5 to 5.1) | 21 | 511.2 (348.4 to 714.6) | 5.6 (3.8 to 7.8) | 14 |
| Suboptimal temperature | 16.5 (9.4 to 22.5) | 5.4 (2.9 to 7.1) | | 173.9 (88.0 to 234.8) | 5.1 (2.7 to 6.8) | | 269.6 (186.8 to 364.4) | 7.4 (5.2 to 9.9) | | 596.8 (414.3 to 763.3) | 6.5 (4.6 to 8.3) | |
| High temperature | 2.1 (-4.2 to 4.6) | 0.7 (-1.3 to 1.5) | 26 | 29.2 (-39.0 to 70.9) | 0.9 (-1.2 to 2.1) | 26 | 8.8 (-3.4 to 17.9) | 0.2 (-0.1 to 0.5) | 26 | 43.3 (-42.1 to 95.3) | 0.5 (-0.5 to 1.0) | 26 |
| Low temperature | 14.5 (9.6 to 19.8) | 4.7 (3.2 to 6.2) | 18 | 145.8 (94.9 to 195.6) | 4.3 (2.8 to 5.7) | 21 | 261.5 (176.8 to 358.7) | 7.1 (4.9 to 9.6) | 11 | 555.5 (391.6 to 721.3) | 6.1 (4.4 to 7.9) | 12 |
| Other environmental risks | 18.2 (11.4 to 26.5) | 5.9 (3.8 to 8.3) | | 207.1 (133.2 to 292.4) | 6.1 (4.1 to 8.3) | | 153.2 (87.3 to 235.9) | 4.2 (2.4 to 6.3) | | 413.0 (242.8 to 615.7) | 4.5 (2.7 to 6.6) | |
| Lead exposure | 18.2 (11.4 to 26.5) | 5.9 (3.8 to 8.3) | 14 | 207.1 (133.2 to 292.4) | 6.1 (4.1 to 8.3) | 15 | 153.2 (87.3 to 235.9) | 4.2 (2.4 to 6.3) | 17 | 413.0 (242.8 to 615.7) | 4.5 (2.7 to 6.6) | 17 |
| Behavioral risks | 189.2 (154.9 to 228.1) | 61.5 (54.1 to 68.1) | | 2215.5 (1932.4 to 2499.4) | 65.4 (58.7 to 71.0) | | 2383.8 (2049.0 to 2701.1) | 65.1 (58.5 to 71.1) | | 5896.9 (5170.3 to 6632.0) | 64.5 (57.8 to 70.6) | |
| Tobacco | 48.6 (41.1 to 57.0) | 15.8 (14.6 to 17.1) | | 734.7 (656.5 to 807.9) | 21.7 (20.5 to 22.9) | | 887.2 (795.7 to 988.6) | 24.2 (22.8 to 25.8) | | 1998.2 (1840.4 to 2155.8) | 21.9 (20.8 to 23.1) | |
| Smoking | 39.4 (33.4 to 46.3) | 12.8 (11.8 to 13.9) | 7 | 597.7 (637.0 to 658.1) | 17.7 (16.7 to 18.7) | 6 | 748.4 (670.6 to 831.6) | 20.4 (19.1 to 21.9) | 4 | 1682.0 (1558.4 to 1805.3) | 18.4 (17.5 to 19.5) | 4 |
| Secondhand smoke | 10.9 (8.4 to 13.8) | 3.6 (2.9 to 4.3) | 21 | 166.5 (134.0 to 201.7) | 4.9 (4.0 to 5.9) | 18 | 178.1 (141.4 to 217.5) | 4.9 (4.0 to 5.8) | 16 | 397.4 (319.9 to 477.6) | 4.3 (3.6 to 5.2) | 18 |
| Alcohol use | -5.4 (-9.4 to -1.5) | -1.8 (-3.0 to -0.5) | 27 | -30.8 (-65.3 to 5.5) | -0.9 (-2.0 to 0.2) | 27 | -34.9 (-98.1 to 27.1) | -1.0 (-2.6 to 0.7) | 27 | -108.0 (-252.6 to 36.5) | -1.2 (-2.8 to 0.4) | 27 |
| Dietary risks | 166.6 (130.2 to 206.4) | 54.1 (45.0 to 62.4) | | 1857.1 (1523.7 to 2170.3) | 54.9 (45.7 to 62.4) | | 1925.4 (1547.2 to 2307.2) | 52.6 (43.3 to 60.9) | | 4877.1 (3990.6 to 5749.3) | 53.4 (44.2 to 61.2) | |
| Diet low in fruits | 19.2 (7.7 to 29.4) | 6.2 (2.6 to 9.0) | 13 | 222.4 (98.5 to 323.8) | 6.6 (2.9 to 9.4) | 13 | 131.3 (45.3 to 210.1) | 3.6 (1.2 to 5.6) | 19 | 436.5 (179.4 to 659.3) | 4.8 (1.9 to 7.1) | 16 |

(Continued)

Table 1. Continued

| | Low-income | | | Lower-middle | | | Upper-middle | | | Globally | | |
|---|---|---------------------|------|---|---------------------|------|---|---------------------|------|---|---------------------|------|
| | Attributable number (in thousand) (95% UI*) | PAF (%) (95% UI) | Rank | Attributable number (in thousand) (95% UI*) | PAF (%) (95% UI) | Rank | Attributable number (in thousand) (95% UI*) | PAF (%) (95% UI) | Rank | Attributable number (in thousand) (95% UI*) | PAF (%) (95% UI) | Rank |
| Diet low in vegetables | 26.9 (16.5 to 37.6) | 8.7 (5.5 to 11.9) | 10 | 192.7 (106.2 to 277.2) | 5.7 (3.2 to 8.0) | 16 | 75.5 (38.5 to 108.4) | 2.1 (1.1 to 3.0) | 24 | 358.3 (195.9 to 513.6) | 3.9 (2.1 to 5.6) | 19 |
| Diet low in legumes | 36.6 (8.4 to 61.9) | 11.9 (2.8 to 19.3) | 8 | 441.0 (99.5 to 723.4) | 13.0 (3.0 to 21.0) | 8 | 410.6 (85.8 to 660.6) | 11.2 (2.3 to 18.1) | 10 | 1116.4 (252.0 to 1815.3) | 12.2 (2.8 to 19.7) | 9 |
| Diet low in whole grains | 50.2 (19.2 to 67.9) | 16.3 (6.2 to 21.5) | 5 | 540.9 (213.2 to 711.1) | 16.0 (6.2 to 20.9) | 7 | 594.3 (219.6 to 781.5) | 16.2 (5.9 to 21.1) | 6 | 1459.1 (550.8 to 1908.0) | 16.0 (6.0 to 20.8) | 6 |
| Diet low in nuts and seeds | 16.4 (8.7 to 23.2) | 5.3 (2.8 to 7.3) | 16 | 263.3 (149.3 to 352.0) | 7.8 (4.4 to 10.3) | 12 | 189.9 (83.7 to 278.7) | 5.2 (2.3 to 7.5) | 14 | 546.6 (279.3 to 757.4) | 6.0 (3.1 to 8.2) | 13 |
| Diet high in processed meat | 3.8 (0.7 to 10.8) | 1.2 (0.2 to 3.4) | 25 | 46.9 (21.0 to 91.1) | 1.4 (0.6 to 2.7) | 25 | 63.7 (12.1 to 132.4) | 1.7 (0.3 to 3.6) | 25 | 197.2 (47.0 to 377.6) | 2.2 (0.5 to 4.2) | 24 |
| Diet high in sugar-sweetened beverages | 7.2 (5.6 to 9.0) | 2.3 (1.9 to 2.8) | 24 | 62.5 (44.0 to 79.6) | 1.8 (1.3 to 2.3) | 24 | 80.8 (54.2 to 104.8) | 2.2 (1.5 to 2.8) | 23 | 193.1 (127.4 to 248.5) | 2.1 (1.4 to 2.7) | 25 |
| Diet low in fiber | 11.4 (4.6 to 19.0) | 3.7 (1.5 to 6.2) | 20 | 166.6 (74.4 to 269.9) | 4.9 (2.2 to 7.7) | 19 | 96.9 (37.4 to 171.7) | 2.6 (1.0 to 4.6) | 22 | 348.9 (147.6 to 568.3) | 3.8 (1.6 to 6.2) | 21 |
| Diet low in seafood omega-3 fatty acids | 12.5 (4.1 to 17.7) | 4.1 (1.3 to 5.5) | 19 | 136.3 (52.0 to 184.5) | 4.0 (1.6 to 5.3) | 22 | 132.7 (69.4 to 172.5) | 3.6 (1.9 to 4.5) | 18 | 337.3 (165.6 to 435.7) | 3.7 (1.8 to 4.7) | 23 |
| Diet low in polyunsaturated fatty acids | 14.8 (2.1 to 29.9) | 4.8 (0.7 to 9.6) | 17 | 166.7 (19.5 to 340.4) | 4.9 (0.6 to 7.7) | 17 | 130.3 (16.7 to 268.8) | 3.6 (0.4 to 7.3) | 20 | 346.2 (44.2 to 707.3) | 3.8 (0.5 to 7.7) | 22 |
| Diet high in trans fatty acids | 16.7 (2.7 to 26.1) | 5.4 (0.8 to 8.3) | 15 | 269.4 (81.6 to 371.7) | 8.0 (1.0 to 10.7) | 11 | 218.5 (28.3 to 308.9) | 6.0 (0.8 to 8.4) | 12 | 645.0 (75.9 to 882.3) | 7.1 (0.8 to 9.5) | 11 |
| Diet high in sodium | 21.9 (2.3 to 59.3) | 7.1 (0.8 to 19.6) | 12 | 215.7 (24.6 to 564.6) | 6.4 (0.7 to 16.6) | 14 | 431.5 (138.9 to 855.3) | 11.8 (3.9 to 23.3) | 9 | 777.2 (185.3 to 1773.1) | 8.5 (2.1 to 19.4) | 10 |
| Diet high in red meat | 7.5 (0.7 to 15.2) | 2.4 (0.2 to 4.6) | 23 | 69.8 (9.2 to 133.3) | 2.1 (0.3 to 3.9) | 23 | 180.2 (29.7 to 337.6) | 4.9 (0.8 to 9.1) | 15 | 351.2 (55.9 to 642.7) | 3.8 (0.6 to 7.1) | 20 |
| Low physical activity | 10.8 (3.7 to 25.3) | 3.5 (1.2 to 8.0) | 22 | 154.5 (57.1 to 331.7) | 4.6 (1.7 to 9.5) | 20 | 205.8 (74.8 to 417.3) | 5.6 (2.1 to 11.4) | 13 | 486.8 (175.7 to 1003.3) | 5.3 (1.9 to 11.0) | 15 |
| Metabolic risks | 242.1 (201.4 to 285.5) | 78.6 (72.2 to 85.0) | | 2806.8 (2475.5 to 3126.9) | 82.9 (76.9 to 88.7) | | 2999.1 (2627.5 to 3339.7) | 81.9 (74.8 to 88.3) | | 7526.9 (6657.2 to 8311.7) | 82.4 (75.7 to 88.5) | |
| High systolic blood pressure | 161.3 (126.5 to 198.8) | 52.4 (44.3 to 60.3) | 1 | 1856.1 (1533.8 to 2194.9) | 54.8 (46.7 to 63.2) | 1 | 1964.3 (1553.3 to 2381.2) | 53.6 (42.9 to 63.7) | 1 | 4861.6 (3927.2 to 5853.4) | 53.2 (43.4 to 62.8) | 1 |
| High LDL cholesterol | 114.8 (85.3 to 148.8) | 37.3 (29.1 to 46.1) | 2 | 1374.2 (1064.8 to 1717.1) | 40.6 (32.3 to 49.5) | 2 | 1549.5 (1141.7 to 1988.3) | 42.3 (31.6 to 53.6) | 2 | 3784.3 (2826.6 to 4824.7) | 41.4 (31.5 to 52.1) | 2 |
| High fasting plasma glucose | 68.8 (40.5 to 109.7) | 22.4 (13.3 to 35.2) | 4 | 923.2 (545.5 to 1439.0) | 27.3 (16.6 to 42.3) | 3 | 810.1 (460.6 to 1292.0) | 22.1 (12.7 to 34.5) | 3 | 2353.4 (1361.2 to 3701.9) | 25.8 (15.0 to 40.3) | 3 |
| High body-mass index | 40.8 (21.1 to 66.0) | 13.2 (7.3 to 20.8) | 6 | 609.6 (381.9 to 866.3) | 18.0 (11.4 to 25.5) | 5 | 648.1 (373.1 to 989.5) | 17.7 (10.2 to 26.7) | 5 | 1662.3 (1005.2 to 2462.3) | 18.2 (11.0 to 26.6) | 5 |

(Continued)

Table 1. Continued

| | Low-income | | | Lower-middle | | | Upper-middle | | | Globally | | |
|--|---|------------------------|------|---|------------------------|------|---|------------------------|------|---|------------------------|------|
| | Attributable number (in thousand) (95% UI*) | PAF (%) (95% UI) | Rank | Attributable number (in thousand) (95% UI*) | PAF (%) (95% UI) | Rank | Attributable number (in thousand) (95% UI*) | PAF (%) (95% UI) | Rank | Attributable number (in thousand) (95% UI*) | PAF (%) (95% UI) | Rank |
| Impaired kidney function | 30.9 (20.7 to 43.0) | 10.1 (7.0 to 13.3) | 9 | 433.2 (290.1 to 582.4) | 12.8 (8.7 to 17.2) | 9 | 486.7 (328.1 to 658.2) | 13.3 (9.0 to 17.7) | 8 | 1220.8 (825.0 to 1631.3) | 13.4 (9.1 to 17.7) | 8 |
| All risk factors | 284.6 (243.5 to 330.1) | 92.5 (90.0 to 94.7) | | 3187.4 (2890.3 to 3480.1) | 94.2 (91.9 to 96.2) | | 3416.8 (3070.0 to 3713.7) | 93.3 (90.4 to 95.8) | | 8542.4 (7811.7 to 9142.3) | 93.5 (90.8 to 95.9) | |
| DALYs | | | | | | | | | | | | |
| Environmental/occupational risks | 3300.5 (2726.0 to 3891.1) | 44.8 (41.2 to 48.9) | | 30721.3 (26771.0 to 34744.1) | 38.7 (35.4 to 41.9) | | 20772.7 (17712.1 to 23952.4) | 30.4 (27.2 to 33.8) | | 59385.1 (52184.3 to 66601.1) | 32.6 (29.6 to 35.7) | |
| Air pollution | 2813.5 (2315.5 to 3335.0) | 38.2 (34.8 to 42.4) | | 25012.2 (21855.3 to 28481.5) | 31.5 (28.8 to 34.4) | | 15157.3 (12859.2 to 17550.5) | 22.2 (19.6 to 24.7) | | 45354.4 (39644.7 to 51231.6) | 24.9 (22.4 to 27.5) | |
| Particulate matter pollution | 2813.5 (2315.5 to 3335.0) | 38.2 (34.8 to 42.4) | | 25012.2 (21855.3 to 28481.5) | 31.5 (28.8 to 34.4) | | 15157.3 (12859.2 to 17550.5) | 22.2 (19.6 to 24.7) | | 45354.4 (39644.7 to 51231.6) | 24.9 (22.4 to 27.5) | |
| Ambient particulate matter pollution | 601.6 (342.4 to 947.2) | 8.2 (4.7 to 12.6) | 11 | 16464.4 (13034.7 to 19837.8) | 20.7 (16.8 to 24.3) | 6 | 12794.4 (10582.3 to 14939.8) | 18.7 (15.9 to 21.3) | 6 | 32174.3 (26024.8 to 37713.8) | 17.7 (14.7 to 20.3) | 7 |
| Household air pollution from solid fuels | 2211.9 (1672.1 to 2843.7) | 30.0 (24.1 to 36.3) | 3 | 8547.7 (6725.1 to 11894.2) | 10.8 (7.4 to 14.6) | 10 | 2362.9 (1208.0 to 4010.8) | 3.5 (1.8 to 5.9) | 21 | 13180.1 (9051.4 to 18251.8) | 7.2 (5.0 to 9.9) | 12 |
| Suboptimal temperature | 388.1 (218.2 to 523.4) | 5.3 (3.0 to 6.9) | | 3990.4 (1918.9 to 5495.2) | 5.0 (2.4 to 6.7) | | 4781.8 (3304.4 to 6505.7) | 7.0 (4.8 to 9.4) | | 11147.2 (7627.1 to 14343.2) | 6.1 (4.2 to 7.8) | |
| High temperature | 47.8 (-96.5 to 105.8) | 0.6 (-1.2 to 1.5) | 26 | 705.5 (-915.8 to 1714.1) | 0.9 (-1.2 to 2.2) | 26 | 157.2 (-86.5 to 330.0) | 0.2 (-0.1 to 0.5) | 26 | 974.0 (-1054.9 to 2209.6) | 0.5 (-0.6 to 1.2) | 26 |
| Low temperature | 341.9 (228.7 to 468.1) | 4.6 (3.2 to 6.1) | 18 | 3312.3 (2105.0 to 4492.3) | 4.2 (2.6 to 5.6) | 21 | 4635.8 (3120.5 to 6410.8) | 6.8 (4.6 to 9.1) | 11 | 10217.6 (7285.5 to 13306.5) | 5.6 (4.1 to 7.2) | 15 |
| Other environmental risks | 425.4 (261.0 to 619.3) | 5.8 (3.6 to 8.1) | | 4701.7 (2940.5 to 6647.4) | 5.9 (3.8 to 8.1) | | 2757.5 (1509.1 to 4281.4) | 4.0 (2.3 to 6.1) | | 8368.7 (4896.4 to 12449.2) | 4.6 (2.7 to 6.7) | |
| Lead exposure | 425.4 (261.0 to 619.3) | 5.8 (3.6 to 8.1) | 16 | 4701.7 (2940.5 to 6647.4) | 5.9 (3.8 to 8.1) | 16 | 2757.5 (1509.1 to 4281.4) | 4.0 (2.3 to 6.1) | 17 | 8368.7 (4896.4 to 12449.2) | 4.6 (2.7 to 6.7) | 18 |
| Behavioral risks | 4784.8 (3921.8 to 5724.2) | 64.9 (57.7 to 71.1) | | 54996.6 (48292.3 to 61648.7) | 69.2 (62.8 to 74.3) | | 47858.7 (42009.4 to 53511.3) | 70.1 (64.0 to 75.5) | | 125894.2 (112086.3 to 139552.4) | 69.2 (63.1 to 74.4) | |
| Tobacco | 1403.2 (1172.6 to 1668.1) | 19.0 (17.7 to 20.5) | | 20564.6 (18373.1 to 22653.2) | 25.9 (24.5 to 27.2) | | 21426.4 (19287.7 to 23852.1) | 31.4 (29.9 to 33.0) | | 50725.1 (46709.8 to 54647.3) | 27.9 (26.6 to 29.1) | |
| Smoking | 1148.2 (964.4 to 1374.8) | 15.6 (14.5 to 16.8) | 7 | 16962.1 (15179.7 to 18813.4) | 21.4 (20.1 to 22.6) | 5 | 18621.4 (16634.7 to 20751.6) | 27.3 (25.7 to 28.8) | 3 | 43452.8 (40296.9 to 46783.9) | 23.9 (22.8 to 25.0) | 3 |
| Secondhand smoke | 307.9 (231.0 to 392.7) | 4.2 (3.3 to 5.1) | 21 | 4491.7 (3573.1 to 5449.7) | 5.7 (4.6 to 6.8) | 17 | 3854.6 (3089.9 to 4686.1) | 5.6 (4.6 to 6.7) | 14 | 9566.1 (7720.3 to 11527.1) | 5.3 (4.3 to 6.3) | 16 |
| Alcohol use | -136.9 (-243.4 to -32.4) | -1.9 (-3.2 to -0.5) | 27 | -698.2 (-1622.1 to 298.1) | -0.9 (-2.1 to 0.4) | 27 | -634.9 (-2086.6 to 792.4) | -0.9 (-3.0 to 1.1) | 27 | -2002.9 (-5192.2 to 1210.8) | -1.1 (-2.9 to 0.7) | 27 |

(Continued)

Table 1. Continued

| | Low-income | | | Lower-middle | | | Upper-middle | | | Globally | | |
|---|---|---------------------|------|---|---------------------|------|---|---------------------|------|---|---------------------|------|
| | Attributable number (in thousand) (95% UI*) | PAF (%) (95% UI) | Rank | Attributable number (in thousand) (95% UI*) | PAF (%) (95% UI) | Rank | Attributable number (in thousand) (95% UI*) | PAF (%) (95% UI) | Rank | Attributable number (in thousand) (95% UI*) | PAF (%) (95% UI) | Rank |
| Dietary risks | 4213.4 (3296.8 to 5165.6) | 57.2 (48.1 to 65.1) | | 46290.8 (38413.0 to 53808.3) | 58.3 (49.0 to 65.5) | | 38471.5 (31383.3 to 45528.6) | 56.3 (46.9 to 64.5) | | 103864.0 (86829.0 to 120418.9) | 57.1 (47.9 to 64.8) | |
| Diet low in fruits | 518.4 (208.4 to 792.6) | 7.0 (2.9 to 10.2) | 12 | 5923.0 (2616.3 to 8617.0) | 7.5 (3.3 to 10.7) | 13 | 2717.2 (915.5 to 4311.2) | 4.0 (1.4 to 6.2) | 18 | 10233.4 (4241.4 to 15123.4) | 5.6 (2.3 to 8.2) | 14 |
| Diet low in vegetables | 720.9 (443.5 to 1002.4) | 9.8 (6.2 to 13.3) | 9 | 5119.0 (2810.4 to 7417.4) | 6.4 (3.6 to 9.1) | 15 | 1533.5 (789.5 to 2187.0) | 2.2 (1.2 to 3.3) | 24 | 8383.0 (4666.2 to 11970.2) | 4.6 (2.5 to 6.5) | 17 |
| Diet low in legumes | 975.6 (231.5 to 1654.5) | 13.2 (3.2 to 21.3) | 8 | 11339.7 (2493.7 to 18438.0) | 14.3 (3.2 to 22.9) | 8 | 8260.5 (1689.8 to 13358.6) | 12.1 (2.5 to 19.5) | 10 | 24309.0 (5263.1 to 39575.3) | 13.4 (3.0 to 21.4) | 8 |
| Diet low in whole grains | 1350.1 (513.8 to 1827.9) | 18.4 (6.9 to 24.0) | 5 | 13949.2 (5491.1 to 18410.2) | 17.6 (6.9 to 22.9) | 7 | 12342.6 (4516.7 to 16125.6) | 18.1 (6.6 to 23.4) | 7 | 32206.5 (12173.3 to 41835.0) | 17.7 (6.6 to 23.0) | 6 |
| Diet low in nuts and seeds | 431.7 (226.7 to 615.4) | 5.9 (3.0 to 8.0) | 15 | 6949.0 (3937.4 to 9314.8) | 8.7 (5.0 to 11.6) | 12 | 3753.1 (1692.1 to 5540.0) | 5.5 (2.5 to 7.9) | 15 | 12279.0 (6364.3 to 16919.1) | 6.7 (3.5 to 9.2) | 13 |
| Diet high in processed meat | 105.6 (16.3 to 300.2) | 1.4 (0.2 to 3.9) | 25 | 1226.6 (625.7 to 2397.6) | 1.5 (0.7 to 3.0) | 25 | 1336.9 (223.1 to 2883.4) | 2.0 (0.3 to 4.2) | 25 | 4141.9 (998.6 to 8024.1) | 2.3 (0.6 to 4.4) | 24 |
| Diet high in sugar-sweetened beverages | 168.0 (127.3 to 216.6) | 2.3 (1.8 to 2.7) | 24 | 1503.0 (933.6 to 1975.7) | 1.9 (1.2 to 2.4) | 24 | 1555.2 (969.0 to 2053.0) | 2.3 (1.5 to 2.9) | 23 | 3973.2 (2470.2 to 5218.8) | 2.2 (1.4 to 2.8) | 25 |
| Diet low in fiber | 316.0 (128.3 to 529.4) | 4.3 (1.7 to 7.2) | 20 | 4429.8 (1985.5 to 7167.9) | 5.6 (2.5 to 8.7) | 18 | 2066.6 (794.0 to 3639.4) | 3.0 (1.2 to 5.2) | 22 | 7943.0 (3373.6 to 12978.3) | 4.4 (1.8 to 7.0) | 20 |
| Diet low in seafood | 328.7 (105.9 to 472.3) | 4.5 (1.4 to 6.0) | 19 | 3517.8 (1291.9 to 4779.0) | 4.4 (1.7 to 5.8) | 20 | 2674.9 (1377.4 to 3509.5) | 3.9 (2.0 to 4.9) | 19 | 7409.7 (3373.5 to 9687.0) | 4.1 (1.9 to 5.2) | 23 |
| Diet low in polyunsaturated fatty acids | 396.0 (55.5 to 801.0) | 5.4 (0.7 to 10.8) | 17 | 4391.7 (494.1 to 8939.9) | 5.5 (0.6 to 11.2) | 19 | 2668.7 (327.0 to 5462.1) | 3.9 (0.4 to 8.1) | 20 | 8012.9 (969.2 to 16249.2) | 4.4 (0.5 to 9.0) | 19 |
| Diet high in trans fatty acids | 434.8 (62.8 to 681.0) | 5.9 (0.8 to 8.9) | 14 | 7026.9 (757.7 to 9634.3) | 8.8 (1.0 to 11.8) | 11 | 4442.8 (536.2 to 6299.3) | 6.5 (0.8 to 9.0) | 12 | 14234.2 (1580.4 to 19410.2) | 7.8 (0.9 to 10.5) | 11 |
| Diet high in sodium | 502.1 (56.5 to 1380.9) | 6.8 (0.8 to 18.9) | 13 | 5506.2 (664.7 to 13883.1) | 6.9 (0.9 to 17.4) | 14 | 9534.4 (3583.9 to 17346.5) | 13.9 (5.4 to 25.3) | 8 | 17353.9 (4712.3 to 36861.5) | 9.5 (2.6 to 20.3) | 10 |
| Diet high in red meat | 210.9 (16.0 to 431.0) | 2.8 (0.2 to 5.5) | 23 | 1811.2 (227.0 to 3476.8) | 2.3 (0.3 to 4.3) | 23 | 4041.5 (763.0 to 7352.2) | 5.9 (1.1 to 10.7) | 13 | 7742.3 (1340.0 to 14077.7) | 4.3 (0.7 to 7.6) | 21 |
| Low physical activity | 216.5 (67.2 to 553.9) | 2.9 (0.9 to 7.1) | 22 | 2834.7 (993.2 to 6465.1) | 3.6 (1.2 to 7.9) | 22 | 3044.1 (1062.3 to 6572.4) | 4.5 (1.6 to 9.5) | 16 | 7586.7 (2613.5 to 16747.2) | 4.2 (1.4 to 9.1) | 22 |
| Metabolic risks | 5904.1 (4880.7 to 6982.1) | 80.1 (74.5 to 85.4) | | 66864.3 (59824.9 to 74118.4) | 84.2 (79.2 to 88.9) | | 57478.9 (51676.0 to 63447.9) | 84.2 (78.7 to 89.3) | | 153132.1 (138737.4 to 166795.4) | 84.1 (78.9 to 89.1) | |
| High systolic blood pressure | 3913.3 (3136.6 to 4793.8) | 53.1 (46.1 to 60.0) | 1 | 43855.4 (37223.2 to 50863.4) | 55.2 (47.7 to 62.2) | 1 | 37876.8 (31625.1 to 44054.7) | 55.5 (47.2 to 63.4) | 1 | 99397.3 (84594.0 to 114599.3) | 54.6 (46.8 to 61.9) | 1 |
| High LDL cholesterol | 3167.6 (2445.5 to 3988.7) | 43.0 (35.7 to 51.1) | 2 | 36744.1 (29932.5 to 44167.9) | 46.2 (38.6 to 54.3) | 2 | 32561.5 (26484.5 to 39434.1) | 47.7 (39.1 to 56.8) | 2 | 84916.4 (69572.6 to 101382.5) | 46.6 (38.5 to 55.0) | 2 |

(Continued)

Table 1. Continued

| | Low-income | | | Lower-middle | | | Upper-middle | | | Globally | | |
|-----------------------------|---|------------------------|------|---|------------------------|------|---|------------------------|------|---|------------------------|------|
| | Attributable number (in thousand) (95% UI*) | PAF (%) (95% UI) | Rank | Attributable number (in thousand) (95% UI*) | PAF (%) (95% UI) | Rank | Attributable number (in thousand) (95% UI*) | PAF (%) (95% UI) | Rank | Attributable number (in thousand) (95% UI*) | PAF (%) (95% UI) | Rank |
| High fasting plasma glucose | 1440.5 (914.6 to 2200.2) | 19.6 (12.3 to 30.1) | 4 | 19480.1 (12178.0 to 29165.7) | 24.5 (15.4 to 36.9) | 3 | 14266.4 (9167.9 to 21592.5) | 20.9 (13.6 to 31.5) | 5 | 43253.3 (27821.4 to 64164.6) | 23.8 (15.3 to 35.8) | 4 |
| High body mass index | 1212.4 (647.1 to 1923.3) | 16.4 (9.2 to 25.1) | 6 | 17398.3 (11114.2 to 24277.4) | 21.9 (14.2 to 30.3) | 4 | 15459.8 (9247.1 to 22706.6) | 22.6 (13.6 to 32.9) | 4 | 41369.8 (26027.7 to 58657.9) | 22.7 (14.6 to 32.0) | 5 |
| Impaired kidney function | 690.0 (467.3 to 943.4) | 9.4 (6.7 to 12.2) | 10 | 9646.1 (6657.7 to 12773.4) | 12.1 (8.5 to 16.0) | 9 | 8606.5 (5994.3 to 11537.3) | 12.6 (8.9 to 16.4) | 9 | 22516.9 (15811.0 to 29665.1) | 12.4 (8.8 to 16.1) | 9 |
| All risk factors | 6851.9 (5826.9 to 7984.3) | 93.0 (91.1 to 94.7) | | 75243.9 (68129.9 to 82384.2) | 94.7 (93.1 to 96.1) | | 64607.6 (58844.1 to 70173.0) | 94.6 (92.6 to 96.3) | | 172100.0 (160171.2 to 184131.0) | 94.5 (92.7 to 96.2) | |

DALYs indicates disability-adjusted life years; IHD, ischemic heart disease; LDL, low-density lipoprotein; and PAF, population-attributable fraction. Deaths- and DALY-based PAFs were ranked for 27 individual risk factors at level 4.

The number ranges in parentheses refers to 95% uncertainty intervals of corresponding numbers. *UI: uncertainty interval.

Individual Risk Factors

Income-Classified Region

The individual risk factors with the top 3 PAFs (%) for deaths in LICs were high systolic blood pressure (52.4; 44.3–60.3), high LDL cholesterol (37.3; 29.1–46.1), and household air pollution from solid fuels (27.2; 21.8–33.6). In LMCs, the PAFs (%) ranged from –0.9 (–2.0 to 0.2) for alcohol use to 54.8 (46.7–63.2) for high systolic blood pressure. The behavioral risk factor with DALY PAF >20% was smoking in LMCs (21.4%; 20.1–22.6) and UMCs (27.3%; 25.7–28.8). In the dietary risk category, diet low in whole grains accounted for the largest proportion of IHD burden in LMICs, with diet high in processed meat accounting for the lowest (Table 1).

Country Specific

Although the impact of each risk factor varied by country, high systolic blood pressure and high LDL cholesterol remained the 2 leading causes of DALYs among the 137 countries, with the former being the leading risk factor in 116 countries (28 LICs, 37 LMCs, and 51 UMCs), while high LDL cholesterol was the leading cause in the remaining 21 countries (3 LICs, 10 LMCs, and 8 UMCs) (Figure 2A through 2C). There were substantial variations in the impact of a given IHD risk factor on DALYs at the national level. For example, IHD-caused DALYs attributable to household air pollution from solid fuels were highest in Somalia (in LICs; 46.1%) and were lowest in Jordan (0.0%) (Figures 2A through 2C; Tables S19–S21).

Sex Specific

The PAF rankings of deaths and DALYs for most individual risk factors were similar in both sexes in LMICs. However, PAFs were substantially higher among men for smoking in LMICs, whereas the PAF for household air pollution ranked higher in women than in men in LICs and LMCs (Tables S22–S23).

Temporal Trends in IHD PAF and Attributable Burden From 2000 to 2019

Temporal Trends in PAF Ranks

Death-based and DALY-based PAF rankings for individual risk factors at level 4 varied across LMICs during the 2000 to 2019 period. In LICs, household air pollution remained the third risk factor for IHD death and DALYs. Of the 10 leading risks for death and DALYs, metabolic risks rose in rank, whereas environmental and behavioral risks fell from 2000 to 2019 in LMCs. In UMCs, a diet high in sodium was the 10th-leading risk for death in 2000, and it climbed to the ninth position in 2019. DALYs attributable to high body mass index increased in rank from sixth in 2000 to fifth in 2019 (Table 1).

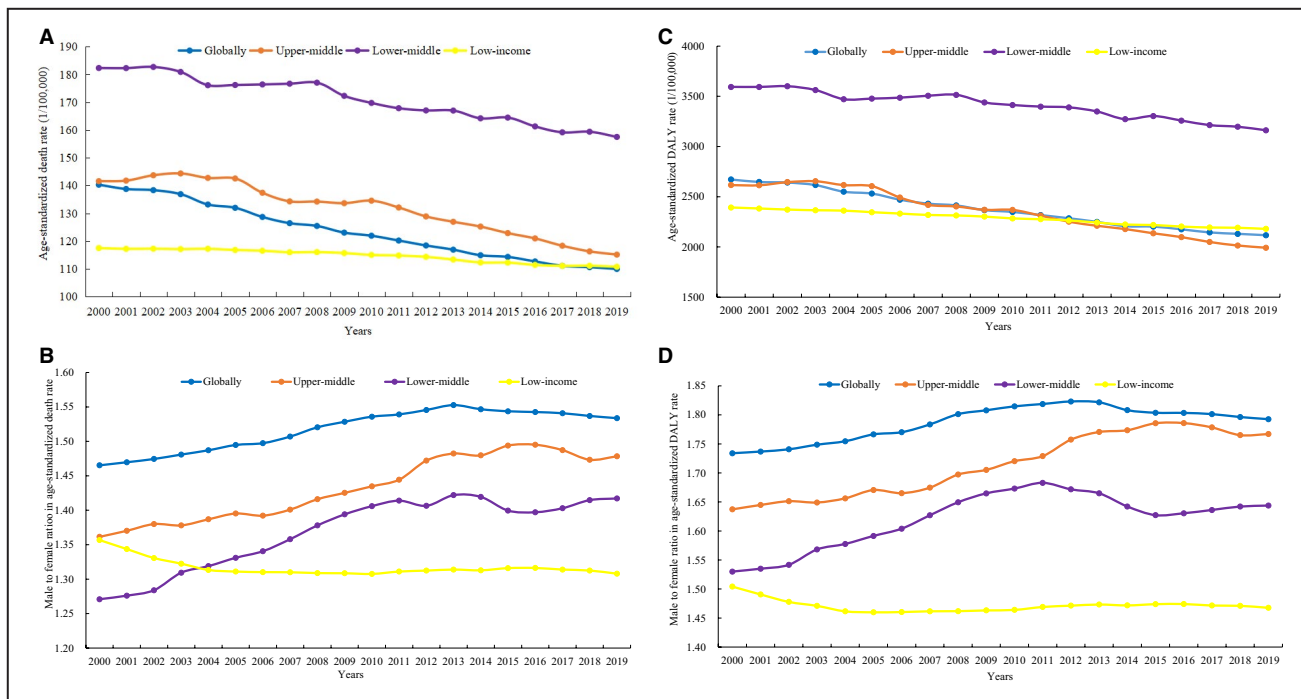


Figure 1. Age-standardized risk-attributable death and DALY rates, and male-to-female ratio in age-standardized death and DALY rates for IHD both globally and in low- and middle-income countries from 2000 to 2019. **A,** Age-standardized death rate for IHD attributable to all modifiable risk factors (1/100 000) from 2000 to 2019; **(B)** male-to-female ratio in age-standardized death rate for IHD attributable to all modifiable risk factors from 2000 to 2019; **(C)** age-standardized DALY rate for IHD attributable to all modifiable risk factors (1/100 000) from 2000 to 2019; **(D)** male-to-female ratio in age-standardized DALY rate for IHD attributable to all modifiable risk factors from 2000 to 2019. DALY indicates disability-adjusted life year; and IHD, ischemic heart disease. Without animals/cells/observations and statistical test.

Temporal Trends in Attributable Age-Standardized Rates

Income-Classified Region

From 2000 to 2019, age-standardized rates for both death and DALYs attributable to modifiable risk factors decreased globally and regionally. There was a 13.6% decrease in the attributable age-standardized IHD death rate in LMCs, and an 18.7% decrease in UMCs (Figure 1A; Table S3). Similarly, the reduction of the age-standardized risk-attributable DALY rate was more prominent in MICs (Figure 1C; Table S4).

Country Specific

Relative changes in age-standardized risk-attributable death and DALY rates were spatially heterogeneous. Age-standardized rates attributable to risk factors declined across most LMICs, with considerable exceptions in certain countries, such as the Dominican Republic (in UMCs), Timor-Leste (in LMCs), and Tajikistan (in LICs) (Figure 3A and 3B; Tables S6 and S7).

Sex Specific

The male-to-female ratio of age-standardized risk-attributable death and DALY rates for IHD showed

an upward trend globally and regionally from 2000 to 2019 (Figure 1B and 1D).

Temporal Trends in Attributable Absolute Deaths and DALYs

Income-Classified Region

We noticed an increasing trend in deaths and DALYs attributable to IHD risk factors over the periods from 2000 to 2010, 2010 to 2019, and 2000 to 2019, in LMICs as well as globally. From 2000 to 2019, IHD deaths attributable to all risk factors increased by 59.20% in LICs, 64.59% in LMCs, 50.98% in UMCs, and 38.95% worldwide. Compared with 2000 to 2010, a slower annual average increase in attributable deaths and DALYs was observed in UMCs from 2010 to 2019, while LICs and LMCs experienced the opposite trend (Table 2).

Country Specific

From 2000 to 2019, most countries experienced an increase in the number of risk-attributable IHD deaths and DALYs, which was contrary to the decreasing age-standardized risk-attributable rates (Tables S24 and S25).

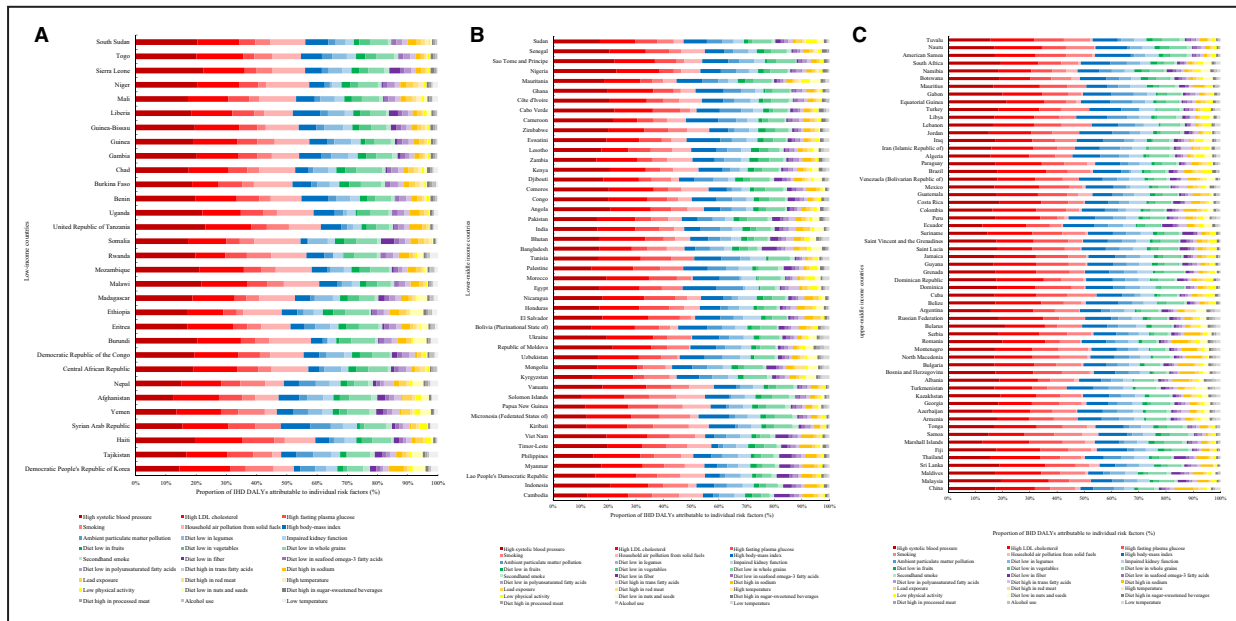


Figure 2. Country-level proportion of IHD DALYs attributable to 27 individual risk factors in low- and middle-income countries in 2019. **A**, Country-level proportion of IHD DALYs attributable to individual risk factors in low-income countries; **(B)** national-level proportion of IHD DALYs attributable to individual risk factors in lower-middle income countries; **(C)** national-level proportion of IHD DALYs attributable to individual risk factors in upper-middle-income countries. DALYs indicates disability-adjusted life years; and IHD, ischemic heart disease. Without animals/cells/observations and statistical test.

Age and Sex Specific

In LICs and LMCs, the increase in deaths and DALYs attributable to IHD risk factors occurred for all age groups, whereas in UMCs, a decline in deaths and DALYs was observed in the 15- to 49-year-old age group (Tables S24 and S25). A marked discrepancy in attributable IHD deaths and DALYs was found between the sexes. A greater increase occurred in men in LMCs over the 2000 to 2019 period, while in LICs and UMCs the attributable IHD burden in women experienced opposite increasing trends (Table 2).

DISCUSSION

We conducted a comprehensive and representative analysis of income-classified region-, country-, age-, and sex-specific IHD burden attributable to potentially modifiable risk clusters and individual risk factors among LMICs, with special attention paid to the current levels and temporal trends from 2000 to 2019. Our findings highlight the need to reduce the impact of preventable IHD burden in LMICs.

Overall Modifiable Risk Factors

According to the present study, the IHD PAFs (whether for deaths or for DALYs) in relation to all modifiable risk factors combined were consistently high, which were over 90% in LMICs in 2019. With the quantification of

the high exposure to IHD risk factors over the life course, cost-effective public health interventions are expected to be identified in all income settings. Increasing trends of attributable IHD deaths and DALYs in all income-classified regions from 2000 to 2019 were also observed, which was probably a function of growing and aging populations.¹

The age-standardized risk-attributable IHD death and DALY rates have considerably improved in LMICs, which may be related to effective primary healthcare reform,²¹ updated medical technology,²² incremental investment in IHD prevention,²³ and national authorities' efforts to facilitate environments prioritizing healthcare services.²² However, the risk-attributable IHD burden differed across the most affected and the least affected countries, and the gap was found to be growingly wider. From 2010 to 2019, we observed for the first time diverging temporal trends of IHD burden between UMCs and LICs. Some countries with considerably increased IHD burden, such as the Dominican Republic, Timor-Leste, and Tajikistan, need to reinforce public care interventions for IHD through the reduction of modifiable risk factors.

We found that in LMICs, higher proportions of death and DALYs occurred among populations aged 25 to 59 years, and the high-risk individuals were younger than those reported in India.²⁴ The inconsistency in burden estimates may be attributed to the different methods used in the 2 studies. Our findings provided

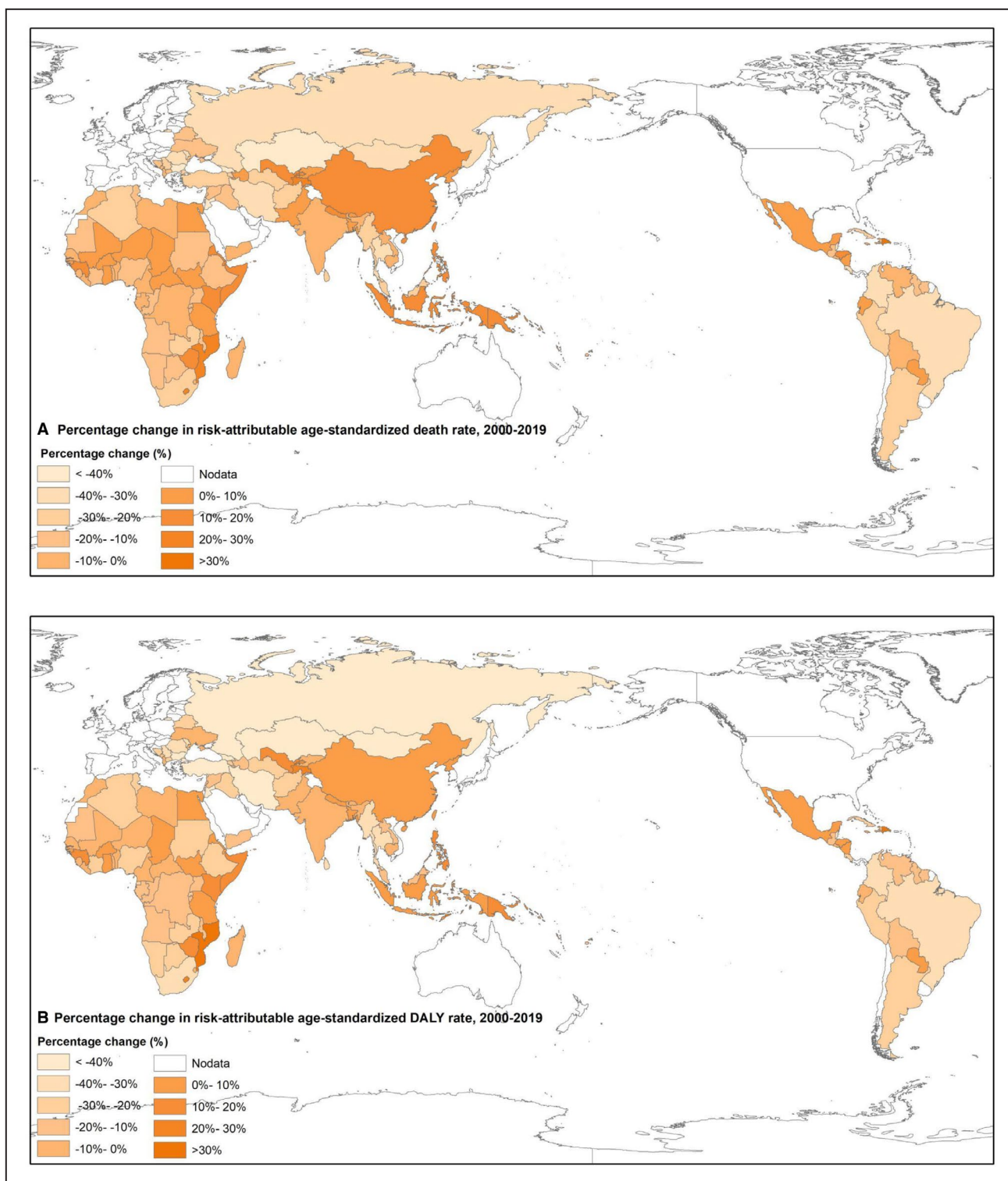


Figure 3. Relative change in risk-attributable age-standardized death and DALY rates for IHD in 137 low- and middle-income countries from 2000 to 2019.

A, Percentage change in attributable age-standardized death rates; **(B)** percentage change in attributable age-standardized DALY rates. DALY indicates disability-adjusted life year; and IHD, ischemic heart disease. Without animals/cells/observations and statistical test.

Table 2. Relative Change in Deaths and DALYs for IHD Attributable to all Modifiable Risk Factors Globally and in Low- and Middle-Income Countries From 2000 to 2019

| Regions | Death | | | DALYs | | |
|---------------|---|--------------|--------------|---|--------------|--------------|
| | % of change (% of annual average change) | | | % of change (% of annual average change) | | |
| | 2000–2019 | 2000–2010 | 2010–2019 | 2000–2019 | 2000–2010 | 2010–2019 |
| Low-income | | | | | | |
| Male | 53.02 (1.23) | 21.15 (1.36) | 26.30 (1.44) | 51.86 (1.23) | 20.36 (1.35) | 26.17 (1.44) |
| Female | 66.98 (1.25) | 30.98 (1.41) | 27.49 (1.45) | 56.90 (1.24) | 24.92 (1.38) | 25.60 (1.43) |
| Both | 59.20 (1.24) | 25.50 (1.38) | 26.85 (1.44) | 53.93 (1.23) | 22.24 (1.36) | 25.93 (1.44) |
| Middle-income | | | | | | |
| Lower-middle | | | | | | |
| Male | 65.04 (1.25) | 32.41 (1.42) | 24.64 (1.43) | 57.63 (1.24) | 31.13 (1.41) | 20.21 (1.40) |
| Female | 64.00 (1.24) | 25.39 (1.38) | 30.79 (1.46) | 58.33 (1.24) | 24.38 (1.38) | 27.29 (1.44) |
| Both | 64.59 (1.25) | 29.41 (1.40) | 27.18 (1.44) | 57.89 (1.24) | 28.57 (1.40) | 22.81 (1.42) |
| Upper-middle | | | | | | |
| Male | 50.47 (1.23) | 30.41 (1.41) | 15.38 (1.35) | 30.37 (1.20) | 19.87 (1.35) | 8.76 (1.27) |
| Female | 51.57 (1.23) | 28.93 (1.40) | 17.56 (1.37) | 29.55 (1.20) | 17.00 (1.33) | 10.73 (1.30) |
| Both | 50.98 (1.23) | 29.72 (1.40) | 16.39 (1.36) | 30.05 (1.20) | 18.73 (1.34) | 9.53 (1.28) |
| Globally | | | | | | |
| Male | 41.18 (1.22) | 19.28 (1.34) | 18.36 (1.38) | 32.26 (1.20) | 16.39 (1.32) | 13.63 (1.34) |
| Female | 36.34 (1.21) | 13.62 (1.30) | 20.00 (1.39) | 29.69 (1.20) | 11.08 (1.27) | 16.75 (1.37) |
| Both | 38.95 (1.21) | 16.67 (1.32) | 19.09 (1.39) | 31.25 (1.20) | 14.31 (1.30) | 14.82 (1.35) |

DALY indicates disability-adjusted life years; and IHD, ischemic heart disease.

an opportunity to deliver IHD interventions earlier in young adults, with the aim to keep a proper trajectory through the life course.

Risk Factors and Risk Clusters

Our findings showed homogeneity in metabolic risk patterns across regions categorized by income, where the metabolic risk cluster was consistently the predominant risk factor for IHD in LMICs. Furthermore, high blood pressure and high LDL cholesterol were the 2 leading contributors among the 137 countries. The high exposure to metabolic risks may act as a key driver of increasing absolute attributable IHD burden.¹ However, we found that exposure to clusters of environmental and behavioral risk factors was associated with economic development. IHD burden attributable to the cluster of environmental risk factors increased significantly with decreased income levels. Compared with MICs, LICs experienced a larger IHD burden attributable to environmental risk factors, including ambient and household air pollution. The association between environmental risks and IHD mortality can be explained by biological mechanisms. Long-term exposure to particulate matter is strongly associated with endothelial dysfunction,²⁵ systematic inflammation,²⁶ and increased blood pressure,²⁶ all of which contribute

to the morbidity and mortality of IHD. A previous GBD study¹³ showed that in high-income countries, the contribution of air pollution to cardiovascular disease burden consistently decreased. If this trend continues, the discrepancy between high-income countries and LICs will increase further. For LICs, implementing available interventions to improve environmental management, especially reducing exposure to air pollution from burning coal and other solid fuels, should be the main priority to reduce risk-attributable IHD burden.^{5,27}

Conversely, the cluster of behavioral risk factors, such as tobacco and low physical activity, denoted an increasing trend with economic development. The joint effects of the 2 risk clusters increased from 2000 to 2019, with high fasting plasma glucose found to be the main contributor in LMCs, and diets high in sodium and high body mass index the main contributors in UMCs. These indicate that managing an increasing IHD burden attributable to behavioral and metabolic risks is anticipated to be an uphill battle for MICs, especially for UMCs.^{28–30}

Consistent with previous studies, our study revealed that the prevalence of each modifiable risk factor varied across countries classified by economic level, such as high alcohol drinking in Russia,²⁹ common drug use in South Africa,³¹ and high sodium consumption and tobacco use in China,^{2,32} combined with the widespread

rising prevalence of physical inactivity^{10,33} and suboptimal dietary habits including diets low in nuts, whole grains, fruits, and vegetables.³⁴ These disparities of the epidemiology of risk factors can be partly explained by inconsistent professional knowledge of prevention and control for IHD, and the varying accessibility and affordability of health care across countries with varying income levels.³

With respect to the causal relationship between economic status and premature deaths from cardiovascular disease, the PURE (Prospective Urban Rural Epidemiology) study,⁵ enrolling 155 722 participants from 21 LICs, MICs, and high-income countries, suggested that education level was considered the most important socioeconomic factor to avert attributable cardiovascular disease burden. Better access to education in high-income countries led to healthier behaviors, increased availability of high-quality health care, and reduced mortality, compared with LMICs. Therefore, increased investments in education in lower-income countries should be the highest priority to reduce the growing disparities in IHD burden.^{35–38} In addition, extremely low rates of awareness, treatment, and control for hypertension and high LDL cholesterol among LMICs,³⁹ worldwide population growth and aging, and other socioeconomic, demographic, and cultural factors, had large effects on the geographic discrepancies observed in modifiable risk factors' epidemiologic transitions across general populations.

Marked differences in risk-attributable IHD burden were observed between the sexes. Our results suggested that men had notably higher IHD burdens for overall and behavioral risk factors, and experienced a more rapid increase from 2000 to 2019, which can be closely related to more unhealthy lifestyles among men compared with women.⁷ For example, the PAF for smoking was notably higher among men in LICs and MICs. To control the risk-attributable IHD burden, preventive interventions to reduce behavioral risks that targeted men were more effective than interventions targeting women, particularly in LMICs.

As a previous study⁴⁰ proposed, a 25% reduction in cardiovascular disease premature deaths by 2025, as advocated for by the United Nations, will be reached only if all modifiable risk factor interventions can be achieved in LMICs. Since the varying prevalence of leading risk factors for IHD has a direct or indirect impact on risks of morbidity and mortality,⁵ efficient responses of international and national health systems and cost-effective interventions should be strengthened among low-to-middle-income countries with restricted access to health care. Furthermore, as the emerging field of mobile health, known as "mHealth," provides a potential opportunity to deliver public health services to IHD patients,⁴¹ individual-targeted interventions based on mobile phone technology may be implemented considering that mHealth can effectively

monitor and identify risk factors on time. The differences observed in this study call for income-classified region- and country-specific initiatives to implement interventions that will reduce preventable IHD burden.

Strengths and Limitations

To the best of our knowledge, this is the first timely and comprehensive assessment of IHD deaths and DALYs attributable to potentially modifiable risk factors in 137 LMICs from 2000 to 2019, based on regionally and nationally representative data from the most updated 2019 GBD study. Our income-classified region-, country-, sex-, and age-specific findings uncover some valuable insights for informing governments of tailored strategies and programs that can prioritize the primary prevention of IHD. For instance, for certain countries with the highest IHD burden attributable to high blood pressure, it is of utmost importance to promote the nationwide practice of favorable lifestyles and the availability and affordability of guideline-recommended antihypertensive therapies for patients in the prevention and treatment of IHD³. Of note, better guidance in implementing public health interventions suitable to differing economic levels needs to be emphasized to ensure that medical and healthcare services are equally available to manage the risk-attributable burden. In this way, mitigation of preventable IHD burden should be positioned as a priority agenda by international and national healthcare policy makers in LMICs.

The GBD study has some limitations, which have been described elsewhere.^{1,15–17} Some of the most important limitations may have affected this study. First, the correlation between attributed prevalence and deaths for IHD brings uncertainties to the calculation of years lived with disability and years of life lost, which leads to decreased precision of attributed DALYs. Second, even though our analysis of IHD burden was conducted using regionally and nationally representative data, we failed to examine subnational discrepancies with available data, which underscores the need to undertake more specific assessments at the state, province, county, urban, or rural level in future studies. Third, with improvements in early diagnostic techniques over the past 2 decades, inconsistencies in diagnostic criteria for IHD over time may cause measurement errors in the data acquisition process. Fourth, even though the TMREL estimates were discussed and approved by international risk factor epidemiologists, evidence of TMREL selection was uncertain for some risk factors, particularly in LICs with limited risk exposure data. For example, the TMREL for LDL cholesterol was set at 0.7 to 1.3 mmol/L, where the risk for IHD associated with cholesterol can be minimized in the general population; however, the discrepancy between the TMREL and the healthy level expected to be targeted after treatment may not have been fully considered.

Fifth, country-level data on many modifiable risk factors were insufficient in some LMICs. National estimation for the IHD prevalence were highly dependent on predictors in the model with unified and standard methodologies of the GBD 2019 study. Results at the country level would be more reliable if the input data limitation was addressed.

CONCLUSIONS

In summary, the age-standardized risk-attributable rates of death and DALY for IHD showed a decreasing trend among LMICs from 2000 to 2019. However, the considerable increase in absolute number of attributable IHD deaths and DALYs indicates that the overall burden remains high. Substantial heterogeneity was observed in the epidemiologic transition of IHD burden attributable to behavioral, environmental, and metabolic risk factors across LICs, LMCs, and UMCs. Moreover, the discrepancy in risk-attributable IHD burden between LICs and MICs has increased, with a higher burden attributable to environmental risks in LICs and higher burdens attributable to behavioral and metabolic risk factors in MICs. Our findings can serve as a useful reference to inform targeted strategies that account for economic development at both income-classified region and country levels.

ARTICLE INFORMATION

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Disclosures

None.

Supplementary Material

Data S1–S2
Tables S1–S25
Figure S1

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SUPPLEMENTAL MATERIAL

The GBD 2019 capstone papers and their respective online appendices documented the general methods, data sources, model selection information, performance and limitation information for the GBD 2019 analyses. This study is in compliance with the Guidelines for Accurate and Transparent Health Estimates Reporting (GATHER) recommendations. These materials provided details requested by the GATHER statement. A GATHER checklist is presented in this appendix (Data S1). This appendix provides more methodological details for the PAF calculation (Data S2). Data S3 and Data S4 present supplemental tables and figure of the manuscript.

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Data S1. GATHER CHECKLIST.

Guidelines for Accurate and Transparent Health Estimates Reporting: the GATHER Statement

| Item # | Checklist item | Reported on page # |
|---|---|---|
| Objectives and funding | | |
| 1 | Define the indicator(s), populations (including age, sex, and geographic entities), and time period(s) for which estimates were made. | Range of the estimation was stated in the last paragraph of the Introduction (Page 5). Main indicators were described in the Methods section (Page 5-9). |
| 2 | List the funding sources for the work. | See funding sources section of the manuscript (Page 25). |
| Data inputs | | |
| <i>For all data inputs from multiple sources that are synthesised as part of the study:</i> | | |
| 3 | Describe how the data were identified and how the data were accessed. | <p>The 2019 GBD study developed new approaches to better estimate the exposure to risk factors by integrating all accessible data from multiple epidemiological studies in various countries. These studies included up-dated high-quality meta-analyses, randomized controlled trials, cohort studies, case-control studies, and other observational studies.</p> <p>Narrative description of data seeking methodology in GBD 2019 was provided in previously published appendices:</p> <p>1.GBD 2019 Demographics Collaborators. Global age-sex-specific fertility, mortality, healthy life</p> |

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| | | <p>expectancy (HALE), and population estimates in 204 countries and territories, 1950–2019: a comprehensive demographic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396:(10258):1160-1203.</p> <p>2.GBD 2019 Diseases and Injuries Collaborators. Global burden of 369 diseases and injuries in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396:(10258):1204-1222.</p> <p>3.GBD 2019 Risk Factors Collaborators. Global burden of 87 risk factors in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396(10258):1223-1249.</p> <p>In particular, all data provided in this present study were available to the public.</p> |
| 4 | <p>Specify the inclusion and exclusion criteria.</p> <p>Identify all ad-hoc exclusions.</p> | <p>The 2019 GBD study integrated all accessible data from multiple epidemiological studies in various countries. These studies included up-dated high-quality meta-analyses, randomized controlled trials, cohort studies, case-control studies, and other observational studies.</p> <p>Of note, all data provided in this present study were available to the public.</p> <p>Narrative about inclusion and exclusion criteria by data type was provided in previously published appendices:</p> <p>1.GBD 2019 Demographics Collaborators. Global age-sex-specific fertility, mortality, healthy life expectancy (HALE), and population estimates in 204 countries and territories, 1950–2019: a comprehensive demographic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396:(10258):1160-1203.</p> |

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| | | <p>2.GBD 2019 Diseases and Injuries Collaborators. Global burden of 369 diseases and injuries in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396:(10258):1204-1222.</p> <p>3.GBD 2019 Risk Factors Collaborators. Global burden of 87 risk factors in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396(10258):1223-1249.</p> |
| 5 | <p>Provide information about all included data sources and their main characteristics. For each data source used, report reference information or contact name/institution, population represented, data collection method, year(s) of data collection, sex and age range, diagnostic criteria or measurement method, and sample size, as relevant.</p> | <p>GBD study team provided an online data source tool that provides metadata for data sources by component, geography, cause, risk, or impairment. The tool can be accessed on the following website: http://ghdx.healthdata.org/gbd-2019/data-input-sources.</p> <p>Data sources section in the Methods part of the manuscript also described the main data source for the present study.</p> |
| 6 | <p>Identify and describe any categories of input data that have potentially important biases (eg, based on characteristics listed in item 5).</p> | <p>IHD were identified with standard case definitions. IHD represented acute myocardial infarction, chronic stable angina, chronic IHD, and heart failure due to IHD.</p> <p>Main text and previous publications summarized the known biases by cause:</p> <p>1.GBD 2019 Demographics Collaborators. Global age-sex-specific fertility, mortality, healthy life expectancy (HALE), and population estimates in 204 countries and territories, 1950–2019: a comprehensive demographic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396:(10258):1160-1203.</p> |

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| | | <p>2.GBD 2019 Diseases and Injuries Collaborators. Global burden of 369 diseases and injuries in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396:(10258):1204-1222.</p> <p>3.GBD 2019 Risk Factors Collaborators. Global burden of 87 risk factors in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396(10258):1223-1249.</p> |
| <i>For data inputs that contribute to the analysis but were not synthesised as part of the study:</i> | | |
| 7 | Describe and give sources for any other data inputs. | The online data source tool provides the list of all data sources: http://ghdx.healthdata.org/gbd-2019/data-input-sources |
| <i>For all data inputs:</i> | | |
| 8 | Provide all data inputs in a file format from which data can be efficiently extracted (eg, a spreadsheet rather than a PDF), including all relevant meta-data listed in item 5. For any data inputs that cannot be shared because of ethical or legal reasons, such as third-party ownership, provide a | <p>Downloads of input data will be available through online tools, including data visualization tools and data query tools: http://www.healthdata.org/results/data-visualizations; http://ghdx.healthdata.org/; http://ghdx.healthdata.org/gbd-data-tool.</p> <p>In particular, all input data are currently available in tools, which are open to the public.</p> |

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| | contact name or the name of the institution that retains the right to the data. | |
| Data analysis | | |
| 9 | Provide a conceptual overview of the data analysis method. A diagram may be helpful. | <p>In the GBD study, the Bayesian meta-regression model DisMod-MR 2.1 was used as the main method to estimate the prevalence of non-fatal diseases, and the Cause of Death Ensemble Model (CODEm) was used to appraise cause-specific mortality. To explore potential trends of specific risk factors, improved spatiotemporal Gaussian process regression was applied to synthesize all available data. DALY is the sum of YLD which is based on cause-specific prevalence and disability weight, and YLL due to premature mortality, which is calculated by multiplying age-sex-specific deaths by global standard life expectancy. To characterize the temporal trends across regions and countries, age-standardized rates (per 100,000) were computed using the global age-standard population constructed by the World Health Organization.</p> <p>Flow diagrams of the overall methodological processes, as well as cause-specific modelling processes have been provided in previously published appendices:</p> <ol style="list-style-type: none"> 1.GBD 2019 Demographics Collaborators. Global age-sex-specific fertility, mortality, healthy life expectancy (HALE), and population estimates in 204 countries and territories, 1950–2019: a comprehensive demographic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396:(10258):1160-1203. 2.GBD 2019 Diseases and Injuries Collaborators. Global burden of 369 diseases and injuries in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396:(10258):1204-1222. |

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| | | <p>3.GBD 2019 Risk Factors Collaborators. Global burden of 87 risk factors in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396(10258):1223-1249.</p> |
| <p>10</p> | <p>Provide a detailed description of all steps of the analysis, including mathematical formulae. This description should cover, as relevant, data cleaning, data pre-processing, data adjustments and weighting of data sources, and mathematical or statistical model(s).</p> | <p>Causes of death that should not be identified as underlying causes of death but have been recorded as the underlying cause of death on death certificates, also known as garbage codes, were redistributed to appropriate the International Classification of Disease (ICD)-10 codes prior to modeling. A Bayesian meta-regression tool was used to estimate prevalence for each cause and the distribution for severity of its sequelae; regression models were used to adjust data that did not follow the standard definition for each cause in the direction of case definition-based data. To explore potential trends of specific risk factors, improved spatiotemporal Gaussian process regression was applied to synthesize all available data.</p> <p>Mortality was estimated by using vital registration data coded to ICD system or household mortality surveys known as verbal autopsy. Years lived with disability for a specific cause was calculated by multiplying its prevalence with the corresponding disability weights, which have been estimated in several previous worldwide surveys. Years of life lost was calculated by multiplying observed deaths for a specific age by global agespecific reference life expectancy. Disability-adjusted life-years for any corresponding subpopulation of a specific cause was the sum of the corresponding YLDs and YLLs.</p> <p>Further etailed descriptions of all steps of the analysis were included in the methodological approaches sections of previously published appendices:</p> |

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| | | <p>1.GBD 2019 Demographics Collaborators. Global age-sex-specific fertility, mortality, healthy life expectancy (HALE), and population estimates in 204 countries and territories, 1950–2019: a comprehensive demographic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396:(10258):1160-1203.</p> <p>2.GBD 2019 Diseases and Injuries Collaborators. Global burden of 369 diseases and injuries in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396:(10258):1204-1222.</p> <p>3.GBD 2019 Risk Factors Collaborators. Global burden of 87 risk factors in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396(10258):1223-1249.</p> |
| 11 | Describe how candidate models were evaluated and how the final model(s) were selected. | <p>The Bayesian meta-regression model DisMod-MR 2.1 was used as the main method to estimate the prevalence of non-fatal diseases, and the Cause of Death Ensemble Model (CODEm) was used to appraise cause-specific mortality. To explore potential trends of specific risk factors, improved spatiotemporal Gaussian process regression was applied to synthesize all available data.</p> <p>These details were provided in previously published appendices:</p> <p>1.GBD 2019 Demographics Collaborators. Global age-sex-specific fertility, mortality, healthy life expectancy (HALE), and population estimates in 204 countries and territories, 1950–2019: a comprehensive demographic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396:(10258):1160-1203.</p> <p>2.GBD 2019 Diseases and Injuries Collaborators. Global burden of 369 diseases and injuries in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease</p> |

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| | | <p>Study 2019. Lancet. 2020;396:(10258):1204-1222.</p> <p>3.GBD 2019 Risk Factors Collaborators. Global burden of 87 risk factors in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396(10258):1223-1249.</p> |
| 12 | Provide the results of an evaluation of model performance, if done, as well as the results of any relevant sensitivity analysis. | <p>This information was provided in the previously published appendices:</p> <p>1.GBD 2019 Demographics Collaborators. Global age-sex-specific fertility, mortality, healthy life expectancy (HALE), and population estimates in 204 countries and territories, 1950–2019: a comprehensive demographic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396:(10258):1160-1203.</p> <p>2.GBD 2019 Diseases and Injuries Collaborators. Global burden of 369 diseases and injuries in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396:(10258):1204-1222.</p> <p>3.GBD 2019 Risk Factors Collaborators. Global burden of 87 risk factors in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396(10258):1223-1249.</p> |
| 13 | Describe methods of calculating uncertainty of the estimates. State which sources of uncertainty were, and were not, accounted for in the uncertainty analysis. | <p>The GBD 2019 study allowed for the production of estimates with uncertainty intervals (UIs) for all locations in every year, even when data were sparse or missing. The 95% UIs reported for each estimate used 1,000 draws from the posterior distribution of models, reported as the 2.5th and 97.5th values of the distribution.</p> <p>These details were provided in the methodological write-ups of previously published appendices:</p> |

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| | | <p>1.GBD 2019 Demographics Collaborators. Global age-sex-specific fertility, mortality, healthy life expectancy (HALE), and population estimates in 204 countries and territories, 1950–2019: a comprehensive demographic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396:(10258):1160-1203.</p> <p>2.GBD 2019 Diseases and Injuries Collaborators. Global burden of 369 diseases and injuries in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396:(10258):1204-1222.</p> <p>3.GBD 2019 Risk Factors Collaborators. Global burden of 87 risk factors in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet. 2020;396(10258):1223-1249.</p> |
| 14 | State how analytical or statistical source code used to generate estimates can be accessed. | Analysis code can be download on the the official website of the GBD study: http://ghdx.healthdata.org/gbd-2019/code |
| Results and discussion | | |
| 15 | Provide published estimates in a file format from which data can be efficiently extracted. | GBD 2019 results are available through online data visualization tools, the Global Health Data Exchange, and the online data query tool: http://www.healthdata.org/results/data-visualizations ; http://ghdx.healthdata.org/ ; http://ghdx.healthdata.org/gbd-data-tool |
| 16 | Report a quantitative measure of the uncertainty of the estimates (eg, uncertainty intervals). | Uncertainty intervals are provided with results. |
| 17 | Interpret results in light of existing evidence. If updating a previous set of estimates, describe the | The detailed interpretation of results was stated in the Discussion Section (Page 17~24). |

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| | reasons for changes in estimates. | |
| 18 | Discuss limitations of the estimates. Include a discussion of any modelling assumptions or data limitations that affect interpretation of the estimates. | First, the correlation between attributed prevalence and deaths for IHD brings uncertainties to the calculation of YLD and YLL, which leads to decreased precision of attributed DALYs. Second, even though our analysis of IHD burden was conducted using regionally and nationally representative data, we failed to examine sub-national discrepancies with available data, which underscores the need to undertake more specific assessments at the state, province, county, urban, or rural level in future studies. Third, with improvements in early diagnostic techniques over the past two decades, inconsistencies in diagnostic criteria for IHD over time may cause measurement errors in the data acquisition process. Fourth, even though the TMREL estimates were discussed and approved by international risk factor epidemiologists, evidence of TMREL selection was uncertain for some risk factors, particularly in LICs with limited risk exposure data. |

Data S2. METHODOLOGICAL DETAILS OF PAF CALCULATION.

A. Categorical variables

With respect to categorical variables (e.g., smoking and second-hand smoke), formula (1) was applied

to explain the proportion of exposure to risk factors that can be avoided:

$$(1) PAF = \frac{\sum_{i=1}^n P_i (RR_i - 1)}{\sum_{i=1}^n P_i (RR_i - 1) + 1},$$

where RR_i is relative risk for risk factor i , P_i is the observed distribution of exposure to modifiable risk factors i in a given population, and n is the total number of exposure categories.

B. Continuous variables

For continuous variables (e.g., ambient particulate matter pollution, high systolic blood pressure, and high LDL cholesterol), formula (2) was introduced to calculate PAFs:

$$(2) PAF = \frac{\int_{x=0}^m RR(x)P(x)dx - \int_{x=0}^m RR(x)P'(x)dx}{\int_{x=0}^m RR(x)P(x)dx},$$

where $RR(x)$ is the relative risk at level x , $P(x)$ is the observed distribution of exposure to risk factors in a given population, $P'(x)$ is the expected distribution of exposure at TMREL in a counterfactual scenario, and m is the maximum level for exposure.

C. Joint action with independent risk factors

For independent risk factors, a multiplicative aggregation of PAFs was calculated by formula

$$(3) PAF = 1 - \prod_{i=1}^n (1 - PAF_i),$$

where PAF_i is the proportion for each individual risk factor i , $(1 - PAF_i)$ is the proportion that cannot be attributed to any modifiable risks, and n is the total number of risk factors.

D. Joint action with mediated risk factors

Since the effect of an individual risk factor (e.g., diet high in sodium) on IHD can be mediated through the intermediate one (e.g., high blood pressure), we used formula (4) to estimate the joint PAFs of combined effects of behavioral, environmental, and metabolic risk clusters:

$$(4) PAF = 1 - \prod_{i=1}^n (1 - PAF_i \prod_{j=1}^n (1 - MF_{ij})),$$

where n is the sum of aggregated risk factors; PAF_i is the proportion for risk i , and MF_{ij} is the mediation factor of risk i mediated through j . Mediation risk factors for IHD are shown in the table below.

| Risk Factor | Mediator | Mediation Factor |
|---|------------------------------|-------------------------|
| Lead exposure in bone | High systolic blood pressure | 1.00 (1.00 to 1.00) |
| Diet low in fruits | High LDL cholesterol | 0.06 (0.05 to 0.08) |
| Diet low in fruits | High systolic blood pressure | 0.06 (0.05 to 0.08) |
| Diet low in vegetables | High fasting plasma glucose | 0.06 (0.01 to 0.02) |
| Diet low in vegetables | High LDL cholesterol | 0.04 (0.03 to 0.05) |
| Diet low in vegetables | High systolic blood pressure | 0.04 (0.03 to 0.05) |
| Diet low in whole grains | High LDL cholesterol | 0.39 (0.17 to 0.54) |
| Diet low in nuts and seeds | High fasting plasma glucose | 0.03 (0.02 to 0.06) |
| Diet low in nuts and seeds | High LDL cholesterol | 0.28 (0.01 to 1.62) |
| Diet low in nuts and seeds | High systolic blood pressure | 0.34 (0.24 to 0.47) |
| Diet high in processed meat | High fasting plasma glucose | 0.01 (0.01 to 0.02) |
| Diet high in sugar-sweetened beverages | High fasting plasma glucose | 0.15 (0.1 to 0.2) |
| Diet high in sugar-sweetened beverages | High LDL cholesterol | 0.10 (0.05 to 0.15) |
| Diet high in sugar-sweetened beverages | High systolic blood pressure | 0.31 (0.28 to 0.34) |
| Diet high in sugar-sweetened beverages | High body-mass index | 1.00 (1.00 to 1.00) |
| Diet low in fibre | Diet low in fruits | 1.00 (1.00 to 1.00) |
| Diet low in fibre | Diet low in vegetables | 1.00 (1.00 to 1.00) |
| Diet low in fibre | Diet low in whole grains | 1.00 (1.00 to 1.00) |
| Diet low in seafood omega-3 fatty acids | High systolic blood pressure | 0.01 (0 to 0.02) |
| Diet low in polyunsaturated fatty acids | High fasting plasma glucose | 0.57 (0.39 to 0.77) |
| Diet low in polyunsaturated fatty acids | High systolic blood pressure | 0.72 (0.57 to 0.89) |
| Diet high in trans fatty acids | High LDL cholesterol | 0.15 (0.02 to 0.24) |
| Diet high in trans fatty acids | High systolic blood pressure | 0.15 (0.02 to 0.24) |
| Diet high in sodium | High systolic blood pressure | 1.00 (1.00 to 1.00) |
| Low physical activity | High fasting plasma glucose | 0.14 (0.11 to 0.18) |
| High fasting plasma glucose | High LDL cholesterol | 0.04 (0.02 to 0.05) |

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| High fasting plasma glucose | High systolic blood pressure | 0.1 (0.08 to 0.11) |
| High LDL cholesterol | High systolic blood pressure | 0.09 (0.07 to 0.11) |
| High body-mass index | High fasting plasma glucose | 0.15 (0.10 to 0.20) |
| High body-mass index | High LDL cholesterol | 0.10 (0.05 to 0.15) |
| High body-mass index | High systolic blood pressure | 0.31 (0.28 to 0.34) |

Mediation risk factors for IHD*

* IHD: ischemic heart disease

For IHD, all available cohorts and estimated relative risks with and without adjustment across all combinations of metabolic risk factors were pooled. The excess attenuated risk for each mediation-risk-cause set was then computed.

Table S1. Definitions of 27 individual risk factors of IHD* and theoretical minimum risk exposure level

| Individual risk factors | Exposure definition | Theoretical minimum risk exposure level |
|--|--|---|
| Ambient particulate matter pollution | Annual average daily exposure to outdoor air concentrations of particulate matter with an aerodynamic diameter of $\leq 2.5 \mu\text{m}$ (PM2.5), measured in $\mu\text{g}/\text{m}^3$ | Joint theoretical minimum risk exposure level for both household and ambient particulate matter pollution is a uniform distribution between 2.4 and $5.9 \mu\text{g}/\text{m}^3$, with burden attributed proportionally between household and particulate matter pollution on the basis of source of PM2.5 exposure in excess of theoretical minimum risk exposure level |
| Household air pollution from solid fuels | Individual exposure to PM2.5 due to use of solid cooking fuel | See ambient particulate matter pollution |
| High temperature | exposure to temperatures warmer than this TMREL | The temperature that is associated with the lowest overall mortality attributable to the risk in a given location and year |
| Low temperature | temperatures colder than this TMREL. | The temperature that is associated with the lowest overall mortality attributable to the risk in a given location and year |
| Lead exposure | Blood lead levels in $\mu\text{g}/\text{dL}$ of blood, bone lead levels in $\mu\text{g}/\text{g}$ of bone | 2 $\mu\text{g}/\text{dL}$, corresponding to lead levels in pre-industrial humans as natural sources of lead prevent the feasibility of zero exposure |
| Smoking | Prevalence of current use of any smoked tobacco | All individuals are lifelong non-smokers |

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| | product and prevalence of former use of any smoked tobacco product; among current smokers, cigarette equivalents smoked per smoker per day and cumulative pack-years of exposure; among former smokers, number of years since quitting | |
| Second-hand smoke | Average daily exposure to air particulate matter from second-hand smoke with an aerodynamic diameter smaller than 2.5 μg , measured in $\mu\text{g}/\text{m}^3$, among non-smokers | No second-hand smoke exposure |
| Alcohol use | Average daily alcohol consumption of pure alcohol (measured in g per day) in current drinkers who had consumed alcohol during the past 12 months | Estimated distribution 0–10 g per day |
| Diet low in fruits | Average daily consumption of fruits (fresh, frozen, cooked, canned, or dried, excluding fruit juices and salted or pickled fruits) | Consumption of fruit 200–300 g per day |
| Diet low in vegetables | Average daily consumption of vegetables (fresh, frozen, cooked, canned, or dried, excluding legumes and salted or pickled vegetables, juices, nuts and seeds, and starchy vegetables such as potatoes or corn) | Consumption of vegetables 290–430 g per day |
| Diet low in legumes | Average daily consumption of legumes (fresh, | Consumption of legumes 50–70 g |

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| | frozen, cooked, canned, or dried legumes) | per day |
| Diet low in whole grains | Average daily consumption of whole grains (bran, germ, and endosperm in their natural proportion) from breakfast cereals, bread, rice, pasta, biscuits, muffins, tortillas, pancakes, and other sources | Consumption of whole grains 100–150 g per day |
| Diet low in nuts and seeds | Average daily consumption of nut and seed foods | Consumption of nuts and seeds 16–25 g per day |
| Diet high in processed meat | Average daily consumption of meat preserved by smoking, curing, salting, or addition of chemical preservatives | Consumption of processed meat 0–4 g per day |
| Diet high in sugar-sweetened beverages | Average daily consumption of beverages with ≥ 50 kcal per 226.8 g serving | Consumption of sugar-sweetened beverages 0–5 g per day |
| Diet low in fibre | Average daily intake of fibre from all sources including fruits, vegetables, grains, legumes, and pulses | Consumption of fibre 19–28 g per day |
| Diet low in seafood omega 3 fatty acids | Average daily intake of eicosapentaenoic acid and docosahexaenoic acid | Consumption of seafood omega 3 fatty acids 200–300 mg per day |
| Diet low in polyunsaturated fatty acids | Average daily intake of omega 6 fatty acids from all sources, mainly liquid vegetable oils, including soybean oil, corn oil, and safflower oil | Consumption of polyunsaturated fatty acids as 9–13% of total daily energy |

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| Diet high in trans fatty acids | Average daily intake of trans fat from all sources, mainly partially hydrogenated vegetable oils and ruminant products | Consumption of trans fatty acids as 0–1% of total daily energy |
| Diet high in sodium | 24-h urinary sodium measured in g per day | 24-h urinary sodium 1–5 g per day |
| Diet high in red meat | Any intake (in grams per day) of red meat including beef, pork, lamb, and goat but excluding poultry, fish, eggs, and all processed meats | |
| Low physical activity | Average weekly physical activity at work, home, transport-related and recreational measured by MET min per week | All adults experience 3000–4500 MET min per week |
| High fasting plasma glucose | Serum fasting plasma glucose measured in mmol/L | 4.8–5.4 mmol/L |
| High low-density lipoprotein cholesterol | Serum low-density lipoprotein, measured in mmol/L | 0.7–1.3 mmol/L |
| High systolic blood pressure | Systolic blood pressure, measured in mm Hg | 110–115 mm Hg |
| High body-mass index | Body-mass index, measured in kg/m ² | 20–25 kg/m ² |
| Impaired kidney function | Proportion of the population with ACR >30 mg/g or GFR <60 mL/min/1.73 m ² , excluding end-stage renal disease | GFR >60 mL/min/1.73 m ² and ACR <30 mg/g |

* IHD: ischemic heart disease

Table S2. 137 LMICs* as per World Bank Classification

| World Bank income level | Number | Countries |
|--------------------------------|---------------|--|
| Low income countries | 31 | Democratic People's Republic of Korea, Tajikistan, Haiti, Syrian Arab Republic, Yemen, Afghanistan, Nepal, Central African Republic, Democratic Republic of the Congo, Burundi, Eritrea, Ethiopia, Madagascar, Malawi, Mozambique, Rwanda, Somalia, United Republic of Tanzania, Uganda, Benin, Burkina Faso, Chad, Gambia, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Sierra Leone, Togo, South Sudan |
| Lower-middle income countries | 47 | Cambodia, Indonesia, Lao People's Democratic Republic, Myanmar, Philippines, Timor-Leste, Viet Nam, Kiribati, Micronesia (Federated States of), Papua New Guinea, Solomon Islands, Vanuatu, Kyrgyzstan, Mongolia, Uzbekistan, Republic of Moldova, Ukraine, Bolivia (Plurinational State of), El Salvador, Honduras, Nicaragua, Egypt, Morocco, Palestine, Tunisia, Bangladesh, Bhutan, India, Pakistan, Angola, Congo, Comoros, Djibouti, Kenya, Zambia, Lesotho, Eswatini, Zimbabwe, Cameroon, Cabo Verde, Côte d'Ivoire, Ghana, Mauritania, Nigeria, Sao Tome and Principe, Senegal, Sudan |
| Upper-middle income countries | 59 | China, Malaysia, Maldives, Sri Lanka, Thailand, Fiji, Marshall Islands, Samoa, Tonga, Armenia, Azerbaijan, Georgia, Kazakhstan, Turkmenistan, Albania, Bosnia and Herzegovina, Bulgaria, North Macedonia, Montenegro, Romania, Serbia, Belarus, Russian Federation, Argentina, Belize, Cuba, Dominica, Dominican Republic, Grenada, Guyana, Jamaica, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Ecuador, Peru, Colombia, Costa Rica, Guatemala, Mexico, Venezuela (Bolivarian Republic of), Brazil, Paraguay, Algeria, Iran (Islamic Republic of), Iraq, Jordan, Lebanon, Libya, Turkey, Equatorial Guinea, Gabon, Mauritius, Botswana, Namibia, South Africa, American Samoa, Nauru, Tuvalu |

* LMICs: low- and middle-income countries

Table S3. Age-standardized risk-attributable mortality rates (1/100,000) for IHD¹ by region and year in globe and LMICs², 2000–2019

| year | Low-income Countries | | | Lower-middle Countries | | | Upper-middle Countries | | | Globe | | |
|------|----------------------|-------------|-------------|------------------------|-------------|-------------|------------------------|-------------|-------------|-------|-------------|-------------|
| | value | lower limit | upper limit | value | lower limit | upper limit | value | lower limit | upper limit | value | lower limit | upper limit |
| 2000 | 117.5 | 104.4 | 131.5 | 182.3 | 171.0 | 193.2 | 141.6 | 131.7 | 148.8 | 140.3 | 131.0 | 147.4 |
| 2001 | 117.2 | 104.0 | 130.9 | 182.3 | 170.7 | 192.8 | 141.8 | 132.0 | 149.4 | 138.8 | 129.0 | 145.5 |
| 2002 | 117.2 | 104.1 | 130.9 | 182.7 | 171.4 | 193.2 | 143.7 | 133.6 | 151.4 | 138.3 | 128.3 | 145.0 |
| 2003 | 117.1 | 103.8 | 131.1 | 180.9 | 169.7 | 191.8 | 144.3 | 134.8 | 152.0 | 136.9 | 127.3 | 144.3 |
| 2004 | 117.2 | 103.7 | 131.4 | 176.1 | 164.5 | 187.0 | 142.7 | 132.5 | 150.4 | 133.2 | 123.7 | 140.3 |
| 2005 | 116.8 | 102.9 | 131.3 | 176.2 | 164.6 | 186.5 | 142.5 | 132.9 | 150.7 | 132.0 | 122.1 | 139.2 |
| 2006 | 116.5 | 102.5 | 130.9 | 176.4 | 165.0 | 186.8 | 137.4 | 127.5 | 145.4 | 128.7 | 119.7 | 136.1 |
| 2007 | 116.0 | 101.9 | 130.7 | 176.7 | 165.0 | 187.5 | 134.3 | 123.8 | 142.5 | 126.4 | 117.1 | 133.7 |
| 2008 | 116.0 | 101.6 | 130.5 | 177.0 | 165.9 | 188.3 | 134.2 | 123.7 | 142.1 | 125.4 | 116.2 | 132.8 |
| 2009 | 115.7 | 101.0 | 130.2 | 172.3 | 161.0 | 182.4 | 133.6 | 123.0 | 142.0 | 123.0 | 113.8 | 130.2 |
| 2010 | 115.0 | 100.3 | 129.8 | 169.7 | 158.6 | 180.4 | 134.5 | 123.8 | 143.1 | 121.9 | 113.0 | 128.9 |
| 2011 | 114.8 | 99.9 | 129.8 | 167.8 | 156.4 | 178.6 | 132.1 | 120.5 | 140.4 | 120.2 | 110.5 | 127.1 |

| | | | | | | | | | | | | |
|------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 2012 | 114.3 | 99.1 | 129.4 | 167.0 | 156.0 | 177.2 | 128.9 | 118.6 | 137.4 | 118.4 | 109.7 | 125.3 |
| 2013 | 113.4 | 98.4 | 128.5 | 167.0 | 156.0 | 177.4 | 126.9 | 115.7 | 135.1 | 116.9 | 107.8 | 123.8 |
| 2014 | 112.3 | 97.1 | 127.6 | 164.2 | 152.4 | 174.3 | 125.2 | 115.1 | 134.0 | 114.9 | 106.0 | 121.5 |
| 2015 | 112.2 | 96.6 | 128.1 | 164.4 | 152.8 | 174.4 | 122.9 | 112.1 | 131.8 | 114.3 | 105.6 | 121.1 |
| 2016 | 111.4 | 95.7 | 127.7 | 161.3 | 149.5 | 172.1 | 121.0 | 109.9 | 130.0 | 112.7 | 104.0 | 119.6 |
| 2017 | 111.1 | 95.1 | 127.6 | 159.2 | 145.9 | 171.1 | 118.3 | 107.3 | 127.5 | 111.1 | 101.6 | 118.5 |
| 2018 | 111.1 | 95.1 | 127.9 | 159.4 | 144.8 | 172.7 | 116.3 | 104.7 | 126.2 | 110.6 | 100.7 | 118.5 |
| 2019 | 110.8 | 94.9 | 127.7 | 157.5 | 142.1 | 171.7 | 115.1 | 102.8 | 125.4 | 110.0 | 99.9 | 118.0 |

* LMICs: low- and middle-income countries

[†]IHD: ischemic heart disease

Table S4. Age-standardized risk-attributable DALY* rates (1/100,000) for IHD[†] by region and year in globe and LMICs[‡], 2000–2019

| year | Low-income | | | Lower-middle | | | Upper-middle | | | Globe | | |
|------|------------|-------------|-------------|--------------|-------------|-------------|--------------|-------------|-------------|--------|-------------|-------------|
| | Countries | | | Countries | | | Countries | | | | | |
| | value | lower limit | upper limit | value | lower limit | upper limit | value | lower limit | upper limit | value | lower limit | upper limit |
| 2000 | 2392.5 | 2132.8 | 2678.3 | 3593.5 | 3403.0 | 3789.6 | 2615.9 | 2500.6 | 2719.0 | 2671.5 | 2558.2 | 2771.8 |
| 2001 | 2382.5 | 2124.3 | 2659.4 | 3593.2 | 3406.7 | 3774.3 | 2614.4 | 2494.3 | 2721.9 | 2647.0 | 2537.5 | 2742.3 |
| 2002 | 2371.8 | 2121.0 | 2649.4 | 3600.2 | 3412.1 | 3787.5 | 2645.6 | 2517.9 | 2761.5 | 2641.3 | 2527.8 | 2743.0 |
| 2003 | 2364.9 | 2113.3 | 2638.3 | 3561.9 | 3386.0 | 3755.5 | 2654.7 | 2534.3 | 2768.9 | 2616.1 | 2505.3 | 2719.7 |
| 2004 | 2361.1 | 2109.7 | 2639.6 | 3471.0 | 3289.2 | 3662.7 | 2616.3 | 2491.4 | 2741.9 | 2549.7 | 2432.5 | 2660.9 |
| 2005 | 2345.7 | 2083.7 | 2627.2 | 3476.8 | 3294.4 | 3666.7 | 2605.8 | 2479.3 | 2735.9 | 2531.2 | 2413.7 | 2643.1 |
| 2006 | 2332.2 | 2067.2 | 2612.2 | 3486.3 | 3317.1 | 3671.5 | 2491.9 | 2370.0 | 2615.3 | 2470.1 | 2359.2 | 2577.7 |
| 2007 | 2318.2 | 2045.2 | 2595.5 | 3505.5 | 3335.1 | 3690.3 | 2418.2 | 2289.8 | 2549.1 | 2430.8 | 2316.3 | 2546.6 |
| 2008 | 2313.5 | 2036.3 | 2595.6 | 3514.7 | 3340.2 | 3713.0 | 2402.9 | 2279.9 | 2532.9 | 2413.0 | 2302.5 | 2528.0 |
| 2009 | 2302.1 | 2027.1 | 2591.4 | 3438.7 | 3259.6 | 3618.8 | 2369.8 | 2236.4 | 2502.1 | 2366.4 | 2255.4 | 2481.8 |
| 2010 | 2284.0 | 2003.1 | 2581.3 | 3413.1 | 3238.1 | 3601.0 | 2368.9 | 2239.8 | 2491.5 | 2348.1 | 2240.4 | 2454.8 |
| 2011 | 2275.8 | 1992.6 | 2565.4 | 3397.3 | 3206.0 | 3599.8 | 2311.7 | 2164.8 | 2450.8 | 2316.6 | 2195.5 | 2431.7 |

| | | | | | | | | | | | | |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 2012 | 2264.3 | 1984.6 | 2574.4 | 3389.6 | 3209.3 | 3576.2 | 2251.0 | 2116.3 | 2386.6 | 2284.9 | 2176.7 | 2393.1 |
| 2013 | 2242.8 | 1962.5 | 2549.7 | 3348.7 | 3173.4 | 3538.4 | 2210.5 | 2068.1 | 2339.8 | 2248.7 | 2133.3 | 2353.5 |
| 2014 | 2223.0 | 1931.0 | 2527.4 | 3272.1 | 3090.5 | 3451.2 | 2177.8 | 2045.0 | 2312.7 | 2206.2 | 2092.3 | 2310.3 |
| 2015 | 2218.5 | 1920.4 | 2535.7 | 3303.6 | 3130.2 | 3485.1 | 2135.4 | 1987.7 | 2276.7 | 2201.9 | 2094.5 | 2309.0 |
| 2016 | 2203.1 | 1899.1 | 2521.0 | 3258.2 | 3058.1 | 3453.9 | 2097.5 | 1949.5 | 2249.2 | 2174.7 | 2053.7 | 2288.4 |
| 2017 | 2193.7 | 1890.4 | 2526.5 | 3212.7 | 2999.5 | 3434.7 | 2049.0 | 1886.0 | 2200.7 | 2143.8 | 2016.0 | 2272.5 |
| 2018 | 2191.1 | 1875.6 | 2536.9 | 3196.6 | 2929.1 | 3467.7 | 2013.8 | 1844.1 | 2183.9 | 2129.9 | 1983.0 | 2269.0 |
| 2019 | 2180.0 | 1866.8 | 2523.2 | 3161.5 | 2868.6 | 3456.4 | 1991.8 | 1812.8 | 2162.7 | 2116.0 | 1971.1 | 2263.3 |

* DALY: disability adjusted life years [¶]IHD: ischemic heart disease [§]LMICs: low- and middle-income countries

Table S5. PAF* for IHD[§] DALYs[†] attributable to all modifiable risk factors by country in 137 LMICs[¶] in 2019

| Countries | value | lower limit | upper limit |
|---------------------------------------|-------|-------------|-------------|
| Democratic People's Republic of Korea | 93.2 | 91.0 | 95.1 |
| Tajikistan | 95.7 | 94.0 | 97.3 |
| Haiti | 95.2 | 93.4 | 96.9 |
| Syrian Arab Republic | 95.4 | 94.0 | 96.8 |
| Yemen | 95.8 | 94.4 | 97.1 |
| Afghanistan | 96.1 | 94.9 | 97.2 |
| Nepal | 93.8 | 92.0 | 95.5 |
| Central African Republic | 94.0 | 92.0 | 95.8 |
| Democratic Republic of the Congo | 93.0 | 90.6 | 95.0 |
| Burundi | 91.1 | 88.6 | 93.2 |
| Eritrea | 91.1 | 88.4 | 93.5 |
| Ethiopia | 87.4 | 84.1 | 90.4 |
| Madagascar | 92.8 | 90.5 | 94.7 |
| Malawi | 92.6 | 90.3 | 94.7 |
| Mozambique | 93.2 | 91.0 | 95.1 |
| Rwanda | 89.8 | 86.7 | 92.6 |
| Somalia | 92.4 | 89.9 | 94.7 |
| United Republic of Tanzania | 93.1 | 91.0 | 95.0 |
| Uganda | 89.5 | 86.8 | 92.3 |
| Benin | 93.1 | 90.7 | 95.2 |
| Burkina Faso | 91.3 | 88.2 | 94.0 |
| Chad | 93.2 | 90.9 | 95.1 |
| Gambia | 94.4 | 92.3 | 96.1 |

| | | | |
|----------------------------------|------|------|------|
| Guinea | 92.8 | 90.5 | 94.9 |
| Guinea-Bissau | 93.8 | 91.7 | 95.6 |
| Liberia | 94.4 | 92.3 | 96.1 |
| Mali | 92.5 | 89.9 | 94.7 |
| Niger | 92.5 | 89.7 | 94.8 |
| Sierra Leone | 93.8 | 91.8 | 95.5 |
| Togo | 94.1 | 92.2 | 95.8 |
| South Sudan | 91.9 | 89.3 | 94.2 |
| Cambodia | 93.7 | 91.6 | 95.7 |
| Indonesia | 95.1 | 93.5 | 96.4 |
| Lao People's Democratic Republic | 94.2 | 92.5 | 95.9 |
| Myanmar | 94.0 | 92.1 | 95.8 |
| Philippines | 93.7 | 91.9 | 95.3 |
| Timor-Leste | 93.4 | 91.3 | 95.3 |
| Viet Nam | 94.6 | 92.4 | 96.5 |
| Kiribati | 96.8 | 95.5 | 97.8 |
| Micronesia (Federated States of) | 96.3 | 94.7 | 97.7 |
| Papua New Guinea | 95.7 | 94.1 | 97.1 |
| Solomon Islands | 95.9 | 94.3 | 97.2 |
| Vanuatu | 96.8 | 95.5 | 97.9 |
| Kyrgyzstan | 93.6 | 91.3 | 95.6 |
| Mongolia | 97.1 | 96.1 | 98.0 |
| Uzbekistan | 96.2 | 94.6 | 97.6 |
| Republic of Moldova | 94.6 | 92.2 | 96.7 |
| Ukraine | 94.0 | 91.5 | 96.3 |
| Bolivia (Plurinational State of) | 91.2 | 88.0 | 94.0 |
| El Salvador | 93.3 | 90.4 | 95.8 |

| | | | |
|-----------------------|------|------|------|
| Honduras | 94.9 | 92.8 | 96.9 |
| Nicaragua | 93.8 | 91.4 | 96.1 |
| Egypt | 95.9 | 94.5 | 97.2 |
| Morocco | 96.4 | 94.9 | 97.6 |
| Palestine | 96.3 | 94.9 | 97.6 |
| Tunisia | 95.6 | 93.7 | 97.3 |
| Bangladesh | 94.0 | 92.2 | 95.7 |
| Bhutan | 94.3 | 92.3 | 96.0 |
| India | 94.6 | 93.0 | 96.1 |
| Pakistan | 95.2 | 93.8 | 96.5 |
| Angola | 93.3 | 91.2 | 95.2 |
| Congo | 94.6 | 92.6 | 96.3 |
| Comoros | 92.1 | 89.4 | 94.4 |
| Djibouti | 93.9 | 91.7 | 95.6 |
| Kenya | 91.4 | 88.7 | 93.6 |
| Zambia | 90.7 | 88.1 | 93.1 |
| Lesotho | 94.2 | 92.1 | 96.1 |
| Eswatini | 95.1 | 93.2 | 96.6 |
| Zimbabwe | 95.4 | 93.6 | 96.9 |
| Cameroon | 92.0 | 89.5 | 94.3 |
| Cabo Verde | 93.9 | 91.1 | 96.3 |
| Côte d'Ivoire | 94.6 | 92.7 | 96.3 |
| Ghana | 94.5 | 92.4 | 96.3 |
| Mauritania | 94.6 | 92.6 | 96.2 |
| Nigeria | 93.3 | 91.0 | 95.2 |
| Sao Tome and Principe | 93.9 | 91.5 | 96.0 |
| Senegal | 94.7 | 92.8 | 96.4 |

| | | | |
|------------------------|------|------|------|
| Sudan | 96.2 | 94.9 | 97.3 |
| China | 93.9 | 91.7 | 95.8 |
| Malaysia | 96.5 | 95.0 | 97.7 |
| Maldives | 95.0 | 93.1 | 96.8 |
| Sri Lanka | 94.8 | 92.6 | 96.7 |
| Thailand | 93.6 | 91.2 | 95.8 |
| Fiji | 97.0 | 95.8 | 98.0 |
| Marshall Islands | 96.0 | 94.3 | 97.3 |
| Samoa | 96.1 | 94.5 | 97.5 |
| Tonga | 96.0 | 94.3 | 97.4 |
| Armenia | 95.3 | 93.1 | 97.3 |
| Azerbaijan | 95.8 | 94.0 | 97.4 |
| Georgia | 95.7 | 93.6 | 97.5 |
| Kazakhstan | 96.8 | 95.3 | 98.2 |
| Turkmenistan | 96.3 | 94.8 | 97.6 |
| Albania | 94.7 | 92.6 | 96.6 |
| Bosnia and Herzegovina | 96.2 | 94.1 | 97.9 |
| Bulgaria | 95.1 | 92.6 | 97.2 |
| North Macedonia | 96.6 | 94.8 | 98.1 |
| Montenegro | 97.0 | 95.5 | 98.4 |
| Romania | 95.3 | 93.0 | 97.3 |
| Serbia | 96.8 | 94.7 | 98.4 |
| Belarus | 95.2 | 92.9 | 97.0 |
| Russian Federation | 95.7 | 93.7 | 97.3 |
| Argentina | 94.3 | 92.1 | 96.3 |
| Belize | 93.9 | 91.6 | 96.0 |
| Cuba | 92.7 | 89.7 | 95.3 |

| | | | |
|------------------------------------|------|------|------|
| Dominica | 93.4 | 90.4 | 96.1 |
| Dominican Republic | 93.4 | 91.0 | 95.6 |
| Grenada | 94.5 | 92.1 | 96.7 |
| Guyana | 94.7 | 92.4 | 96.7 |
| Jamaica | 93.8 | 91.1 | 96.2 |
| Saint Lucia | 94.3 | 91.7 | 96.6 |
| Saint Vincent and the Grenadines | 93.3 | 90.3 | 95.9 |
| Suriname | 95.2 | 93.2 | 97.0 |
| Ecuador | 92.2 | 89.4 | 94.7 |
| Peru | 91.6 | 88.6 | 94.2 |
| Colombia | 93.3 | 90.3 | 95.8 |
| Costa Rica | 95.8 | 93.7 | 97.4 |
| Guatemala | 91.8 | 89.1 | 94.2 |
| Mexico | 94.6 | 92.6 | 96.5 |
| Venezuela (Bolivarian Republic of) | 95.3 | 93.3 | 97.1 |
| Brazil | 94.9 | 93.2 | 96.7 |
| Paraguay | 95.3 | 93.4 | 97.0 |
| Algeria | 95.9 | 94.2 | 97.3 |
| Iran (Islamic Republic of) | 95.5 | 93.9 | 97.0 |
| Iraq | 97.4 | 96.4 | 98.2 |
| Jordan | 97.3 | 96.2 | 98.2 |
| Lebanon | 96.6 | 95.1 | 98.0 |
| Libya | 96.5 | 95.2 | 97.7 |
| Turkey | 94.9 | 93.0 | 96.8 |
| Equatorial Guinea | 93.3 | 90.9 | 95.5 |
| Gabon | 93.6 | 91.2 | 95.8 |
| Mauritius | 95.2 | 93.2 | 96.9 |

| | | | |
|----------------|------|------|------|
| Botswana | 96.0 | 94.4 | 97.4 |
| Namibia | 94.3 | 92.2 | 96.3 |
| South Africa | 96.3 | 94.6 | 97.6 |
| American Samoa | 96.2 | 94.7 | 97.6 |
| Nauru | 97.1 | 95.6 | 98.2 |
| Tuvalu | 95.5 | 93.5 | 97.2 |

* DALY: disability adjusted life years

§ IHD: ischemic heart disease

‡ PAF: population attributable fraction

¶ LMIC: low- and middle-income countries

Table S6. Age-standardized death rate (1/100,000) and percentage change for IHD by country in 137 LMICs* from 2000 to 2019

| | 2000 | | | 2019 | | | % of change, 2000-2019 |
|---------------------------------------|-------|-------------|-------------|-------|-------------|-------------|------------------------|
| | value | lower limit | upper limit | value | lower limit | upper limit | |
| Democratic People's Republic of Korea | 112.1 | 89.4 | 133.9 | 115.5 | 96.9 | 136.8 | 3 |
| Tajikistan | 317.3 | 284.1 | 347.5 | 410.2 | 349.0 | 479.8 | 29.3 |
| Haiti | 192.3 | 151.1 | 238.3 | 183.2 | 132.5 | 248.6 | -4.7 |
| Syrian Arab Republic | 381.0 | 338.1 | 425.8 | 341.8 | 272.5 | 424.6 | -10.3 |
| Yemen | 303.5 | 244.9 | 373.5 | 279.2 | 230.5 | 353.6 | -8 |
| Afghanistan | 394.1 | 315.8 | 478.2 | 307.3 | 241.8 | 369.1 | -22 |
| Nepal | 99.4 | 84.4 | 119.3 | 114.4 | 90.3 | 138.0 | 15 |
| Central African Republic | 133.7 | 99.2 | 172.8 | 136.4 | 101.3 | 181.5 | 2 |
| Democratic Republic of the Congo | 115.2 | 91.8 | 146.1 | 104.9 | 76.8 | 139.5 | -8.9 |
| Burundi | 114.1 | 91.9 | 144.4 | 101.9 | 76.7 | 131.9 | -10.7 |
| Eritrea | 89.5 | 67.4 | 114.6 | 100.9 | 79.4 | 126.1 | 12.7 |
| Ethiopia | 86.3 | 70.0 | 102.8 | 71.9 | 52.5 | 91.3 | -16.6 |
| Madagascar | 123.0 | 103.2 | 142.9 | 119.8 | 88.0 | 158.1 | -2.6 |
| Malawi | 98.5 | 83.2 | 115.2 | 83.2 | 65.4 | 103.2 | -15.5 |

| | | | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|
| Mozambique | 73.6 | 60.6 | 87.5 | 94.1 | 73.5 | 118.6 | 27.9 |
| Rwanda | 90.5 | 70.3 | 115.1 | 75.0 | 53.5 | 99.0 | -17.1 |
| Somalia | 100.3 | 74.2 | 130.1 | 114.7 | 86.0 | 153.1 | 14.4 |
| United Republic of Tanzania | 82.2 | 67.7 | 99.1 | 87.9 | 64.5 | 110.9 | 7 |
| Uganda | 89.5 | 65.9 | 111.5 | 78.0 | 53.5 | 98.4 | -12.9 |
| Benin | 110.2 | 93.5 | 128.6 | 104.1 | 84.6 | 128.0 | -5.6 |
| Burkina Faso | 109.3 | 93.8 | 126.2 | 117.5 | 98.2 | 137.5 | 7.5 |
| Chad | 108.9 | 89.4 | 136.1 | 111.3 | 91.2 | 134.9 | 2.2 |
| Gambia | 121.1 | 99.5 | 143.9 | 141.3 | 116.5 | 169.3 | 16.7 |
| Guinea | 95.5 | 77.4 | 114.8 | 113.2 | 92.8 | 138.8 | 18.5 |
| Guinea-Bissau | 147.3 | 122.7 | 180.6 | 152.9 | 121.6 | 189.7 | 3.8 |
| Liberia | 113.6 | 94.9 | 134.7 | 109.3 | 85.9 | 137.9 | -3.8 |
| Mali | 106.4 | 89.4 | 125.1 | 106.6 | 85.4 | 129.9 | 0.3 |
| Niger | 106.6 | 83.4 | 131.5 | 108.1 | 85.3 | 134.3 | 1.4 |
| Sierra Leone | 126.6 | 98.9 | 158.8 | 124.4 | 95.5 | 159.0 | -1.7 |
| Togo | 129.1 | 106.6 | 153.5 | 124.9 | 102.3 | 154.4 | -3.2 |
| South Sudan | 73.0 | 56.1 | 92.3 | 76.1 | 53.7 | 100.8 | 4.2 |

| | | | | | | | |
|----------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Cambodia | 111.1 | 93.5 | 133.5 | 109.2 | 89.0 | 129.8 | -1.7 |
| Indonesia | 119.0 | 107.6 | 130.6 | 131.4 | 112.1 | 146.2 | 10.5 |
| Lao People's Democratic Republic | 161.1 | 135.7 | 198.2 | 150.8 | 123.3 | 177.7 | -6.4 |
| Myanmar | 129.2 | 108.4 | 153.8 | 97.1 | 84.5 | 112.0 | -24.8 |
| Philippines | 123.8 | 111.3 | 134.9 | 136.3 | 113.1 | 158.8 | 10 |
| Timor-Leste | 105.2 | 82.9 | 129.9 | 145.3 | 111.0 | 178.9 | 38.1 |
| Viet Nam | 88.5 | 77.2 | 101.9 | 89.0 | 73.0 | 104.9 | 0.5 |
| Kiribati | 242.9 | 205.2 | 282.9 | 235.7 | 189.0 | 285.1 | -2.9 |
| Micronesia (Federated States of) | 248.7 | 201.5 | 308.3 | 267.4 | 199.2 | 341.2 | 7.5 |
| Papua New Guinea | 139.7 | 97.8 | 199.1 | 159.0 | 114.9 | 216.1 | 13.8 |
| Solomon Islands | 387.1 | 322.2 | 461.7 | 402.7 | 332.8 | 471.1 | 4 |
| Vanuatu | 276.3 | 219.0 | 348.0 | 290.6 | 229.3 | 372.6 | 5.2 |
| Kyrgyzstan | 288.5 | 265.7 | 305.1 | 291.9 | 256.0 | 325.8 | 1.2 |
| Mongolia | 475.0 | 412.3 | 535.1 | 294.8 | 243.7 | 356.1 | -37.9 |
| Uzbekistan | 553.4 | 522.7 | 578.5 | 660.4 | 588.5 | 734.1 | 19.3 |
| Republic of Moldova | 388.5 | 359.4 | 407.5 | 246.7 | 215.0 | 279.4 | -36.5 |
| Ukraine | 440.3 | 413.8 | 460.3 | 392.9 | 340.3 | 449.9 | -10.8 |

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|----------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Bolivia (Plurinational State of) | 100.5 | 74.0 | 129.6 | 95.3 | 68.2 | 123.7 | -5.1 |
| El Salvador | 98.6 | 88.7 | 106.2 | 93.0 | 71.5 | 117.5 | -5.7 |
| Honduras | 130.0 | 102.4 | 169.2 | 144.6 | 118.9 | 176.1 | 11.3 |
| Nicaragua | 130.8 | 117.9 | 141.3 | 137.3 | 115.8 | 154.8 | 5 |
| Egypt | 335.4 | 306.5 | 369.5 | 340.3 | 265.8 | 422.9 | 1.4 |
| Morocco | 271.4 | 232.5 | 313.1 | 265.7 | 211.9 | 307.8 | -2.1 |
| Palestine | 252.4 | 225.7 | 279.8 | 196.7 | 171.1 | 225.1 | -22.1 |
| Tunisia | 224.8 | 184.9 | 265.2 | 182.2 | 138.4 | 232.1 | -19 |
| Bangladesh | 95.7 | 83.3 | 106.4 | 102.5 | 79.7 | 125.1 | 7.2 |
| Bhutan | 120.0 | 97.9 | 143.6 | 125.2 | 98.5 | 153.1 | 4.3 |
| India | 153.0 | 139.1 | 167.8 | 140.9 | 121.3 | 161.6 | -7.9 |
| Pakistan | 179.6 | 158.2 | 204.3 | 180.0 | 149.9 | 216.3 | 0.2 |
| Angola | 117.4 | 96.8 | 142.0 | 103.8 | 78.5 | 129.8 | -11.6 |
| Congo | 146.5 | 116.9 | 184.6 | 130.7 | 97.5 | 170.9 | -10.8 |
| Comoros | 97.6 | 79.8 | 119.3 | 95.1 | 71.9 | 124.8 | -2.6 |
| Djibouti | 93.3 | 72.4 | 118.1 | 106.4 | 77.5 | 142.6 | 14.1 |
| Kenya | 64.3 | 52.9 | 78.4 | 73.9 | 57.0 | 92.9 | 14.9 |

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|-----------------------|-------|-------|-------|-------|-------|-------|-------|
| Zambia | 105.7 | 89.3 | 124.9 | 80.7 | 64.3 | 100.3 | -23.7 |
| Lesotho | 88.9 | 69.2 | 110.4 | 113.5 | 83.2 | 144.5 | 27.6 |
| Eswatini | 114.3 | 88.0 | 147.3 | 113.5 | 83.8 | 146.6 | -0.7 |
| Zimbabwe | 134.4 | 112.6 | 156.4 | 153.0 | 123.6 | 186.8 | 13.8 |
| Cameroon | 107.6 | 87.7 | 131.6 | 104.5 | 83.2 | 133.1 | -2.9 |
| Cabo Verde | 102.2 | 84.2 | 121.0 | 128.7 | 109.8 | 144.6 | 25.9 |
| Côte d'Ivoire | 136.8 | 115.3 | 161.6 | 113.7 | 92.5 | 138.0 | -16.9 |
| Ghana | 111.4 | 94.7 | 128.7 | 120.1 | 102.0 | 142.8 | 7.8 |
| Mauritania | 112.1 | 93.4 | 133.2 | 98.9 | 81.3 | 119.7 | -11.8 |
| Nigeria | 116.4 | 85.3 | 159.2 | 96.5 | 69.7 | 121.2 | -17.1 |
| Sao Tome and Principe | 127.4 | 108.8 | 144.9 | 141.5 | 114.6 | 164.2 | 11.1 |
| Senegal | 112.4 | 95.2 | 133.2 | 110.8 | 89.4 | 134.8 | -1.4 |
| Sudan | 310.5 | 239.1 | 383.1 | 261.4 | 206.6 | 325.5 | -15.8 |
| China | 89.2 | 81.7 | 97.6 | 106.7 | 92.3 | 121.1 | 19.6 |
| Malaysia | 179.8 | 168.2 | 189.8 | 138.7 | 111.8 | 169.2 | -22.8 |
| Maldives | 203.9 | 185.5 | 225.8 | 112.6 | 93.6 | 131.9 | -44.8 |
| Sri Lanka | 141.6 | 131.6 | 158.0 | 102.0 | 76.2 | 130.0 | -28 |

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|------------------------|-------|-------|-------|-------|-------|-------|-------|
| Thailand | 77.7 | 66.7 | 88.7 | 48.3 | 36.3 | 61.8 | -37.8 |
| Fiji | 287.3 | 269.2 | 304.2 | 236.8 | 192.4 | 287.5 | -17.6 |
| Marshall Islands | 246.4 | 197.3 | 307.2 | 257.2 | 196.7 | 331.5 | 4.4 |
| Samoa | 204.5 | 175.5 | 246.1 | 203.1 | 169.5 | 244.4 | -0.7 |
| Tonga | 136.4 | 120.0 | 153.7 | 122.7 | 99.0 | 147.4 | -10 |
| Armenia | 307.2 | 283.1 | 326.0 | 222.1 | 187.0 | 256.8 | -27.7 |
| Azerbaijan | 400.7 | 370.8 | 425.1 | 423.2 | 370.7 | 476.8 | 5.6 |
| Georgia | 340.3 | 311.4 | 367.2 | 201.3 | 171.6 | 234.4 | -40.8 |
| Kazakhstan | 419.7 | 395.2 | 437.4 | 240.0 | 208.8 | 270.3 | -42.8 |
| Turkmenistan | 446.0 | 417.6 | 466.5 | 337.8 | 279.6 | 406.6 | -24.3 |
| Albania | 137.8 | 125.6 | 146.2 | 136.8 | 106.6 | 173.9 | -0.7 |
| Bosnia and Herzegovina | 182.9 | 162.5 | 201.4 | 154.3 | 125.7 | 186.7 | -15.6 |
| Bulgaria | 380.2 | 351.9 | 402.7 | 224.2 | 185.6 | 266.0 | -41 |
| North Macedonia | 248.0 | 231.0 | 261.3 | 199.1 | 164.7 | 237.2 | -19.7 |
| Montenegro | 161.2 | 147.4 | 172.5 | 157.0 | 132.3 | 182.0 | -2.6 |
| Romania | 258.8 | 240.3 | 271.3 | 166.8 | 139.7 | 195.8 | -35.5 |
| Serbia | 259.5 | 240.5 | 272.4 | 195.1 | 162.5 | 230.1 | -24.8 |

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|----------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Belarus | 377.7 | 353.9 | 394.4 | 313.5 | 253.6 | 385.1 | -17 |
| Russian Federation | 364.0 | 345.6 | 377.0 | 226.9 | 194.7 | 255.3 | -37.7 |
| Argentina | 105.7 | 97.5 | 111.7 | 76.4 | 69.3 | 82.0 | -27.8 |
| Belize | 148.1 | 137.8 | 158.2 | 78.0 | 68.1 | 88.7 | -47.4 |
| Cuba | 141.9 | 130.2 | 150.4 | 100.0 | 82.8 | 119.8 | -29.5 |
| Dominica | 103.5 | 89.2 | 118.0 | 82.2 | 68.9 | 97.8 | -20.6 |
| Dominican Republic | 109.8 | 96.8 | 123.3 | 161.4 | 127.2 | 201.9 | 46.9 |
| Grenada | 122.4 | 112.5 | 131.1 | 99.2 | 89.9 | 107.8 | -19 |
| Guyana | 202.7 | 181.1 | 226.5 | 178.5 | 144.0 | 217.4 | -12 |
| Jamaica | 61.4 | 55.3 | 66.3 | 59.3 | 48.1 | 72.0 | -3.4 |
| Saint Lucia | 84.9 | 76.9 | 91.3 | 61.6 | 52.4 | 70.9 | -27.4 |
| Saint Vincent and the Grenadines | 140.2 | 127.5 | 150.6 | 120.8 | 105.7 | 135.2 | -13.8 |
| Suriname | 119.5 | 110.5 | 127.8 | 99.6 | 83.7 | 116.9 | -16.6 |
| Ecuador | 70.0 | 63.3 | 75.1 | 74.4 | 59.9 | 91.8 | 6.4 |
| Peru | 61.6 | 51.9 | 71.9 | 44.3 | 32.9 | 57.3 | -28.1 |
| Colombia | 100.7 | 91.0 | 108.2 | 69.4 | 54.5 | 87.1 | -31 |
| Costa Rica | 98.1 | 88.0 | 105.9 | 67.6 | 52.8 | 84.0 | -31.1 |

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|------------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Guatemala | 118.0 | 105.8 | 129.6 | 96.8 | 78.7 | 115.6 | -18 |
| Mexico | 91.0 | 82.8 | 96.3 | 93.2 | 80.2 | 105.9 | 2.5 |
| Venezuela (Bolivarian Republic of) | 133.1 | 122.7 | 140.5 | 122.3 | 95.7 | 155.2 | -8.1 |
| Brazil | 104.4 | 96.4 | 110.3 | 70.0 | 63.6 | 74.8 | -32.9 |
| Paraguay | 83.1 | 73.9 | 91.8 | 84.3 | 65.8 | 106.4 | 1.5 |
| Algeria | 303.2 | 251.4 | 359.0 | 224.9 | 185.1 | 269.1 | -25.8 |
| Iran (Islamic Republic of) | 248.6 | 228.9 | 262.2 | 154.0 | 139.9 | 167.7 | -38.1 |
| Iraq | 289.5 | 231.7 | 359.3 | 246.5 | 205.0 | 284.9 | -14.9 |
| Jordan | 196.3 | 166.7 | 226.7 | 116.9 | 98.8 | 138.5 | -40.4 |
| Lebanon | 258.3 | 215.3 | 293.7 | 231.1 | 168.7 | 265.6 | -10.5 |
| Libya | 167.5 | 139.2 | 209.6 | 164.3 | 129.9 | 215.4 | -1.9 |
| Turkey | 159.1 | 139.0 | 177.2 | 112.8 | 90.8 | 137.1 | -29.1 |
| Equatorial Guinea | 111.3 | 81.5 | 147.6 | 90.0 | 64.4 | 121.1 | -19.2 |
| Gabon | 119.0 | 97.1 | 144.8 | 107.8 | 84.0 | 134.5 | -9.4 |
| Mauritius | 217.7 | 204.4 | 227.9 | 97.1 | 80.4 | 116.4 | -55.4 |
| Botswana | 146.4 | 105.5 | 195.5 | 122.9 | 93.0 | 161.3 | -16 |
| Namibia | 126.4 | 104.8 | 149.0 | 106.7 | 85.4 | 128.8 | -15.5 |

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|----------------|-------|-------|-------|-------|-------|-------|-------|
| South Africa | 108.6 | 101.4 | 115.3 | 76.9 | 69.0 | 82.9 | -29.3 |
| American Samoa | 143.7 | 129.9 | 157.8 | 141.7 | 122.0 | 163.0 | -1.4 |
| Nauru | 382.4 | 315.3 | 451.5 | 335.7 | 277.3 | 400.8 | -12.2 |
| Tuvalu | 235.1 | 205.1 | 272.8 | 234.2 | 186.4 | 295.2 | -0.4 |

*LMICs: low- and middle-income countries

Table S7. Age-standardized DALY* rate (1/100,000) and percentage change for IHD by country in LMICs[§] from 2000 to 2019

| | 2000 | | | 2019 | | | % of change, 2000-2019 |
|---------------------------------------|--------|-------------|-------------|--------|-------------|-------------|------------------------|
| | value | lower limit | upper limit | value | lower limit | upper limit | |
| Democratic People's Republic of Korea | 2230.4 | 1765.4 | 2717.7 | 2278.7 | 1872.1 | 2781.0 | 2.2 |
| Tajikistan | 5702.8 | 5184.2 | 6190.5 | 6860.6 | 5758.5 | 8230.5 | 20.3 |
| Haiti | 3880.6 | 3070.8 | 4837.9 | 3647.7 | 2618.5 | 5046.9 | -6 |
| Syrian Arab Republic | 7313.0 | 6443.4 | 8240.4 | 6187.1 | 4823.0 | 8005.2 | -15.4 |
| Yemen | 6343.9 | 4946.6 | 8028.5 | 5609.5 | 4452.9 | 7368.2 | -11.6 |
| Afghanistan | 9077.9 | 7150.3 | 11353.1 | 6640.9 | 5195.3 | 8201.8 | -26.8 |
| Nepal | 2186.1 | 1849.3 | 2641.5 | 2332.1 | 1834.6 | 2863.9 | 6.7 |
| Central African Republic | 2969.6 | 2213.0 | 3818.9 | 2936.5 | 2210.5 | 3824.5 | -1.1 |
| Democratic Republic of the Congo | 2313.6 | 1860.6 | 2939.0 | 2047.6 | 1495.5 | 2739.6 | -11.5 |
| Burundi | 2400.0 | 1913.8 | 3009.0 | 2046.3 | 1543.2 | 2696.9 | -14.7 |
| Eritrea | 1931.8 | 1446.6 | 2481.2 | 2047.1 | 1573.8 | 2623.7 | 6 |
| Ethiopia | 1880.8 | 1561.2 | 2231.4 | 1382.8 | 1025.9 | 1743.1 | -26.5 |
| Madagascar | 2471.2 | 2069.3 | 2867.1 | 2354.5 | 1696.7 | 3140.4 | -4.7 |

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|-----------------------------|--------|--------|--------|--------|--------|--------|-------|
| Malawi | 2126.5 | 1797.2 | 2503.9 | 1706.5 | 1334.5 | 2124.1 | -19.8 |
| Mozambique | 1438.7 | 1182.2 | 1700.4 | 1895.9 | 1461.4 | 2419.1 | 31.8 |
| Rwanda | 1838.9 | 1442.4 | 2311.6 | 1361.6 | 989.7 | 1808.4 | -26 |
| Somalia | 2156.9 | 1578.1 | 2778.3 | 2390.9 | 1761.2 | 3224.6 | 10.8 |
| United Republic of Tanzania | 1576.6 | 1319.0 | 1886.1 | 1617.8 | 1176.0 | 2069.4 | 2.6 |
| Uganda | 1750.7 | 1304.6 | 2177.8 | 1465.5 | 1033.7 | 1858.4 | -16.3 |
| Benin | 2122.8 | 1780.5 | 2518.8 | 1954.3 | 1550.8 | 2472.5 | -7.9 |
| Burkina Faso | 2104.4 | 1767.2 | 2458.6 | 2234.4 | 1830.9 | 2667.4 | 6.2 |
| Chad | 2113.2 | 1734.5 | 2641.5 | 2115.8 | 1722.0 | 2610.4 | 0.1 |
| Gambia | 2272.0 | 1816.1 | 2745.0 | 2629.9 | 2094.7 | 3241.3 | 15.8 |
| Guinea | 1819.6 | 1469.8 | 2194.6 | 2175.7 | 1740.3 | 2704.4 | 19.6 |
| Guinea-Bissau | 3075.5 | 2531.1 | 3790.0 | 3080.4 | 2416.1 | 3850.2 | 0.2 |
| Liberia | 2122.3 | 1731.6 | 2570.4 | 2029.4 | 1561.0 | 2630.4 | -4.4 |
| Mali | 1863.1 | 1560.7 | 2202.6 | 1856.4 | 1481.3 | 2335.1 | -0.4 |
| Niger | 1999.7 | 1549.3 | 2487.8 | 1985.6 | 1525.0 | 2541.5 | -0.7 |
| Sierra Leone | 2379.4 | 1827.0 | 3057.6 | 2355.4 | 1745.5 | 3096.4 | -1 |
| Togo | 2497.0 | 2047.8 | 3018.2 | 2376.8 | 1873.4 | 3036.6 | -4.8 |

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|----------------------------------|--------|--------|---------|---------|--------|---------|-------|
| South Sudan | 1413.4 | 1065.7 | 1816.8 | 1450.6 | 1024.8 | 1956.2 | 2.6 |
| Cambodia | 2328.9 | 1958.8 | 2814.0 | 2098.7 | 1679.7 | 2556.7 | -9.9 |
| Indonesia | 2504.8 | 2266.4 | 2736.6 | 2654.2 | 2240.7 | 2996.9 | 6 |
| Lao People's Democratic Republic | 3365.8 | 2805.8 | 4102.8 | 2923.4 | 2352.7 | 3538.0 | -13.1 |
| Myanmar | 2761.3 | 2269.7 | 3346.6 | 1882.7 | 1609.0 | 2206.6 | -31.8 |
| Philippines | 2482.0 | 2251.8 | 2691.3 | 2838.3 | 2311.3 | 3389.8 | 14.4 |
| Timor-Leste | 2003.4 | 1500.9 | 2573.2 | 2700.0 | 1977.7 | 3446.4 | 34.8 |
| Viet Nam | 1620.4 | 1415.1 | 1855.3 | 1596.6 | 1292.4 | 1931.7 | -1.5 |
| Kiribati | 6474.4 | 5390.5 | 7597.9 | 5996.1 | 4788.2 | 7486.8 | -7.4 |
| Micronesia (Federated States of) | 5961.3 | 4792.9 | 7510.5 | 6248.4 | 4376.3 | 8275.0 | 4.8 |
| Papua New Guinea | 3304.7 | 2313.3 | 4665.9 | 3699.7 | 2691.5 | 5055.4 | 12 |
| Solomon Islands | 9933.9 | 8011.2 | 12171.2 | 10199.5 | 8153.9 | 12273.7 | 2.7 |
| Vanuatu | 6381.3 | 4942.1 | 8201.5 | 6643.0 | 5122.3 | 8877.4 | 4.1 |
| Kyrgyzstan | 5248.7 | 4957.0 | 5492.2 | 4729.5 | 4166.6 | 5297.0 | -9.9 |
| Mongolia | 8878.0 | 7622.8 | 10209.3 | 5208.6 | 4183.8 | 6487.1 | -41.3 |
| Uzbekistan | 9445.7 | 9070.5 | 9780.8 | 10506.1 | 9231.9 | 11896.1 | 11.2 |
| Republic of Moldova | 6493.2 | 6176.2 | 6729.2 | 4155.0 | 3638.8 | 4706.2 | -36 |

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|----------------------------------|--------|--------|--------|--------|--------|--------|-------|
| Ukraine | 7574.2 | 7279.6 | 7812.1 | 6965.1 | 6011.7 | 8079.5 | -8 |
| Bolivia (Plurinational State of) | 1850.7 | 1346.8 | 2412.3 | 1642.2 | 1157.4 | 2190.0 | -11.3 |
| El Salvador | 1899.3 | 1776.9 | 2029.9 | 1722.1 | 1320.1 | 2208.2 | -9.3 |
| Honduras | 2338.7 | 1833.2 | 3038.6 | 2499.8 | 2056.9 | 3090.3 | 6.9 |
| Nicaragua | 2127.6 | 1973.8 | 2261.8 | 2169.3 | 1830.4 | 2513.9 | 2 |
| Egypt | 6625.3 | 6091.7 | 7405.7 | 6677.5 | 5102.2 | 8580.3 | 0.8 |
| Morocco | 5413.2 | 4690.5 | 6273.6 | 4927.7 | 3823.7 | 5872.6 | -9 |
| Palestine | 4952.4 | 4427.8 | 5521.7 | 3634.4 | 3164.5 | 4163.7 | -26.6 |
| Tunisia | 4064.4 | 3308.1 | 4830.1 | 3197.0 | 2379.9 | 4145.1 | -21.3 |
| Bangladesh | 2077.6 | 1833.9 | 2291.4 | 2182.8 | 1706.8 | 2685.8 | 5.1 |
| Bhutan | 2560.0 | 2068.5 | 3105.0 | 2441.3 | 1886.2 | 3046.4 | -4.6 |
| India | 3278.4 | 3001.4 | 3572.2 | 3024.7 | 2608.3 | 3469.3 | -7.7 |
| Pakistan | 4092.6 | 3643.1 | 4599.4 | 4016.6 | 3312.7 | 4875.7 | -1.9 |
| Angola | 2424.4 | 2007.9 | 2912.3 | 2008.0 | 1556.7 | 2547.8 | -17.2 |
| Congo | 3032.5 | 2428.3 | 3794.2 | 2510.2 | 1879.9 | 3349.6 | -17.2 |
| Comoros | 1912.3 | 1559.6 | 2340.5 | 1815.9 | 1366.6 | 2387.5 | -5 |
| Djibouti | 1852.7 | 1411.7 | 2404.5 | 2037.2 | 1447.8 | 2785.0 | 10 |

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|-----------------------|--------|--------|--------|--------|--------|--------|-------|
| Kenya | 1267.6 | 1062.8 | 1518.9 | 1420.7 | 1127.4 | 1768.2 | 12.1 |
| Zambia | 2303.6 | 1932.4 | 2736.4 | 1637.9 | 1288.2 | 2065.1 | -28.9 |
| Lesotho | 1834.7 | 1425.2 | 2273.5 | 2349.3 | 1719.6 | 3066.4 | 28.1 |
| Eswatini | 2362.4 | 1767.6 | 3105.4 | 2263.9 | 1661.8 | 3035.8 | -4.2 |
| Zimbabwe | 2573.6 | 2177.7 | 2995.5 | 2935.0 | 2330.0 | 3617.4 | 14 |
| Cameroon | 2065.7 | 1672.9 | 2534.2 | 1967.7 | 1519.6 | 2560.3 | -4.7 |
| Cabo Verde | 1908.5 | 1574.3 | 2277.1 | 2197.8 | 1895.4 | 2505.8 | 15.2 |
| Côte d'Ivoire | 2708.8 | 2245.8 | 3252.2 | 2134.7 | 1654.0 | 2677.9 | -21.2 |
| Ghana | 2137.2 | 1792.4 | 2499.5 | 2186.4 | 1821.8 | 2639.7 | 2.3 |
| Mauritania | 2068.8 | 1703.9 | 2473.9 | 1735.4 | 1370.1 | 2181.1 | -16.1 |
| Nigeria | 2169.3 | 1544.5 | 3041.7 | 1713.5 | 1250.6 | 2211.0 | -21 |
| Sao Tome and Principe | 2346.9 | 2026.8 | 2698.3 | 2456.7 | 1963.6 | 2888.6 | 4.7 |
| Senegal | 2016.8 | 1663.8 | 2437.9 | 2001.6 | 1568.5 | 2496.8 | -0.8 |
| Sudan | 6461.0 | 4869.8 | 8156.2 | 5118.2 | 3975.8 | 6569.8 | -20.8 |
| China | 1611.0 | 1489.3 | 1754.5 | 1753.9 | 1514.9 | 1997.0 | 8.9 |
| Malaysia | 3512.6 | 3333.1 | 3659.7 | 2822.6 | 2249.1 | 3450.3 | -19.6 |
| Maldives | 3907.4 | 3596.8 | 4320.2 | 2013.3 | 1692.8 | 2346.0 | -48.5 |

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|------------------------|--------|--------|--------|--------|--------|--------|-------|
| Sri Lanka | 2894.8 | 2751.1 | 3158.2 | 1883.0 | 1415.2 | 2416.0 | -35 |
| Thailand | 1523.9 | 1325.2 | 1740.1 | 964.9 | 728.6 | 1248.9 | -36.7 |
| Fiji | 6438.3 | 6112.4 | 6766.4 | 5236.6 | 4185.6 | 6440.3 | -18.7 |
| Marshall Islands | 5876.5 | 4705.1 | 7318.8 | 5979.0 | 4491.8 | 7930.7 | 1.7 |
| Samoa | 4522.4 | 3786.3 | 5528.8 | 4407.2 | 3580.6 | 5424.6 | -2.5 |
| Tonga | 2971.0 | 2627.1 | 3334.3 | 2661.1 | 2113.9 | 3257.0 | -10.4 |
| Armenia | 5000.1 | 4726.1 | 5214.9 | 3736.3 | 3163.9 | 4354.0 | -25.3 |
| Azerbaijan | 7522.0 | 6979.7 | 7972.7 | 6721.3 | 5869.0 | 7679.7 | -10.6 |
| Georgia | 6704.1 | 6192.5 | 7221.1 | 3760.7 | 3202.1 | 4369.2 | -43.9 |
| Kazakhstan | 8029.1 | 7700.3 | 8315.2 | 3878.8 | 3354.3 | 4451.7 | -51.7 |
| Turkmenistan | 8562.9 | 8229.4 | 8862.6 | 6226.7 | 5088.7 | 7583.8 | -27.3 |
| Albania | 2432.5 | 2279.4 | 2551.8 | 2305.0 | 1780.4 | 2967.1 | -5.2 |
| Bosnia and Herzegovina | 3309.8 | 2986.2 | 3616.8 | 2480.0 | 2023.7 | 3038.1 | -25.1 |
| Bulgaria | 6476.2 | 6097.5 | 6803.9 | 3858.7 | 3149.0 | 4676.2 | -40.4 |
| North Macedonia | 4422.2 | 4189.3 | 4639.9 | 3200.1 | 2607.9 | 3894.1 | -27.6 |
| Montenegro | 3096.3 | 2913.3 | 3273.9 | 2737.1 | 2302.8 | 3224.0 | -11.6 |
| Romania | 4446.4 | 4250.4 | 4606.6 | 2806.5 | 2341.2 | 3320.0 | -36.9 |

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|----------------------------------|--------|--------|--------|--------|--------|--------|-------|
| Serbia | 4393.2 | 4167.6 | 4550.6 | 2914.8 | 2390.5 | 3496.7 | -33.7 |
| Belarus | 6913.6 | 6633.8 | 7129.2 | 5452.9 | 4389.8 | 6815.6 | -21.1 |
| Russian Federation | 7056.9 | 6821.1 | 7224.3 | 4117.5 | 3581.2 | 4700.5 | -41.7 |
| Argentina | 1951.8 | 1857.4 | 2032.0 | 1372.0 | 1281.4 | 1456.5 | -29.7 |
| Belize | 2896.1 | 2729.5 | 3082.9 | 1546.0 | 1357.4 | 1754.5 | -46.6 |
| Cuba | 2566.4 | 2431.0 | 2674.0 | 1803.4 | 1493.0 | 2169.7 | -29.7 |
| Dominica | 1824.5 | 1587.3 | 2080.9 | 1456.7 | 1213.4 | 1742.6 | -20.2 |
| Dominican Republic | 2260.8 | 2036.2 | 2515.8 | 3254.8 | 2497.0 | 4172.1 | 44 |
| Grenada | 2300.1 | 2140.4 | 2440.4 | 1895.0 | 1719.5 | 2071.3 | -17.6 |
| Guyana | 4384.3 | 3897.0 | 4945.5 | 3686.1 | 2915.3 | 4591.8 | -15.9 |
| Jamaica | 1177.7 | 1088.4 | 1254.6 | 1152.8 | 929.9 | 1400.8 | -2.1 |
| Saint Lucia | 1501.8 | 1391.1 | 1595.1 | 1126.8 | 962.6 | 1308.0 | -25 |
| Saint Vincent and the Grenadines | 2505.5 | 2335.1 | 2667.4 | 2098.4 | 1843.1 | 2360.6 | -16.2 |
| Suriname | 2537.6 | 2385.7 | 2700.9 | 2111.0 | 1785.1 | 2486.8 | -16.8 |
| Ecuador | 1330.0 | 1247.8 | 1405.4 | 1314.5 | 1055.1 | 1658.4 | -1.2 |
| Peru | 1094.3 | 932.8 | 1275.4 | 786.7 | 579.7 | 1025.2 | -28.1 |
| Colombia | 1890.5 | 1780.1 | 1986.9 | 1255.8 | 993.7 | 1588.2 | -33.6 |

| | | | | | | | |
|---------------------------------------|--------|--------|--------|--------|--------|--------|-------|
| Costa Rica | 1770.1 | 1654.8 | 1871.5 | 1267.9 | 1007.1 | 1597.9 | -28.4 |
| Guatemala | 1970.4 | 1772.9 | 2184.8 | 1581.8 | 1276.6 | 1924.5 | -19.7 |
| Mexico | 1635.3 | 1550.8 | 1698.1 | 1656.5 | 1431.7 | 1889.6 | 1.3 |
| Venezuela (Bolivarian Republic of) | 2717.3 | 2586.0 | 2831.7 | 2427.6 | 1865.6 | 3141.1 | -10.7 |
| Brazil | 2199.6 | 2101.1 | 2291.8 | 1480.2 | 1384.9 | 1562.3 | -32.7 |
| Paraguay | 1637.4 | 1494.6 | 1797.6 | 1672.0 | 1311.4 | 2132.1 | 2.1 |
| Algeria | 5187.6 | 4174.9 | 6282.5 | 3591.0 | 2901.7 | 4443.0 | -30.8 |
| Iran (Islamic Republic of) | 4611.0 | 4378.1 | 4840.5 | 2698.1 | 2512.7 | 2960.7 | -41.5 |
| Iraq | 5996.5 | 4693.3 | 7641.6 | 4643.7 | 3732.1 | 5568.4 | -22.6 |
| Jordan | 3814.4 | 3220.4 | 4466.6 | 2193.0 | 1863.8 | 2612.6 | -42.5 |
| Lebanon | 4790.3 | 4043.6 | 5508.7 | 4332.9 | 3201.3 | 5043.4 | -9.5 |
| Libya | 3453.2 | 2995.6 | 4410.0 | 3302.0 | 2608.1 | 4427.1 | -4.4 |
| Turkey | 3399.1 | 3028.7 | 3739.1 | 2014.0 | 1628.5 | 2453.1 | -40.7 |
| Equatorial Guinea | 2170.5 | 1585.5 | 2911.1 | 1586.2 | 1128.2 | 2231.2 | -26.9 |
| Gabon | 2350.5 | 1921.6 | 2828.9 | 2022.1 | 1561.8 | 2537.7 | -14 |
| Mauritius | 4605.9 | 4399.9 | 4795.4 | 1921.1 | 1587.1 | 2310.5 | -58.3 |

| | | | | | | | |
|----------------|--------|--------|---------|--------|--------|--------|-------|
| Botswana | 3158.7 | 2222.9 | 4254.9 | 2429.6 | 1776.0 | 3237.3 | -23.1 |
| Namibia | 2524.1 | 2090.2 | 2990.6 | 2005.3 | 1587.1 | 2513.7 | -20.6 |
| South Africa | 2212.8 | 2098.0 | 2335.4 | 1423.8 | 1286.4 | 1535.6 | -35.7 |
| American Samoa | 3191.0 | 2853.8 | 3509.8 | 3125.1 | 2637.5 | 3668.8 | -2.1 |
| Nauru | 9445.0 | 7590.7 | 11411.8 | 7946.1 | 6402.3 | 9674.6 | -15.9 |
| Tuvalu | 5367.8 | 4659.7 | 6257.6 | 5313.2 | 4125.2 | 6859.2 | -1.0 |

* DALY: disability adjusted life years

§ LMICs: low- and middle-income countries

Table S8. PAF[†](%) for IHD[§] Deaths and DALYs^{*} attributable to all modifiable risk factors by region and sex in 2019

| | Death | DALY |
|--------------|----------------------|----------------------|
| Low-income | | |
| male | 93.0 (90.7, 95.0) | 93.3 (91.5, 94.9) |
| female | 91.9 (89.1, 94.5) | 92.5 (90.4, 94.4) |
| Lower-middle | | |
| male | 94.6 (92.7, 96.4) | 95.2 (93.8, 96.5) |
| female | 93.5 (90.9, 95.8) | 93.9 (92.0, 95.6) |
| Upper-middle | | |
| male | 94.1 (91.7, 96.2) | 95.4 (93.7, 96.8) |
| female | 92.4 (88.8, 95.4) | 93.5 (90.9, 95.7) |

* DALY: disability adjusted life years

§ IHD: ischemic heart disease

† PAF: population attributable fraction

Table S9. PAF*(%) for IHD[§] death by age in LMICs[†] in 2019

| | Low-income | Lower-middle income countries | Upper-middle income countries |
|-------------|----------------------|-------------------------------|-------------------------------|
| 15-49 years | 92.6 (91.0, 94.3) | 94.7 (93.3, 96.0) | 96.8 (95.7, 97.8) |
| 50-69 years | 95.6 (93.8, 97.1) | 96.7 (95.3, 97.9) | 97.0 (95.6, 98.1) |
| 70+ years | 90.2 (86.4, 93.8) | 92.2 (88.7, 95.4) | 91.7 (87.8, 95.1) |

*PAF: population attributable fraction

§ IHD: ischemic heart disease

† LMICs: low- and middle-income countries

Table S10. PAF* (%) for IHD§ DALY† by age in LMICs¶ in 2019

| | Low-income | Lower-middle income countries |
|-------------|--------------|-------------------------------|
| | 90.4 | 93.1 |
| 15-49 years | (88.5, 92.4) | (91.5, 94.9) |
| | 95.8 | 96.8 |
| 50-69 years | (94.1, 97.2) | (95.5, 98.0) |
| | 90.6 | 92.6 |
| 70+ years | (87.1, 93.9) | (89.4, 95.5) |

*PAF: population attributable fraction

§ IHD: ischemic heart disease

† DALY: disability adjusted life years

¶ LMICs: low- and middle-income countries

Table S11. Male to female ratio in IHD age-standardized death rate attributable to all modifiable risk factors by region and year in globe and LMICs*, 2000–2019

| | Globe | LICs[§] | Lower-MICs[‡] | Upper-MICs[¶] |
|------|--------------|-------------------------|-------------------------------|-------------------------------|
| 2000 | 1.47 | 1.36 | 1.27 | 1.36 |
| 2001 | 1.47 | 1.34 | 1.28 | 1.37 |
| 2002 | 1.47 | 1.33 | 1.28 | 1.38 |
| 2003 | 1.48 | 1.32 | 1.31 | 1.38 |
| 2004 | 1.49 | 1.31 | 1.32 | 1.39 |
| 2005 | 1.49 | 1.31 | 1.33 | 1.40 |
| 2006 | 1.50 | 1.31 | 1.34 | 1.39 |
| 2007 | 1.51 | 1.31 | 1.36 | 1.40 |
| 2008 | 1.52 | 1.31 | 1.38 | 1.42 |
| 2009 | 1.53 | 1.31 | 1.39 | 1.43 |
| 2010 | 1.54 | 1.31 | 1.41 | 1.43 |
| 2011 | 1.54 | 1.31 | 1.41 | 1.44 |
| 2012 | 1.55 | 1.31 | 1.41 | 1.47 |
| 2013 | 1.55 | 1.31 | 1.42 | 1.48 |
| 2014 | 1.55 | 1.31 | 1.42 | 1.48 |
| 2015 | 1.54 | 1.32 | 1.40 | 1.49 |
| 2016 | 1.54 | 1.32 | 1.40 | 1.50 |
| 2017 | 1.54 | 1.31 | 1.40 | 1.49 |
| 2018 | 1.54 | 1.31 | 1.41 | 1.47 |
| 2019 | 1.53 | 1.31 | 1.42 | 1.48 |

* LMICs: low- and middle-income countries

§ LICs: low-income countries

‡ Lower-MIC: lower-middle income countries

¶ Upper-MIC: upper-middle income countries

Table S12. Male to female ratio in IHD age-standardized DALY* rate attributable to all modifiable risk factors by region and year in globe and LMICs[§], 2000–2019

| | Globe | LICs [‡] | Lower-MICs [¶] | Upper-MICs [£] |
|------|-------|-------------------|-------------------------|-------------------------|
| 2000 | 1.73 | 1.50 | 1.53 | 1.64 |
| 2001 | 1.74 | 1.49 | 1.53 | 1.64 |
| 2002 | 1.74 | 1.48 | 1.53 | 1.65 |
| 2003 | 1.75 | 1.47 | 1.53 | 1.65 |
| 2004 | 1.75 | 1.46 | 1.53 | 1.66 |
| 2005 | 1.77 | 1.46 | 1.53 | 1.67 |
| 2006 | 1.77 | 1.46 | 1.53 | 1.67 |
| 2007 | 1.78 | 1.46 | 1.53 | 1.67 |
| 2008 | 1.80 | 1.46 | 1.53 | 1.70 |
| 2009 | 1.81 | 1.46 | 1.53 | 1.71 |
| 2010 | 1.81 | 1.46 | 1.53 | 1.72 |
| 2011 | 1.82 | 1.47 | 1.53 | 1.73 |
| 2012 | 1.82 | 1.47 | 1.53 | 1.76 |
| 2013 | 1.82 | 1.47 | 1.53 | 1.77 |
| 2014 | 1.81 | 1.47 | 1.53 | 1.77 |
| 2015 | 1.80 | 1.47 | 1.53 | 1.79 |
| 2016 | 1.80 | 1.47 | 1.53 | 1.79 |
| 2017 | 1.80 | 1.47 | 1.53 | 1.78 |
| 2018 | 1.80 | 1.47 | 1.53 | 1.77 |
| 2019 | 1.79 | 1.47 | 1.53 | 1.77 |

* DALY: disability adjusted life years

§ LMICs: low- and middle-income countries

‡ LICs: low-income countries

¶ Lower-MIC: lower-middle income countries

£ Upper-MIC: upper-middle income countries

Table S13. PAF* of IHD deaths by age and sex in low income countries in 2019

| | males | | | females | | | both | | |
|---|-------|-------------|-------------|---------|-------------|-------------|-------|-------------|-------------|
| | value | lower limit | upper limit | value | lower limit | upper limit | value | lower limit | upper limit |
| Metabolic risks | | | | | | | | | |
| 25 to 29 | 88.1 | 77.6 | 95.5 | 87.0 | 76.6 | 94.6 | 87.7 | 77.7 | 95.0 |
| 30 to 34 | 87.9 | 79.2 | 94.6 | 87.8 | 79.1 | 94.6 | 87.9 | 79.3 | 94.3 |
| 35 to 39 | 87.3 | 80.0 | 93.0 | 87.8 | 80.5 | 93.3 | 87.4 | 80.4 | 93.1 |
| 40 to 44 | 86.5 | 79.2 | 92.2 | 87.8 | 80.6 | 93.0 | 87.0 | 79.8 | 92.3 |
| 45 to 49 | 86.6 | 79.8 | 92.0 | 88.6 | 82.2 | 93.4 | 87.3 | 80.8 | 92.4 |
| 50 to 54 | 85.6 | 79.4 | 91.0 | 88.2 | 82.4 | 92.6 | 86.5 | 80.6 | 91.5 |
| 55 to 59 | 84.0 | 78.2 | 89.3 | 86.4 | 80.7 | 91.3 | 84.9 | 79.3 | 89.9 |
| 60 to 64 | 81.5 | 75.1 | 87.2 | 84.3 | 78.5 | 89.6 | 82.6 | 76.5 | 88.0 |
| 65 to 69 | 78.5 | 69.7 | 85.9 | 80.3 | 71.5 | 87.1 | 79.3 | 70.5 | 86.6 |
| 70 to 74 | 75.4 | 64.9 | 84.2 | 76.7 | 67.1 | 85.1 | 76.0 | 66.3 | 84.4 |
| 75 to 79 | 75.5 | 66.6 | 84.2 | 76.6 | 68.0 | 84.8 | 76.1 | 67.8 | 84.5 |
| 80 plus | 72.7 | 59.7 | 85.6 | 73.9 | 61.7 | 85.7 | 73.4 | 60.9 | 85.3 |
| Environmental/occupational risks | | | | | | | | | |
| 25 to 29 | 59.1 | 50.6 | 66.6 | 59.5 | 51.0 | 67.8 | 59.2 | 50.7 | 67.3 |
| 30 to 34 | 57.6 | 49.2 | 65.3 | 58.0 | 49.1 | 66.7 | 57.7 | 49.1 | 65.6 |
| 35 to 39 | 55.7 | 47.5 | 63.4 | 56.0 | 47.4 | 64.7 | 55.8 | 47.5 | 63.8 |
| 40 to 44 | 54.2 | 45.8 | 62.0 | 54.4 | 45.2 | 63.5 | 54.3 | 45.5 | 62.5 |
| 45 to 49 | 52.8 | 44.9 | 60.5 | 52.8 | 44.2 | 61.5 | 52.8 | 44.7 | 60.9 |
| 50 to 54 | 50.6 | 42.9 | 58.2 | 50.4 | 42.0 | 59.9 | 50.5 | 42.6 | 58.9 |
| 55 to 59 | 48.5 | 41.1 | 57.2 | 48.5 | 40.2 | 59.7 | 48.5 | 40.8 | 58.2 |
| 60 to 64 | 46.1 | 38.6 | 54.3 | 45.7 | 37.3 | 56.7 | 45.9 | 38.2 | 55.3 |
| 65 to 69 | 43.8 | 36.9 | 52.6 | 43.3 | 35.6 | 55.6 | 43.5 | 36.5 | 54.1 |
| 70 to 74 | 41.5 | 34.2 | 50.7 | 41.0 | 32.3 | 53.8 | 41.3 | 33.4 | 52.1 |

| | | | | | | | | | |
|----------|------|------|------|------|------|------|------|------|------|
| 75 to 79 | 38.6 | 32.0 | 47.7 | 37.5 | 30.0 | 49.3 | 38.0 | 30.9 | 48.2 |
| 80 plus | 33.4 | 28.8 | 39.8 | 31.4 | 26.5 | 38.7 | 32.2 | 27.4 | 39.1 |

Behavioral risks

| | | | | | | | | | |
|----------|------|------|------|------|------|------|------|------|------|
| 25 to 29 | 78.3 | 69.3 | 84.4 | 80.1 | 71.6 | 85.9 | 78.9 | 70.2 | 84.9 |
| 30 to 34 | 81.8 | 74.4 | 86.8 | 80.4 | 71.6 | 86.0 | 81.3 | 73.4 | 86.5 |
| 35 to 39 | 82.7 | 75.5 | 87.3 | 79.9 | 71.2 | 85.5 | 81.8 | 74.4 | 86.7 |
| 40 to 44 | 79.1 | 72.0 | 84.1 | 74.5 | 65.6 | 80.5 | 77.6 | 70.0 | 82.7 |
| 45 to 49 | 79.3 | 72.4 | 84.0 | 74.3 | 65.8 | 80.5 | 77.5 | 70.1 | 82.6 |
| 50 to 54 | 77.3 | 70.6 | 82.1 | 71.4 | 63.0 | 77.6 | 75.2 | 67.8 | 80.4 |
| 55 to 59 | 72.0 | 64.8 | 77.6 | 66.2 | 57.3 | 73.3 | 69.8 | 62.0 | 76.0 |
| 60 to 64 | 68.9 | 61.6 | 75.5 | 62.2 | 53.7 | 69.8 | 66.3 | 58.9 | 73.2 |
| 65 to 69 | 64.3 | 56.7 | 71.4 | 58.6 | 50.2 | 66.8 | 61.8 | 54.0 | 69.5 |
| 70 to 74 | 61.0 | 53.6 | 68.1 | 55.4 | 47.5 | 63.3 | 58.3 | 50.7 | 65.7 |
| 75 to 79 | 56.2 | 48.3 | 63.9 | 51.7 | 44.0 | 59.8 | 53.8 | 46.0 | 62.0 |
| 80 plus | 55.1 | 47.3 | 62.7 | 51.8 | 43.9 | 59.4 | 53.1 | 45.3 | 60.6 |

* PAF: population attributable fraction

Table S14. PAF* of IHD deaths by age and sex in lower-middle income countries in 2019

| | males | | | females | | | both | | |
|---|-------|-------------|-------------|---------|-------------|-------------|-------|-------------|-------------|
| | value | lower limit | upper limit | value | lower limit | upper limit | value | lower limit | upper limit |
| Metabolic risks | | | | | | | | | |
| 25 to 29 | 90.6 | 81.5 | 96.8 | 87.5 | 77.9 | 94.9 | 89.6 | 80.4 | 96.0 |
| 30 to 34 | 90.7 | 83.4 | 95.9 | 88.9 | 80.8 | 94.6 | 90.2 | 82.8 | 95.5 |
| 35 to 39 | 90.3 | 84.4 | 94.8 | 89.6 | 83.5 | 94.2 | 90.1 | 84.3 | 94.6 |
| 40 to 44 | 89.3 | 83.2 | 93.8 | 89.2 | 83.4 | 93.8 | 89.3 | 83.3 | 93.8 |
| 45 to 49 | 89.2 | 83.5 | 93.7 | 89.7 | 84.2 | 93.9 | 89.3 | 83.7 | 93.6 |
| 50 to 54 | 88.4 | 83.1 | 92.8 | 89.6 | 84.6 | 93.4 | 88.7 | 83.7 | 93.0 |
| 55 to 59 | 87.7 | 82.7 | 92.2 | 89.2 | 85.1 | 93.2 | 88.2 | 83.4 | 92.4 |
| 60 to 64 | 86.0 | 80.5 | 90.9 | 87.9 | 83.2 | 92.2 | 86.7 | 81.4 | 91.4 |
| 65 to 69 | 82.4 | 74.5 | 89.4 | 84.7 | 77.8 | 90.6 | 83.3 | 75.7 | 89.9 |
| 70 to 74 | 79.4 | 70.0 | 87.5 | 82.2 | 73.8 | 89.3 | 80.6 | 71.6 | 88.4 |
| 75 to 79 | 79.5 | 71.1 | 87.4 | 82.5 | 75.6 | 89.4 | 80.9 | 73.3 | 88.4 |
| 80 plus | 77.2 | 64.6 | 89.3 | 80.3 | 68.5 | 90.3 | 78.9 | 66.7 | 89.7 |
| Environmental/occupational risks | | | | | | | | | |
| 25 to 29 | 52.9 | 45.1 | 60.1 | 54.2 | 46.6 | 61.4 | 53.3 | 45.6 | 60.6 |
| 30 to 34 | 51.8 | 43.6 | 59.2 | 52.2 | 44.1 | 59.7 | 51.9 | 43.8 | 59.4 |
| 35 to 39 | 49.7 | 42.1 | 57.0 | 50.2 | 42.5 | 57.5 | 49.9 | 42.2 | 57.2 |
| 40 to 44 | 47.8 | 40.9 | 55.0 | 48.5 | 41.2 | 55.7 | 48.0 | 41.0 | 55.0 |
| 45 to 49 | 46.2 | 39.6 | 52.7 | 46.3 | 39.7 | 52.9 | 46.3 | 39.6 | 52.7 |
| 50 to 54 | 44.3 | 37.7 | 50.5 | 44.7 | 37.9 | 50.9 | 44.5 | 37.8 | 50.6 |
| 55 to 59 | 42.3 | 36.3 | 48.2 | 42.3 | 36.1 | 48.5 | 42.3 | 36.3 | 48.4 |
| 60 to 64 | 39.5 | 33.3 | 45.3 | 39.6 | 33.5 | 45.8 | 39.5 | 33.3 | 45.4 |
| 65 to 69 | 37.4 | 31.9 | 42.4 | 37.0 | 31.4 | 42.4 | 37.2 | 31.8 | 42.2 |

| | | | | | | | | | |
|-------------------------|------|------|------|------|------|------|------|------|------|
| 70 to 74 | 35.4 | 30.1 | 40.7 | 34.1 | 28.7 | 39.5 | 34.9 | 29.6 | 40.1 |
| 75 to 79 | 32.4 | 27.7 | 37.4 | 30.5 | 26.1 | 35.4 | 31.5 | 27.0 | 36.4 |
| 80 plus | 27.2 | 23.5 | 31.3 | 24.0 | 20.6 | 27.6 | 25.5 | 21.9 | 29.2 |
| Behavioral risks | | | | | | | | | |
| 25 to 29 | 79.8 | 71.4 | 85.7 | 81.1 | 73.4 | 86.6 | 80.2 | 72.1 | 86.0 |
| 30 to 34 | 85.2 | 79.0 | 89.5 | 81.8 | 73.8 | 87.2 | 84.2 | 77.7 | 88.7 |
| 35 to 39 | 86.1 | 80.2 | 90.0 | 81.8 | 74.0 | 87.0 | 84.8 | 78.6 | 89.1 |
| 40 to 44 | 83.3 | 77.4 | 87.5 | 76.9 | 68.7 | 82.6 | 81.4 | 74.8 | 85.8 |
| 45 to 49 | 83.0 | 77.1 | 87.1 | 75.4 | 67.7 | 81.4 | 80.8 | 74.4 | 85.3 |
| 50 to 54 | 82.6 | 77.2 | 86.6 | 72.9 | 64.8 | 78.9 | 79.5 | 73.3 | 84.0 |
| 55 to 59 | 77.6 | 71.5 | 82.4 | 68.3 | 60.1 | 75.0 | 74.6 | 68.0 | 79.9 |
| 60 to 64 | 75.6 | 69.7 | 80.5 | 64.9 | 56.9 | 71.8 | 71.7 | 65.1 | 77.3 |
| 65 to 69 | 69.6 | 62.9 | 75.0 | 60.7 | 52.7 | 67.7 | 66.0 | 58.9 | 72.2 |
| 70 to 74 | 66.6 | 60.4 | 72.2 | 57.6 | 50.1 | 64.4 | 62.7 | 55.6 | 68.8 |
| 75 to 79 | 60.8 | 53.6 | 67.3 | 53.9 | 46.0 | 60.7 | 57.5 | 50.1 | 64.1 |
| 80 plus | 59.3 | 51.9 | 65.8 | 54.3 | 46.6 | 61.2 | 56.5 | 49.1 | 63.2 |

* PAF: population attributable fraction

Table S15. PAF* of IHD deaths by age and sex in upper-middle income countries in 2019

| | males | | | females | | | both | | |
|---|------------------------|-------------|-------------|---------|-------------|-------------|-------|-------------|-------------|
| | value | lower limit | upper limit | value | lower limit | upper limit | value | lower limit | upper limit |
| | Metabolic risks | | | | | | | | |
| 25 to 29 | 93.5 | 86.1 | 98.3 | 91.3 | 82.5 | 97.5 | 93.0 | 85.7 | 98.0 |
| 30 to 34 | 93.7 | 87.2 | 97.7 | 91.8 | 84.5 | 97.1 | 93.3 | 86.9 | 97.4 |
| 35 to 39 | 93.5 | 88.7 | 97.1 | 92.5 | 87.1 | 96.4 | 93.3 | 88.5 | 96.8 |
| 40 to 44 | 92.8 | 87.1 | 96.4 | 92.2 | 86.4 | 96.3 | 92.6 | 87.1 | 96.2 |
| 45 to 49 | 92.4 | 87.3 | 96.0 | 92.4 | 86.9 | 96.3 | 92.4 | 87.3 | 95.9 |
| 50 to 54 | 91.1 | 86.0 | 95.3 | 91.6 | 85.8 | 95.9 | 91.2 | 86.4 | 95.0 |
| 55 to 59 | 90.0 | 84.6 | 94.2 | 90.9 | 85.5 | 94.9 | 90.2 | 85.4 | 94.1 |
| 60 to 64 | 87.6 | 81.9 | 92.6 | 89.0 | 83.1 | 93.8 | 88.1 | 82.8 | 92.7 |
| 65 to 69 | 83.3 | 74.6 | 90.0 | 85.4 | 77.3 | 92.1 | 84.1 | 76.2 | 90.5 |
| 70 to 74 | 80.0 | 70.0 | 88.1 | 82.2 | 72.2 | 90.3 | 80.9 | 72.1 | 88.4 |
| 75 to 79 | 79.6 | 70.5 | 87.4 | 82.4 | 73.6 | 90.1 | 80.9 | 72.7 | 88.4 |
| 80 plus | 77.1 | 65.1 | 87.5 | 79.3 | 67.3 | 88.7 | 78.4 | 67.0 | 88.1 |
| Environmental/occupational risks | | | | | | | | | |
| 25 to 29 | 44.8 | 37.0 | 52.1 | 46.1 | 38.2 | 53.7 | 45.2 | 37.4 | 52.4 |
| 30 to 34 | 43.3 | 36.1 | 51.3 | 44.2 | 36.9 | 51.7 | 43.6 | 36.4 | 51.3 |
| 35 to 39 | 40.5 | 33.2 | 48.1 | 40.4 | 33.4 | 48.0 | 40.5 | 33.3 | 48.1 |
| 40 to 44 | 39.2 | 32.5 | 46.6 | 38.9 | 32.2 | 46.0 | 39.1 | 32.3 | 46.5 |
| 45 to 49 | 37.7 | 31.6 | 44.3 | 37.8 | 31.5 | 44.1 | 37.7 | 31.7 | 44.2 |
| 50 to 54 | 36.6 | 30.3 | 43.2 | 36.8 | 30.6 | 43.1 | 36.7 | 30.3 | 43.2 |
| 55 to 59 | 33.8 | 28.1 | 40.1 | 33.8 | 28.2 | 40.0 | 33.8 | 28.2 | 40.0 |
| 60 to 64 | 31.6 | 26.1 | 37.0 | 31.5 | 25.8 | 36.9 | 31.6 | 26.1 | 37.1 |
| 65 to 69 | 31.3 | 25.9 | 36.2 | 30.5 | 25.0 | 35.5 | 31.0 | 25.6 | 35.7 |
| 70 to 74 | 30.6 | 25.6 | 35.7 | 29.0 | 23.9 | 34.2 | 29.9 | 24.9 | 35.0 |

| | | | | | | | | | |
|----------|------|------|------|------|------|------|------|------|------|
| 75 to 79 | 29.2 | 24.9 | 33.7 | 26.7 | 22.4 | 31.3 | 28.0 | 23.8 | 32.6 |
| 80 plus | 25.4 | 22.0 | 29.2 | 22.0 | 18.8 | 25.6 | 23.4 | 20.2 | 27.1 |

Behavioral risks

| | | | | | | | | | |
|----------|------|------|------|------|------|------|------|------|------|
| 25 to 29 | 79.3 | 69.9 | 85.3 | 80.8 | 72.5 | 86.3 | 79.7 | 70.6 | 85.6 |
| 30 to 34 | 88.0 | 82.8 | 91.5 | 83.5 | 76.1 | 88.2 | 87.0 | 81.4 | 90.7 |
| 35 to 39 | 89.1 | 84.2 | 92.1 | 83.7 | 77.1 | 88.3 | 87.9 | 82.8 | 91.2 |
| 40 to 44 | 86.9 | 82.4 | 90.3 | 79.4 | 72.2 | 84.6 | 85.3 | 80.2 | 88.9 |
| 45 to 49 | 86.9 | 82.5 | 90.3 | 78.5 | 71.3 | 83.8 | 84.9 | 80.1 | 88.7 |
| 50 to 54 | 86.2 | 81.7 | 89.6 | 77.2 | 69.9 | 82.6 | 83.9 | 78.8 | 87.8 |
| 55 to 59 | 82.3 | 77.1 | 86.4 | 72.7 | 65.5 | 79.0 | 79.6 | 74.1 | 84.1 |
| 60 to 64 | 80.6 | 75.3 | 84.9 | 69.7 | 62.1 | 76.0 | 77.1 | 71.3 | 81.9 |
| 65 to 69 | 75.8 | 69.7 | 81.3 | 64.9 | 57.0 | 72.1 | 71.7 | 65.0 | 77.6 |
| 70 to 74 | 72.5 | 66.5 | 77.9 | 60.8 | 52.7 | 68.6 | 67.5 | 61.0 | 73.6 |
| 75 to 79 | 65.4 | 58.3 | 72.1 | 56.1 | 48.6 | 63.5 | 61.1 | 53.8 | 68.0 |
| 80 plus | 60.7 | 53.4 | 67.9 | 55.1 | 47.4 | 62.4 | 57.4 | 50.1 | 64.5 |

* PAF: population attributable fraction

Table S16. PAF* of IHD DALYs[§] by age and sex in low-income countries in 2019

| | males | | | females | | | both | | |
|---|-------|-------------|-------------|---------|-------------|-------------|-------|-------------|-------------|
| | value | lower limit | upper limit | value | lower limit | upper limit | value | lower limit | upper limit |
| Metabolic risks | | | | | | | | | |
| 25 to 29 | 88.1 | 77.6 | 95.5 | 86.9 | 76.6 | 94.6 | 87.7 | 77.6 | 95.0 |
| 30 to 34 | 87.9 | 79.2 | 94.6 | 87.8 | 79.1 | 94.6 | 87.9 | 79.3 | 94.3 |
| 35 to 39 | 87.3 | 80.0 | 93.0 | 87.8 | 80.4 | 93.3 | 87.4 | 80.4 | 93.0 |
| 40 to 44 | 86.5 | 79.2 | 92.2 | 87.8 | 80.6 | 93.0 | 87.0 | 79.8 | 92.3 |
| 45 to 49 | 86.6 | 79.8 | 92.0 | 88.6 | 82.2 | 93.4 | 87.3 | 80.8 | 92.4 |
| 50 to 54 | 85.6 | 79.4 | 91.0 | 88.1 | 82.3 | 92.6 | 86.5 | 80.6 | 91.5 |
| 55 to 59 | 83.9 | 78.1 | 89.2 | 86.4 | 80.7 | 91.3 | 84.8 | 79.3 | 89.9 |
| 60 to 64 | 81.5 | 75.0 | 87.2 | 84.3 | 78.5 | 89.6 | 82.6 | 76.4 | 88.0 |
| 65 to 69 | 78.4 | 69.7 | 85.9 | 80.3 | 71.5 | 87.1 | 79.2 | 70.5 | 86.5 |
| 70 to 74 | 75.4 | 64.9 | 84.2 | 76.7 | 67.0 | 85.1 | 76.0 | 66.3 | 84.4 |
| 75 to 79 | 75.5 | 66.6 | 84.1 | 76.6 | 68.0 | 84.7 | 76.1 | 67.8 | 84.5 |
| 80 plus | 72.9 | 59.9 | 85.8 | 74.1 | 62.0 | 86.1 | 73.6 | 61.2 | 85.6 |
| Environmental/occupational risks | | | | | | | | | |
| 25 to 29 | 59.1 | 50.6 | 66.6 | 59.4 | 50.9 | 67.7 | 59.2 | 50.7 | 67.2 |
| 30 to 34 | 57.6 | 49.1 | 65.3 | 58.0 | 49.1 | 66.6 | 57.7 | 49.1 | 65.6 |
| 35 to 39 | 55.7 | 47.4 | 63.4 | 56.0 | 47.3 | 64.6 | 55.8 | 47.4 | 63.7 |
| 40 to 44 | 54.2 | 45.7 | 61.9 | 54.3 | 45.2 | 63.4 | 54.2 | 45.5 | 62.4 |
| 45 to 49 | 52.7 | 44.9 | 60.4 | 52.8 | 44.1 | 61.4 | 52.7 | 44.7 | 60.9 |
| 50 to 54 | 50.5 | 42.8 | 58.2 | 50.3 | 41.9 | 59.9 | 50.4 | 42.5 | 58.9 |
| 55 to 59 | 48.5 | 41.1 | 57.2 | 48.4 | 40.1 | 59.6 | 48.4 | 40.7 | 58.1 |
| 60 to 64 | 46.0 | 38.5 | 54.2 | 45.6 | 37.2 | 56.7 | 45.8 | 38.1 | 55.3 |
| 65 to 69 | 43.7 | 36.8 | 52.5 | 43.2 | 35.5 | 55.5 | 43.5 | 36.4 | 54.0 |

| | | | | | | | | | |
|-------------------------|------|------|------|------|------|------|------|------|------|
| 70 to 74 | 41.4 | 34.1 | 50.6 | 40.9 | 32.2 | 53.6 | 41.2 | 33.3 | 52.0 |
| 75 to 79 | 38.5 | 31.9 | 47.6 | 37.5 | 29.9 | 49.1 | 37.9 | 30.8 | 48.1 |
| 80 plus | 33.7 | 28.6 | 40.1 | 31.9 | 26.8 | 39.6 | 32.7 | 27.7 | 39.9 |
| Behavioral risks | | | | | | | | | |
| 25 to 29 | 78.3 | 69.3 | 84.4 | 80.0 | 71.5 | 85.8 | 78.9 | 70.2 | 84.9 |
| 30 to 34 | 81.8 | 74.4 | 86.8 | 80.3 | 71.5 | 85.9 | 81.3 | 73.4 | 86.4 |
| 35 to 39 | 82.7 | 75.5 | 87.3 | 79.8 | 71.1 | 85.4 | 81.8 | 74.4 | 86.6 |
| 40 to 44 | 79.1 | 72.0 | 84.1 | 74.5 | 65.6 | 80.4 | 77.5 | 69.9 | 82.7 |
| 45 to 49 | 79.3 | 72.3 | 83.9 | 74.2 | 65.7 | 80.4 | 77.5 | 70.0 | 82.5 |
| 50 to 54 | 77.3 | 70.5 | 82.1 | 71.3 | 63.0 | 77.6 | 75.1 | 67.7 | 80.3 |
| 55 to 59 | 71.9 | 64.8 | 77.6 | 66.1 | 57.3 | 73.3 | 69.8 | 62.0 | 76.0 |
| 60 to 64 | 68.9 | 61.6 | 75.5 | 62.2 | 53.7 | 69.8 | 66.3 | 58.9 | 73.2 |
| 65 to 69 | 64.3 | 56.7 | 71.3 | 58.6 | 50.2 | 66.8 | 61.8 | 54.0 | 69.5 |
| 70 to 74 | 61.0 | 53.6 | 68.1 | 55.4 | 47.5 | 63.3 | 58.3 | 50.7 | 65.7 |
| 75 to 79 | 56.1 | 48.2 | 63.9 | 51.7 | 44.0 | 59.8 | 53.8 | 46.0 | 62.0 |
| 80 plus | 55.3 | 47.5 | 62.9 | 51.9 | 44.0 | 59.5 | 53.3 | 45.6 | 60.8 |

* PAF: population attributable fraction

§ DALY: disability adjusted life years

Table S17. PAF* of IHD DALYs[§] by age and sex in lower-middle income countries in 2019

| | males | | | females | | | both | | |
|------------------------|-------|-------------|-------------|---------|-------------|-------------|-------|-------------|-------------|
| | value | lower limit | upper limit | value | lower limit | upper limit | value | lower limit | upper limit |
| Metabolic risks | | | | | | | | | |
| 25 to 29 | 90.6 | 81.5 | 96.8 | 87.5 | 77.9 | 94.9 | 89.6 | 80.4 | 96.0 |
| 30 to 34 | 90.7 | 83.4 | 95.9 | 88.9 | 80.8 | 94.6 | 90.2 | 82.8 | 95.5 |
| 35 to 39 | 90.3 | 84.4 | 94.8 | 89.6 | 83.5 | 94.2 | 90.1 | 84.3 | 94.6 |
| 40 to 44 | 89.3 | 83.2 | 93.8 | 89.2 | 83.4 | 93.8 | 89.3 | 83.3 | 93.8 |
| 45 to 49 | 89.2 | 83.5 | 93.7 | 89.7 | 84.2 | 93.9 | 89.3 | 83.7 | 93.6 |
| 50 to 54 | 88.4 | 83.1 | 92.8 | 89.6 | 84.6 | 93.4 | 88.7 | 83.7 | 93.0 |
| 55 to 59 | 87.7 | 82.7 | 92.2 | 89.2 | 85.1 | 93.1 | 88.2 | 83.4 | 92.4 |
| 60 to 64 | 86.0 | 80.5 | 90.9 | 87.9 | 83.1 | 92.2 | 86.7 | 81.4 | 91.4 |
| 65 to 69 | 82.4 | 74.5 | 89.4 | 84.7 | 77.8 | 90.6 | 83.3 | 75.7 | 89.9 |
| 70 to 74 | 79.4 | 70.0 | 87.5 | 82.2 | 73.7 | 89.3 | 80.6 | 71.6 | 88.4 |
| 75 to 79 | 79.5 | 71.1 | 87.4 | 82.5 | 75.6 | 89.4 | 80.9 | 73.3 | 88.4 |
| 80 plus | 77.4 | 64.7 | 89.5 | 80.4 | 68.4 | 90.6 | 79.0 | 66.8 | 89.9 |

Environmental/occupational risks

| | | | | | | | | | |
|----------|------|------|------|------|------|------|------|------|------|
| 25 to 29 | 52.9 | 45.1 | 60.0 | 54.2 | 46.5 | 61.3 | 53.3 | 45.6 | 60.5 |
| 30 to 34 | 51.8 | 43.5 | 59.2 | 52.2 | 44.1 | 59.6 | 51.9 | 43.7 | 59.4 |
| 35 to 39 | 49.7 | 42.0 | 57.0 | 50.2 | 42.4 | 57.5 | 49.8 | 42.2 | 57.2 |
| 40 to 44 | 47.7 | 40.9 | 54.9 | 48.5 | 41.1 | 55.7 | 48.0 | 40.9 | 55.0 |
| 45 to 49 | 46.2 | 39.6 | 52.7 | 46.3 | 39.6 | 52.9 | 46.2 | 39.6 | 52.7 |
| 50 to 54 | 44.3 | 37.6 | 50.5 | 44.6 | 37.8 | 50.9 | 44.4 | 37.8 | 50.6 |
| 55 to 59 | 42.2 | 36.3 | 48.2 | 42.3 | 36.0 | 48.4 | 42.3 | 36.2 | 48.3 |
| 60 to 64 | 39.4 | 33.2 | 45.3 | 39.5 | 33.4 | 45.7 | 39.5 | 33.2 | 45.4 |
| 65 to 69 | 37.3 | 31.8 | 42.3 | 36.9 | 31.3 | 42.3 | 37.2 | 31.7 | 42.2 |
| 70 to 74 | 35.3 | 30.0 | 40.6 | 34.1 | 28.7 | 39.5 | 34.8 | 29.5 | 40.1 |
| 75 to 79 | 32.4 | 27.7 | 37.3 | 30.5 | 26.0 | 35.3 | 31.5 | 26.9 | 36.3 |
| 80 plus | 27.6 | 23.6 | 31.8 | 24.6 | 21.2 | 28.4 | 25.9 | 22.4 | 29.9 |

Behavioral risks

| | | | | | | | | | |
|----------|------|------|------|------|------|------|------|------|------|
| 25 to 29 | 79.8 | 71.4 | 85.6 | 81.1 | 73.4 | 86.5 | 80.2 | 72.0 | 85.9 |
| 30 to 34 | 85.2 | 79.0 | 89.5 | 81.7 | 73.8 | 87.1 | 84.2 | 77.7 | 88.7 |
| 35 to 39 | 86.0 | 80.2 | 90.0 | 81.7 | 73.9 | 86.9 | 84.8 | 78.6 | 89.1 |
| 40 to 44 | 83.3 | 77.4 | 87.5 | 76.8 | 68.7 | 82.6 | 81.3 | 74.7 | 85.8 |

| | | | | | | | | | |
|----------|------|------|------|------|------|------|------|------|------|
| 45 to 49 | 83.0 | 77.1 | 87.1 | 75.3 | 67.6 | 81.3 | 80.7 | 74.3 | 85.3 |
| 50 to 54 | 82.6 | 77.2 | 86.6 | 72.8 | 64.8 | 78.8 | 79.5 | 73.2 | 84.0 |
| 55 to 59 | 77.6 | 71.5 | 82.4 | 68.3 | 60.0 | 75.0 | 74.6 | 68.0 | 79.8 |
| 60 to 64 | 75.5 | 69.7 | 80.5 | 64.8 | 56.8 | 71.8 | 71.6 | 65.0 | 77.2 |
| 65 to 69 | 69.5 | 62.9 | 75.0 | 60.7 | 52.6 | 67.6 | 66.0 | 58.8 | 72.1 |
| 70 to 74 | 66.6 | 60.4 | 72.2 | 57.6 | 50.1 | 64.4 | 62.7 | 55.6 | 68.8 |
| 75 to 79 | 60.8 | 53.6 | 67.2 | 53.8 | 46.0 | 60.7 | 57.4 | 50.0 | 64.0 |
| 80 plus | 59.6 | 52.3 | 66.1 | 54.3 | 46.6 | 61.3 | 56.8 | 49.5 | 63.4 |

* PAF: population attributable fraction

§ DALY: disability adjusted life years

Table S18. PAF* of IHD DALYs[§] by age and sex in upper-middle income countries in 2019

| | males | | | females | | | both | | |
|---|-------|-------------|-------------|---------|-------------|-------------|-------|-------------|-------------|
| | value | lower limit | upper limit | value | lower limit | upper limit | value | lower limit | upper limit |
| Metabolic risks | | | | | | | | | |
| 25 to 29 | 93.5 | 86.1 | 98.3 | 91.2 | 82.4 | 97.4 | 92.9 | 85.7 | 98.0 |
| 30 to 34 | 93.7 | 87.2 | 97.7 | 91.7 | 84.4 | 97.1 | 93.2 | 86.9 | 97.4 |
| 35 to 39 | 93.5 | 88.7 | 97.1 | 92.4 | 86.9 | 96.4 | 93.3 | 88.4 | 96.8 |
| 40 to 44 | 92.7 | 87.0 | 96.4 | 92.1 | 86.2 | 96.3 | 92.6 | 87.0 | 96.2 |
| 45 to 49 | 92.3 | 87.2 | 96.0 | 92.3 | 86.6 | 96.2 | 92.3 | 87.3 | 95.9 |
| 50 to 54 | 91.0 | 86.0 | 95.2 | 91.5 | 85.6 | 95.9 | 91.1 | 86.3 | 95.0 |
| 55 to 59 | 89.9 | 84.5 | 94.1 | 90.8 | 85.2 | 94.9 | 90.2 | 85.3 | 94.0 |
| 60 to 64 | 87.6 | 81.8 | 92.5 | 88.9 | 82.8 | 93.8 | 88.0 | 82.6 | 92.7 |
| 65 to 69 | 83.2 | 74.6 | 90.0 | 85.3 | 77.1 | 92.1 | 84.0 | 76.1 | 90.5 |
| 70 to 74 | 79.9 | 70.0 | 88.1 | 82.1 | 72.1 | 90.3 | 80.9 | 72.1 | 88.4 |
| 75 to 79 | 79.6 | 70.5 | 87.4 | 82.3 | 73.5 | 90.2 | 80.9 | 72.6 | 88.3 |
| 80 plus | 77.1 | 65.0 | 87.6 | 79.3 | 67.7 | 89.0 | 78.4 | 67.0 | 88.1 |
| Environmental/occupational risks | | | | | | | | | |

| | | | | | | | | | |
|----------|------|------|------|------|------|------|------|------|------|
| 25 to 29 | 44.8 | 37.0 | 52.1 | 46.1 | 38.1 | 53.7 | 45.1 | 37.4 | 52.4 |
| 30 to 34 | 43.3 | 36.1 | 51.3 | 44.2 | 36.9 | 51.7 | 43.5 | 36.4 | 51.3 |
| 35 to 39 | 40.5 | 33.2 | 48.1 | 40.5 | 33.4 | 48.1 | 40.5 | 33.3 | 48.1 |
| 40 to 44 | 39.1 | 32.5 | 46.6 | 38.9 | 32.3 | 46.0 | 39.1 | 32.3 | 46.5 |
| 45 to 49 | 37.7 | 31.7 | 44.3 | 37.8 | 31.5 | 44.1 | 37.7 | 31.7 | 44.2 |
| 50 to 54 | 36.6 | 30.2 | 43.2 | 36.8 | 30.4 | 43.1 | 36.6 | 30.3 | 43.2 |
| 55 to 59 | 33.8 | 28.1 | 40.0 | 33.8 | 28.3 | 40.0 | 33.8 | 28.2 | 39.9 |
| 60 to 64 | 31.6 | 26.1 | 37.0 | 31.4 | 25.8 | 36.9 | 31.6 | 26.1 | 37.0 |
| 65 to 69 | 31.2 | 25.9 | 36.1 | 30.3 | 24.9 | 35.3 | 30.8 | 25.5 | 35.6 |
| 70 to 74 | 30.4 | 25.4 | 35.6 | 28.8 | 23.7 | 34.0 | 29.7 | 24.7 | 34.9 |
| 75 to 79 | 29.0 | 24.7 | 33.5 | 26.5 | 22.3 | 31.1 | 27.8 | 23.6 | 32.3 |
| 80 plus | 25.7 | 22.2 | 29.5 | 22.3 | 19.1 | 26.0 | 23.8 | 20.5 | 27.6 |

Behavioral risks

| | | | | | | | | | |
|----------|------|------|------|------|------|------|------|------|------|
| 25 to 29 | 79.3 | 69.8 | 85.3 | 80.6 | 72.4 | 86.2 | 79.6 | 70.5 | 85.5 |
| 30 to 34 | 88.0 | 82.8 | 91.5 | 83.3 | 75.9 | 88.1 | 86.9 | 81.3 | 90.6 |
| 35 to 39 | 89.0 | 84.2 | 92.1 | 83.5 | 76.9 | 88.2 | 87.9 | 82.6 | 91.2 |
| 40 to 44 | 86.9 | 82.3 | 90.3 | 79.1 | 71.9 | 84.4 | 85.2 | 80.0 | 88.9 |

| | | | | | | | | | |
|----------|------|------|------|------|------|------|------|------|------|
| 45 to 49 | 86.9 | 82.5 | 90.3 | 78.2 | 71.0 | 83.5 | 84.8 | 80.0 | 88.6 |
| 50 to 54 | 86.2 | 81.7 | 89.6 | 76.9 | 69.5 | 82.3 | 83.8 | 78.7 | 87.7 |
| 55 to 59 | 82.3 | 77.1 | 86.4 | 72.4 | 65.2 | 78.8 | 79.5 | 74.0 | 84.0 |
| 60 to 64 | 80.6 | 75.3 | 84.9 | 69.5 | 62.0 | 75.8 | 76.9 | 71.1 | 81.8 |
| 65 to 69 | 75.8 | 69.7 | 81.3 | 64.7 | 56.8 | 71.9 | 71.5 | 64.9 | 77.5 |
| 70 to 74 | 72.4 | 66.4 | 77.9 | 60.6 | 52.5 | 68.5 | 67.4 | 60.8 | 73.6 |
| 75 to 79 | 65.4 | 58.2 | 72.0 | 56.0 | 48.5 | 63.5 | 61.0 | 53.8 | 67.9 |
| 80 plus | 61.2 | 54.1 | 68.4 | 55.3 | 47.6 | 62.6 | 57.8 | 50.7 | 64.9 |

* PAF: population attributable fraction

§ DALY: disability adjusted life years

Table S19. PAF* of IHD DALYs§ for modifiable risk factors in 31 low-income countries in 2019

| | a | b | c | d | e | f | g | h | i | j | k | l | m | n | o | p | q | r | s | t | u | v | w | x | y | z | ab | ac | ad | ae | af |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Air pollution | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 34.9 | 28.9 | 36.8 | 23.2 | 32.2 | 39.5 | 37.1 | 42.6 | 38.5 | 40.8 | 37.4 | 37.8 | 39.6 | 38.1 | 39.0 | 37.1 | 47.5 | 36.1 | 37.2 | 37.5 | 40.1 | 40.6 | 37.2 | 38.8 | 40.5 | 38.6 | 39.5 | 43.5 | 38.8 | 38.1 | 38.1 |
| lower limit | 31.8 | 21.9 | 33.6 | 19.3 | 26.5 | 35.5 | 34.2 | 38.2 | 35.1 | 36.7 | 33.6 | 34.0 | 36.3 | 34.8 | 35.2 | 34.0 | 39.4 | 33.1 | 34.0 | 34.1 | 35.6 | 35.7 | 34.0 | 34.8 | 36.8 | 35.1 | 34.5 | 36.6 | 35.1 | 34.9 | 34.8 |
| upper limit | 38.1 | 35.2 | 40.2 | 27.2 | 37.8 | 44.1 | 40.4 | 48.8 | 42.5 | 47.0 | 41.4 | 42.8 | 42.9 | 41.9 | 44.3 | 40.5 | 61.5 | 39.4 | 40.6 | 41.6 | 47.3 | 48.1 | 41.1 | 44.2 | 45.3 | 42.8 | 46.9 | 54.6 | 43.9 | 41.6 | 41.9 |
| Ambient particulate matter pollution | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 14.7 | 18.9 | 5.1 | 23.1 | 17.9 | 9.8 | 17.6 | 5.5 | 6.6 | 4.0 | 10.5 | 5.5 | 4.2 | 4.1 | 3.0 | 7.6 | 1.4 | 5.6 | 6.9 | 7.7 | 5.4 | 5.3 | 9.6 | 6.3 | 7.7 | 7.9 | 5.3 | 4.7 | 6.8 | 9.9 | 6.5 |
| lower limit | 9.4 | 10.1 | 1.9 | 19.2 | 9.4 | 4.4 | 11.1 | 1.7 | 2.7 | 1.4 | 4.7 | 2.8 | 1.9 | 1.7 | 1.3 | 3.3 | 0.3 | 2.8 | 3.5 | 3.6 | 1.9 | 2.0 | 4.8 | 2.7 | 3.3 | 3.8 | 1.9 | 1.3 | 3.0 | 4.9 | 2.8 |
| upper limit | 20.7 | 27.7 | 10.2 | 27.2 | 26.3 | 17.4 | 24.1 | 11.9 | 12.0 | 8.8 | 18.4 | 9.5 | 7.6 | 7.7 | 6.2 | 13.6 | 4.3 | 9.6 | 12.0 | 13.5 | 11.1 | 11.4 | 16.1 | 12.0 | 13.9 | 14.0 | 11.0 | 11.6 | 12.4 | 15.9 | 12.0 |
| Household air pollution from solid fuels | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 20.2 | 10.0 | 31.7 | 0.0 | 14.4 | 29.7 | 19.5 | 37.1 | 31.9 | 36.8 | 26.9 | 32.3 | 35.4 | 34.0 | 36.0 | 29.5 | 46.1 | 30.5 | 30.3 | 29.8 | 34.8 | 35.2 | 27.6 | 32.6 | 32.8 | 30.6 | 34.2 | 38.8 | 32.0 | 28.2 | 31.5 |
| lower limit | 14.0 | 5.4 | 26.4 | 0.0 | 8.7 | 22.1 | 12.7 | 29.0 | 25.5 | 29.6 | 19.6 | 26.3 | 30.3 | 28.6 | 30.6 | 22.5 | 35.5 | 25.1 | 24.5 | 23.0 | 26.2 | 26.6 | 20.8 | 25.3 | 24.8 | 23.4 | 25.7 | 27.5 | 24.9 | 21.6 | 25.0 |
| upper limit | 26.2 | 15.5 | 36.4 | 0.1 | 20.9 | 37.0 | 26.7 | 45.6 | 37.8 | 44.8 | 33.6 | 39.2 | 40.1 | 39.5 | 42.5 | 35.4 | 60.9 | 35.5 | 36.0 | 36.3 | 44.0 | 44.8 | 34.3 | 40.6 | 40.1 | 37.5 | 43.6 | 51.8 | 39.3 | 34.7 | 37.9 |
| Other environmental risks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 3.3 | 5.2 | 8.1 | 5.4 | 11.2 | 12.1 | 7.3 | 4.5 | 3.8 | 3.8 | 3.1 | 5.4 | 3.3 | 4.3 | 5.8 | 3.4 | 6.0 | 3.6 | 3.9 | 4.5 | 5.9 | 5.9 | 4.0 | 4.9 | 4.4 | 4.5 | 5.7 | 6.9 | 4.1 | 3.1 | 4.4 |
| lower limit | 1.4 | 3.0 | 5.5 | 3.1 | 8.2 | 9.1 | 5.0 | 2.3 | 1.8 | 1.9 | 1.2 | 3.3 | 1.4 | 2.1 | 3.5 | 1.4 | 3.7 | 1.7 | 2.0 | 2.4 | 3.7 | 3.7 | 1.9 | 2.8 | 2.3 | 2.4 | 3.5 | 4.6 | 2.1 | 1.1 | 2.3 |
| upper limit | 5.4 | 7.6 | 10.8 | 7.7 | 14.0 | 15.2 | 10.0 | 6.8 | 5.9 | 6.0 | 5.2 | 7.8 | 5.4 | 6.4 | 8.1 | 5.5 | 8.4 | 5.7 | 6.1 | 6.7 | 8.2 | 8.2 | 6.1 | 7.2 | 6.7 | 6.7 | 8.0 | 9.4 | 6.2 | 5.2 | 6.6 |
| Lead exposure | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 3.3 | 5.2 | 8.1 | 5.4 | 11.2 | 12.1 | 7.3 | 4.5 | 3.8 | 3.8 | 3.1 | 5.4 | 3.3 | 4.3 | 5.8 | 3.4 | 6.0 | 3.6 | 3.9 | 4.5 | 5.9 | 5.9 | 4.0 | 4.9 | 4.4 | 4.5 | 5.7 | 6.9 | 4.1 | 3.1 | 4.4 |
| lower limit | 1.4 | 3.0 | 5.5 | 3.1 | 8.2 | 9.1 | 5.0 | 2.3 | 1.8 | 1.9 | 1.2 | 3.3 | 1.4 | 2.1 | 3.5 | 1.4 | 3.7 | 1.7 | 2.0 | 2.4 | 3.7 | 3.7 | 1.9 | 2.8 | 2.3 | 2.4 | 3.5 | 4.6 | 2.1 | 1.1 | 2.3 |
| upper limit | 5.4 | 7.6 | 10.8 | 7.7 | 14.0 | 15.2 | 10.0 | 6.8 | 5.9 | 6.0 | 5.2 | 7.8 | 5.4 | 6.4 | 8.1 | 5.5 | 8.4 | 5.7 | 6.1 | 6.7 | 8.2 | 8.2 | 6.1 | 7.2 | 6.7 | 6.7 | 8.0 | 9.4 | 6.2 | 5.2 | 6.6 |
| Tobacco | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 33.0 | 25.0 | 13.4 | 33.4 | 37.1 | 23.3 | 29.3 | 16.2 | 11.7 | 14.3 | 15.7 | 6.9 | 16.0 | 18.2 | 17.2 | 22.8 | 17.4 | 23.8 | 13.4 | 13.7 | 13.4 | 14.9 | 19.1 | 19.6 | 12.3 | 13.3 | 12.7 | 10.5 | 20.3 | 20.4 | 16.4 |
| lower limit | 30.3 | 23.0 | 12.0 | 31.4 | 34.9 | 21.0 | 27.3 | 14.0 | 10.0 | 12.2 | 13.2 | 6.1 | 14.0 | 15.6 | 15.1 | 19.7 | 14.7 | 21.6 | 11.4 | 12.1 | 11.7 | 12.7 | 17.2 | 17.4 | 11.0 | 11.7 | 11.1 | 9.1 | 18.2 | 18.3 | 13.7 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|
| | upper limit | 35.8 | 27.3 | 14.9 | 35.5 | 39.6 | 25.7 | 31.2 | 18.7 | 13.5 | 16.5 | 18.3 | 7.9 | 17.9 | 21.0 | 19.5 | 26.1 | 20.2 | 26.0 | 15.5 | 15.5 | 15.1 | 17.4 | 20.9 | 21.8 | 13.7 | 15.0 | 14.4 | 11.9 | 22.5 | 22.4 | 19.1 | |
| | Smoking | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | value | 27.9 | 21.1 | 11.0 | 28.6 | 31.8 | 16.8 | 25.7 | 13.4 | 10.0 | 12.2 | 12.8 | 5.4 | 12.9 | 15.7 | 14.7 | 20.4 | 14.3 | 21.1 | 11.0 | 10.9 | 10.2 | 11.9 | 14.5 | 16.3 | 8.4 | 10.7 | 9.7 | 7.3 | 16.3 | 17.2 | 13.6 | |
| | lower limit | 25.1 | 19.1 | 9.7 | 26.8 | 29.5 | 14.9 | 23.9 | 11.3 | 8.3 | 10.2 | 10.4 | 4.6 | 11.0 | 12.9 | 12.7 | 17.2 | 11.5 | 18.8 | 9.1 | 9.4 | 8.7 | 9.7 | 12.8 | 14.2 | 7.4 | 9.3 | 8.2 | 6.2 | 14.3 | 15.2 | 10.9 | |
| | upper limit | 30.8 | 23.3 | 12.4 | 30.6 | 34.2 | 18.8 | 27.5 | 15.9 | 11.8 | 14.4 | 15.5 | 6.2 | 14.7 | 18.5 | 17.1 | 23.9 | 17.2 | 23.3 | 13.1 | 12.6 | 12.0 | 14.3 | 16.2 | 18.6 | 9.5 | 12.4 | 11.2 | 8.6 | 18.4 | 19.1 | 16.3 | |
| | Secondhand smoke | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | value | 6.7 | 5.1 | 2.7 | 6.9 | 7.9 | 7.8 | 4.8 | 3.2 | 1.9 | 2.4 | 3.4 | 1.7 | 3.6 | 3.0 | 2.9 | 3.0 | 3.6 | 3.6 | 2.7 | 3.2 | 3.6 | 3.4 | 5.3 | 3.9 | 4.3 | 2.9 | 3.4 | 3.4 | 4.8 | 3.9 | 3.3 | |
| | lower limit | 5.5 | 4.1 | 2.1 | 5.6 | 6.5 | 6.2 | 3.8 | 2.5 | 1.4 | 1.8 | 2.6 | 1.2 | 2.6 | 2.3 | 2.2 | 2.4 | 2.7 | 2.8 | 2.0 | 2.5 | 2.7 | 2.7 | 4.3 | 3.1 | 3.4 | 2.3 | 2.6 | 2.7 | 3.7 | 3.2 | 2.5 | |
| | upper limit | 8.0 | 6.1 | 3.4 | 8.3 | 9.4 | 9.5 | 5.9 | 4.1 | 2.5 | 3.1 | 4.2 | 2.1 | 4.6 | 3.7 | 3.8 | 3.7 | 4.5 | 4.4 | 3.4 | 4.0 | 4.5 | 4.3 | 6.5 | 4.8 | 5.3 | 3.7 | 4.3 | 4.2 | 6.0 | 4.9 | 4.1 | |
| | Alcohol use | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | value | -1.5 | -1.8 | -0.9 | -0.1 | -0.2 | -0.2 | -2.3 | -4.0 | -3.8 | -1.0 | -3.2 | -3.3 | -3.3 | -1.8 | -4.2 | -2.2 | 0.0 | -0.4 | -0.4 | -1.9 | -3.5 | -1.1 | -1.8 | -1.2 | -1.5 | -1.6 | -0.6 | -1.3 | -1.3 | -1.8 | -1.6 | |
| | lower limit | -3.3 | -3.1 | -2.7 | -0.3 | -0.4 | -0.3 | -4.0 | -5.9 | -5.5 | -3.7 | -4.8 | -5.1 | -5.0 | -3.4 | -6.2 | -5.3 | 0.0 | -3.1 | -3.4 | -3.2 | -6.5 | -2.6 | -3.1 | -1.9 | -3.0 | -3.3 | -1.2 | -2.0 | -3.0 | -3.2 | -2.6 | |
| | upper limit | 0.4 | -0.4 | 1.0 | 0.2 | 0.1 | -0.1 | -0.3 | -1.9 | -2.0 | 2.0 | -1.6 | -1.3 | -1.5 | -0.2 | -2.1 | 1.2 | 0.0 | 2.5 | 3.0 | -0.4 | 0.1 | 1.0 | -0.3 | -0.5 | 0.3 | 0.4 | 0.1 | -0.7 | 0.7 | -0.3 | -0.7 | |
| | Metabolic risks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | value | 78.5 | 84.9 | 87.5 | 87.6 | 83.6 | 86.7 | 78.1 | 82.2 | 81.0 | 76.7 | 75.3 | 67.6 | 79.2 | 83.8 | 83.7 | 72.3 | 75.0 | 84.9 | 77.1 | 82.8 | 73.9 | 78.0 | 84.3 | 80.2 | 82.9 | 85.1 | 77.1 | 79.1 | 84.0 | 83.0 | 79.1 | |
| | lower limit | 72.4 | 79.4 | 82.7 | 83.3 | 78.0 | 81.8 | 71.6 | 75.7 | 74.9 | 69.8 | 68.1 | 59.8 | 72.9 | 78.4 | 78.2 | 63.7 | 67.7 | 79.8 | 70.2 | 76.9 | 65.7 | 71.4 | 78.6 | 73.8 | 77.1 | 79.5 | 70.3 | 72.2 | 78.4 | 77.4 | 72.6 | |
| | upper limit | 84.7 | 90.4 | 92.0 | 92.0 | 88.7 | 91.0 | 84.5 | 87.5 | 86.7 | 82.7 | 81.9 | 75.3 | 85.0 | 88.7 | 88.4 | 80.0 | 82.0 | 89.5 | 83.5 | 88.3 | 81.7 | 84.4 | 89.4 | 86.0 | 88.3 | 90.0 | 83.6 | 85.6 | 88.8 | 88.0 | 85.4 | |
| | High fasting plasma glucose | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | value | 15.2 | 29.3 | 33.3 | 30.9 | 20.6 | 29.7 | 20.1 | 21.4 | 20.8 | 13.0 | 13.2 | 11.3 | 11.5 | 19.7 | 17.2 | 18.0 | 13.5 | 14.9 | 18.8 | 22.0 | 21.6 | 18.4 | 19.1 | 18.6 | 18.1 | 23.3 | 19.5 | 17.0 | 11.2 | 10.8 | 14.8 | |
| | lower limit | 9.9 | 17.2 | 21.0 | 18.9 | 12.4 | 18.7 | 12.6 | 13.0 | 13.1 | 7.9 | 7.9 | 7.2 | 7.2 | 11.0 | 9.7 | 9.5 | 8.0 | 8.6 | 11.3 | 12.6 | 11.7 | 11.3 | 11.2 | 11.0 | 10.7 | 14.2 | 11.0 | 8.6 | 6.8 | 6.7 | 8.9 | |
| | upper limit | 23.6 | 47.0 | 50.2 | 48.1 | 32.0 | 45.0 | 31.5 | 33.5 | 31.4 | 21.0 | 20.9 | 17.3 | 18.0 | 34.0 | 28.9 | 31.6 | 21.6 | 24.4 | 30.1 | 36.4 | 36.4 | 29.4 | 30.7 | 30.8 | 29.2 | 36.6 | 31.8 | 30.8 | 17.6 | 16.3 | 24.3 | |
| | High systolic blood pressure | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | value | 43.8 | 56.8 | 62.5 | 53.3 | 48.7 | 48.7 | 47.5 | 58.6 | 56.0 | 54.5 | 47.6 | 43.0 | 56.4 | 63.5 | 63.4 | 50.1 | 52.1 | 66.5 | 55.2 | 57.6 | 50.8 | 52.2 | 61.9 | 54.7 | 58.9 | 59.9 | 49.0 | 56.2 | 67.0 | 59.2 | 56.1 | |
| | lower limit | 35.5 | 48.5 | 54.8 | 44.9 | 39.9 | 39.6 | 39.7 | 49.4 | 48.2 | 45.9 | 39.0 | 35.3 | 47.9 | 55.7 | 55.7 | 41.4 | 43.3 | 58.3 | 47.7 | 49.4 | 42.6 | 43.3 | 53.2 | 46.7 | 50.7 | 51.7 | 40.6 | 47.4 | 59.1 | 51.0 | 47.9 | |
| | upper limit | 52.2 | 64.8 | 70.2 | 61.2 | 56.9 | 57.4 | 55.6 | 66.5 | 64.1 | 61.9 | 56.2 | 50.6 | 64.4 | 70.7 | 70.6 | 58.3 | 60.9 | 73.5 | 62.8 | 65.4 | 58.7 | 60.0 | 69.7 | 62.6 | 66.9 | 67.1 | 57.1 | 64.7 | 74.2 | 67.0 | 64.3 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| High body-mass index | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 6.6 | 17.3 | 14.2 | 33.8 | 19.3 | 26.7 | 15.7 | 10.8 | 14.8 | 10.3 | 12.4 | 12.9 | 15.5 | 17.8 | 15.9 | 14.9 | 6.5 | 19.7 | 17.5 | 26.2 | 17.2 | 12.6 | 22.8 | 17.2 | 17.7 | 29.6 | 17.6 | 14.1 | 16.5 | 20.5 | 20.9 |
| lower limit | 1.4 | 9.2 | 7.0 | 22.0 | 10.7 | 16.8 | 8.1 | 4.5 | 7.5 | 4.3 | 6.3 | 6.5 | 8.1 | 9.1 | 8.3 | 7.2 | 1.7 | 12.0 | 9.5 | 16.5 | 9.0 | 6.3 | 14.0 | 9.8 | 9.3 | 19.9 | 9.8 | 7.2 | 8.5 | 12.3 | 12.5 |
| upper limit | 15.7 | 26.8 | 22.8 | 46.0 | 28.0 | 37.3 | 24.7 | 19.0 | 23.4 | 18.2 | 19.8 | 21.1 | 23.8 | 27.5 | 24.4 | 23.9 | 14.8 | 28.3 | 26.6 | 36.8 | 27.2 | 20.2 | 32.4 | 25.9 | 27.4 | 40.3 | 26.5 | 22.4 | 25.8 | 30.0 | 30.2 |
| Dietary risks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 57.9 | 64.1 | 52.8 | 52.6 | 65.3 | 67.8 | 58.8 | 59.5 | 55.2 | 54.3 | 58.9 | 59.1 | 61.6 | 50.4 | 56.1 | 48.1 | 62.2 | 48.4 | 45.5 | 52.5 | 55.3 | 61.6 | 55.5 | 52.1 | 57.3 | 58.4 | 54.9 | 48.5 | 53.3 | 56.2 | 51.1 |
| lower limit | 48.4 | 54.9 | 43.0 | 42.0 | 56.5 | 58.5 | 49.0 | 49.2 | 45.4 | 44.0 | 48.8 | 50.3 | 51.6 | 39.5 | 45.6 | 37.2 | 52.0 | 36.8 | 35.4 | 41.7 | 45.2 | 51.8 | 44.8 | 41.5 | 47.0 | 48.4 | 44.9 | 38.9 | 42.5 | 45.7 | 40.6 |
| upper limit | 66.2 | 71.3 | 60.6 | 60.3 | 71.7 | 74.1 | 66.8 | 68.1 | 63.1 | 63.4 | 67.9 | 67.2 | 70.4 | 60.6 | 65.6 | 58.4 | 70.7 | 60.2 | 55.9 | 62.8 | 64.2 | 69.6 | 64.9 | 62.0 | 66.3 | 67.4 | 63.7 | 57.7 | 62.8 | 65.6 | 61.5 |
| Diet low in fruits | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 5.6 | 7.0 | 5.7 | 3.4 | 7.7 | 8.2 | 6.8 | 7.9 | 7.5 | 2.5 | 7.6 | 8.8 | 7.8 | 6.4 | 8.2 | 0.2 | 9.0 | 5.0 | 1.6 | 7.5 | 9.0 | 8.6 | 9.0 | 4.3 | 7.2 | 7.3 | 7.0 | 8.2 | 7.5 | 9.2 | 5.0 |
| lower limit | 1.8 | 2.7 | 1.8 | 1.0 | 3.1 | 3.2 | 2.6 | 3.1 | 3.0 | 0.6 | 2.9 | 4.0 | 3.1 | 2.4 | 3.5 | 0.2 | 3.8 | 1.6 | 0.4 | 3.1 | 4.0 | 3.8 | 4.1 | 1.4 | 2.7 | 2.9 | 2.8 | 3.5 | 3.0 | 4.1 | 1.6 |
| upper limit | 8.4 | 10.3 | 8.7 | 5.8 | 11.2 | 12.0 | 10.1 | 11.4 | 10.8 | 4.5 | 11.0 | 12.6 | 11.3 | 9.5 | 11.7 | 0.3 | 12.8 | 7.7 | 2.9 | 10.8 | 12.9 | 12.3 | 12.8 | 6.8 | 10.5 | 10.7 | 10.1 | 11.7 | 10.8 | 13.1 | 7.7 |
| Diet low in vegetables | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 4.5 | 1.2 | 11.1 | 5.1 | 9.7 | 12.2 | 7.4 | 12.4 | 11.7 | 10.7 | 11.3 | 10.1 | 11.7 | 10.3 | 10.6 | 9.4 | 12.1 | 9.0 | 10.2 | 7.3 | 10.4 | 11.1 | 10.0 | 8.9 | 11.5 | 10.6 | 9.5 | 6.7 | 9.1 | 10.9 | 9.6 |
| lower limit | 1.5 | 0.3 | 7.3 | 2.0 | 5.8 | 7.9 | 3.9 | 8.3 | 7.7 | 6.7 | 7.2 | 6.4 | 7.6 | 6.5 | 6.8 | 5.7 | 8.1 | 5.4 | 6.5 | 3.6 | 6.6 | 7.3 | 6.3 | 5.3 | 7.5 | 6.8 | 5.8 | 3.3 | 5.4 | 6.9 | 5.8 |
| upper limit | 7.0 | 2.3 | 15.0 | 8.0 | 13.4 | 16.5 | 10.8 | 16.7 | 15.7 | 14.5 | 15.2 | 13.8 | 15.8 | 14.0 | 14.3 | 12.8 | 16.4 | 12.4 | 13.9 | 10.6 | 14.2 | 15.1 | 13.7 | 12.4 | 15.6 | 14.3 | 12.8 | 9.9 | 12.7 | 14.8 | 13.2 |
| Diet low in whole grains | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 15.8 | 25.6 | 19.4 | 24.4 | 26.5 | 27.7 | 14.8 | 19.7 | 17.0 | 21.2 | 18.3 | 19.7 | 15.1 | 12.9 | 18.5 | 18.8 | 21.1 | 12.7 | 15.5 | 15.8 | 18.4 | 25.3 | 16.1 | 15.2 | 15.4 | 17.4 | 16.5 | 18.0 | 15.9 | 17.3 | 16.2 |
| lower limit | 5.9 | 10.9 | 6.8 | 10.2 | 11.5 | 11.8 | 5.7 | 7.0 | 6.3 | 7.1 | 6.7 | 6.7 | 6.0 | 5.2 | 6.5 | 6.5 | 7.2 | 5.1 | 5.8 | 5.9 | 6.5 | 10.9 | 5.9 | 5.8 | 6.0 | 6.3 | 6.0 | 6.4 | 6.0 | 6.4 | 6.1 |
| upper limit | 21.3 | 31.1 | 25.1 | 29.7 | 32.3 | 33.9 | 20.0 | 25.9 | 22.6 | 27.1 | 24.2 | 25.4 | 20.8 | 18.2 | 24.4 | 24.3 | 27.1 | 17.7 | 20.9 | 21.2 | 24.0 | 30.9 | 21.4 | 20.5 | 21.1 | 23.0 | 22.0 | 23.7 | 21.3 | 23.0 | 21.9 |
| Diet low in nuts and seeds | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 12.7 | 12.6 | 2.4 | 0.8 | 12.5 | 10.0 | 11.4 | 0.4 | 1.0 | 11.7 | 6.4 | 11.0 | 10.6 | 0.9 | 2.9 | 5.6 | 1.4 | 0.2 | 0.5 | 0.9 | 0.8 | 2.8 | 0.3 | 0.5 | 0.4 | 4.9 | 2.9 | 0.2 | 0.3 | 0.4 | 1.5 |
| lower limit | 8.8 | 7.5 | 0.5 | 0.2 | 7.7 | 4.3 | 5.9 | 0.2 | 0.2 | 8.2 | 2.1 | 5.7 | 4.5 | 0.2 | 0.9 | 1.9 | 0.3 | 0.2 | 0.2 | 0.3 | 0.2 | 0.9 | 0.2 | 0.2 | 0.2 | 1.5 | 0.7 | 0.2 | 0.2 | 0.2 | 0.4 |
| upper limit | 16.7 | 16.5 | 4.9 | 2.1 | 16.6 | 14.3 | 15.3 | 1.1 | 2.6 | 16.0 | 10.2 | 14.9 | 14.9 | 2.5 | 5.2 | 8.9 | 3.4 | 0.4 | 1.2 | 2.0 | 2.1 | 5.1 | 0.8 | 1.4 | 1.2 | 8.0 | 5.3 | 0.4 | 0.7 | 1.3 | 3.4 |
| Diet high in red meat | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 2.6 | 3.1 | 2.6 | 3.4 | 2.7 | 4.2 | 3.3 | 5.8 | 1.2 | 1.0 | 2.8 | 2.4 | 3.4 | 2.0 | 1.9 | 2.0 | 4.4 | 2.4 | 2.9 | 1.9 | 3.6 | 3.6 | 1.8 | 2.3 | 3.8 | 1.8 | 4.3 | 4.3 | 1.5 | 1.9 | 3.1 |

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|----------------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | lower limit | 1.0 | 0.8 | 1.4 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.0 | |
| | upper limit | 8.8 | 9.4 | 9.8 | 10.0 | 10.7 | 11.3 | 13.3 | 8.5 | 8.2 | 8.2 | 8.3 | 7.9 | 8.4 | 8.0 | 8.0 | 7.8 | 8.3 | 7.8 | 7.8 | 8.0 | 7.9 | 7.9 | 7.9 | 7.8 | 8.3 | 8.1 | 7.8 | 7.9 | 8.0 | 8.2 | 0.0 |
| Diet high in sodium | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | value | 15.2 | 6.7 | 4.1 | 2.2 | 2.2 | 2.1 | 6.1 | 4.1 | 2.5 | 8.0 | 7.7 | 8.2 | 7.8 | 8.3 | 8.3 | 8.6 | 7.9 | 12.7 | 8.1 | 6.1 | 5.1 | 5.2 | 5.3 | 5.2 | 5.3 | 5.3 | 5.0 | 5.2 | 5.4 | 5.3 | 0.0 |
| | lower limit | 4.4 | 0.5 | 0.2 | 0.3 | 0.3 | 0.2 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.6 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 |
| | upper limit | 28.2 | 17.9 | 13.9 | 8.4 | 8.3 | 8.0 | 17.0 | 16.7 | 11.2 | 23.8 | 22.7 | 23.1 | 23.4 | 23.4 | 23.9 | 24.1 | 23.2 | 30.9 | 22.8 | 20.7 | 18.8 | 19.1 | 19.6 | 18.8 | 19.1 | 19.4 | 18.7 | 18.9 | 19.3 | 19.1 | 0.0 |
| Low physical activity | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | value | 2.8 | 2.2 | 5.0 | 8.9 | 7.1 | 6.8 | 3.1 | 3.1 | 3.7 | 1.1 | 1.1 | 1.2 | 1.1 | 1.3 | 1.1 | 1.2 | 1.0 | 1.2 | 1.2 | 3.2 | 1.7 | 2.2 | 2.9 | 2.4 | 2.6 | 3.5 | 2.3 | 2.8 | 2.9 | 2.8 | 0.0 |
| | lower limit | 0.8 | 0.7 | 1.4 | 3.5 | 2.5 | 2.3 | 0.9 | 0.8 | 1.0 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.3 | 0.4 | 0.3 | 0.4 | 0.3 | 0.8 | 0.5 | 0.6 | 0.8 | 0.6 | 0.7 | 1.0 | 0.6 | 0.7 | 0.8 | 0.7 | 0.0 |
| | upper limit | 6.9 | 5.5 | 12.0 | 17.0 | 14.8 | 14.9 | 7.3 | 7.8 | 9.0 | 3.9 | 3.9 | 3.9 | 3.8 | 4.2 | 4.0 | 3.9 | 3.7 | 4.0 | 4.0 | 7.9 | 4.7 | 6.0 | 7.4 | 6.2 | 7.0 | 8.6 | 6.2 | 7.2 | 7.4 | 7.4 | 0.0 |
| Environmental/occupational risks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | value | 41.5 | 39.5 | 42.6 | 33.9 | 43.5 | 51.2 | 46.4 | 46.3 | 42.7 | 46.6 | 42.9 | 43.4 | 44.1 | 43.6 | 44.4 | 43.4 | 52.4 | 40.9 | 41.6 | 42.1 | 46.9 | 48.5 | 41.7 | 42.9 | 44.7 | 41.8 | 48.5 | 52.1 | 41.7 | 41.1 | 43.5 |
| | lower limit | 37.2 | 31.5 | 39.2 | 29.5 | 37.6 | 47.2 | 42.9 | 41.6 | 39.0 | 41.9 | 37.3 | 38.9 | 40.8 | 39.9 | 40.3 | 39.7 | 44.3 | 37.4 | 37.9 | 37.0 | 39.1 | 42.0 | 35.9 | 38.7 | 39.0 | 38.1 | 40.1 | 44.3 | 37.8 | 37.0 | 38.4 |
| | upper limit | 45.4 | 46.7 | 46.2 | 38.2 | 48.5 | 55.5 | 50.1 | 52.1 | 46.6 | 52.5 | 47.3 | 48.2 | 47.7 | 47.4 | 49.4 | 47.2 | 65.7 | 44.3 | 45.3 | 46.5 | 54.0 | 56.0 | 46.2 | 48.2 | 49.7 | 45.9 | 56.1 | 62.1 | 46.7 | 44.8 | 47.8 |
| Behavioral risks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | value | 71.1 | 72.5 | 60.6 | 70.1 | 78.8 | 76.1 | 70.7 | 65.2 | 60.0 | 60.4 | 64.0 | 60.8 | 66.4 | 58.6 | 62.1 | 59.2 | 68.4 | 60.3 | 52.6 | 59.1 | 59.8 | 67.1 | 63.6 | 61.3 | 62.5 | 64.2 | 60.8 | 54.1 | 62.5 | 64.9 | 58.5 |
| | lower limit | 65.0 | 65.6 | 52.6 | 63.4 | 73.3 | 69.2 | 64.0 | 56.4 | 51.3 | 51.5 | 55.7 | 52.6 | 57.9 | 49.6 | 53.1 | 50.9 | 59.9 | 51.8 | 43.9 | 49.9 | 50.9 | 58.7 | 55.0 | 52.6 | 53.6 | 55.3 | 52.1 | 45.5 | 54.1 | 56.3 | 49.8 |
| | upper limit | 76.5 | 77.9 | 67.2 | 75.0 | 82.6 | 80.9 | 76.3 | 72.4 | 67.2 | 68.1 | 71.9 | 68.5 | 73.9 | 67.0 | 70.0 | 67.3 | 75.5 | 68.9 | 61.8 | 67.5 | 67.5 | 73.5 | 70.8 | 68.9 | 70.4 | 71.6 | 68.3 | 61.8 | 70.0 | 72.2 | 67.1 |
| Suboptimal temperature | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | value | 7.2 | 10.2 | 1.2 | 9.1 | 6.1 | 8.3 | 7.9 | 2.0 | 3.1 | 6.1 | 5.8 | 3.6 | 4.3 | 4.9 | 3.3 | 6.8 | 3.5 | 4.0 | 3.1 | 2.9 | 5.9 | 7.9 | 3.2 | 1.8 | 2.8 | 0.6 | 9.7 | 9.1 | 0.8 | 1.9 | 4.5 |
| | lower limit | 2.9 | 3.3 | 0.0 | 6.7 | 0.9 | 5.7 | 5.0 | -0.2 | 1.5 | 2.7 | -2.6 | -0.3 | 2.6 | 2.7 | 1.7 | 3.9 | -3.6 | 2.0 | 1.4 | -5.3 | -7.1 | -1.9 | -6.8 | -0.4 | -8.1 | -0.6 | -3.2 | -1.4 | -0.1 | -3.2 | -4.4 |
| | upper limit | 11.4 | 17.6 | 2.5 | 11.5 | 8.9 | 11.1 | 11.0 | 3.4 | 4.8 | 9.8 | 8.6 | 6.0 | 5.9 | 7.3 | 5.1 | 9.9 | 5.3 | 6.3 | 5.2 | 4.9 | 9.4 | 12.0 | 5.3 | 2.9 | 5.1 | 2.3 | 16.1 | 14.7 | 1.8 | 3.5 | 7.5 |
| Diet low in legumes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | value | 10.8 | 19.8 | 11.2 | 13.7 | 16.8 | 20.7 | 14.5 | 17.2 | 17.5 | 0.8 | 13.7 | 8.5 | 18.0 | 9.6 | 13.2 | 0.4 | 19.2 | 5.3 | 3.1 | 13.4 | 11.1 | 14.4 | 17.7 | 15.9 | 19.2 | 18.1 | 13.5 | 2.1 | 13.6 | 14.4 | 9.1 |
| | lower limit | 1.1 | 7.0 | 1.0 | 2.1 | 4.0 | 6.5 | 2.5 | 4.2 | 4.8 | 0.2 | 1.8 | 0.9 | 4.8 | 0.9 | 1.8 | 0.2 | 5.6 | 0.5 | 0.3 | 2.0 | 1.2 | 2.5 | 5.2 | 4.1 | 5.6 | 5.2 | 2.1 | 0.3 | 2.1 | 2.2 | 0.8 |
| | upper limit | 18.1 | 30.0 | 18.6 | 22.8 | 27.6 | 32.4 | 24.3 | 28.3 | 28.2 | 2.0 | 22.6 | 14.4 | 28.9 | 16.2 | 21.6 | 0.7 | 29.8 | 10.0 | 6.4 | 22.2 | 18.5 | 24.0 | 27.6 | 26.4 | 29.9 | 28.7 | 22.4 | 4.4 | 22.6 | 24.0 | 15.4 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| High temperature | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 0.1 | 0.1 | 0.0 | 0.7 | 2.2 | 0.4 | 0.0 | 0.9 | 0.0 | 0.0 | 3.3 | -0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 1.9 | 0.0 | 0.0 | 2.1 | 4.1 | 3.7 | 2.1 | 0.7 | 1.9 | -0.1 | 5.0 | 4.5 | 0.1 | 1.4 | 3.7 |
| lower limit | 0.0 | 0.1 | -0.7 | -0.2 | -1.4 | -0.2 | -0.3 | -1.1 | -0.7 | -0.2 | -3.9 | -4.6 | -0.7 | -0.6 | -0.7 | 0.0 | -5.0 | -0.8 | -0.9 | -5.3 | -7.1 | -3.4 | -7.3 | -1.2 | -8.2 | -1.0 | -3.5 | -3.1 | -0.7 | -3.5 | -4.5 |
| upper limit | 0.3 | 0.2 | 0.6 | 1.6 | 4.1 | 1.1 | 0.3 | 2.1 | 0.6 | 0.0 | 5.9 | 0.9 | 0.5 | 0.4 | 0.7 | 0.0 | 3.6 | 0.5 | 0.6 | 4.1 | 7.4 | 6.6 | 4.0 | 1.8 | 3.9 | 0.5 | 9.0 | 8.1 | 1.1 | 3.2 | 6.6 |
| Low temperature | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 7.0 | 10.1 | 1.2 | 8.5 | 4.1 | 7.9 | 7.9 | 1.1 | 3.1 | 6.1 | 2.6 | 4.3 | 4.2 | 4.9 | 3.3 | 6.8 | 1.6 | 4.1 | 3.2 | 0.8 | 1.8 | 4.3 | 1.1 | 1.1 | 0.9 | 0.8 | 5.0 | 4.8 | 0.6 | 0.5 | 0.8 |
| lower limit | 2.7 | 3.1 | 0.3 | 5.8 | 1.8 | 5.2 | 4.9 | 0.4 | 1.8 | 2.9 | 1.2 | 3.0 | 2.8 | 2.8 | 1.6 | 4.1 | 0.9 | 2.2 | 1.5 | 0.0 | 0.0 | 1.1 | 0.2 | 0.5 | 0.0 | 0.1 | -0.5 | 0.2 | 0.1 | 0.1 | 0.3 |
| upper limit | 11.3 | 17.5 | 2.4 | 11.3 | 6.1 | 10.8 | 11.1 | 2.0 | 4.8 | 9.8 | 3.8 | 5.7 | 5.9 | 7.3 | 5.3 | 9.9 | 2.3 | 6.3 | 5.2 | 1.4 | 3.2 | 7.2 | 1.8 | 1.9 | 1.6 | 2.5 | 10.4 | 9.2 | 1.6 | 0.9 | 1.3 |
| Impaired kidney function | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 11.3 | 10.3 | 12.0 | 16.0 | 12.8 | 12.9 | 11.3 | 7.0 | 7.4 | 7.2 | 7.5 | 7.6 | 7.1 | 7.8 | 7.7 | 7.9 | 7.2 | 8.2 | 7.3 | 9.2 | 8.5 | 8.3 | 9.2 | 8.8 | 8.9 | 9.1 | 8.9 | 8.4 | 8.9 | 9.0 | 7.4 |
| lower limit | 8.0 | 6.8 | 8.9 | 12.6 | 9.8 | 10.0 | 8.3 | 4.5 | 4.8 | 4.7 | 5.0 | 5.0 | 4.7 | 5.2 | 5.2 | 5.3 | 4.8 | 5.5 | 4.8 | 6.5 | 5.9 | 5.7 | 6.4 | 6.1 | 6.3 | 6.3 | 6.1 | 5.8 | 6.2 | 6.3 | 4.8 |
| upper limit | 14.9 | 14.0 | 15.3 | 19.5 | 15.9 | 16.0 | 14.3 | 9.7 | 10.1 | 9.8 | 10.1 | 10.4 | 9.7 | 10.5 | 10.5 | 10.7 | 9.9 | 11.1 | 10.1 | 12.2 | 11.3 | 11.1 | 12.2 | 11.7 | 11.6 | 11.9 | 11.8 | 11.2 | 11.7 | 11.7 | 10.2 |
| High LDL cholesterol | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 51.0 | 46.2 | 47.9 | 52.0 | 53.0 | 57.7 | 41.7 | 43.9 | 42.0 | 38.5 | 42.1 | 30.4 | 42.0 | 43.7 | 44.7 | 25.2 | 38.1 | 43.7 | 31.9 | 40.2 | 23.9 | 39.4 | 42.4 | 41.1 | 44.2 | 43.5 | 37.9 | 37.9 | 40.5 | 45.8 | 37.6 |
| lower limit | 42.7 | 38.2 | 39.8 | 44.3 | 45.5 | 50.7 | 34.1 | 36.1 | 34.0 | 30.8 | 34.2 | 23.0 | 34.4 | 36.0 | 36.7 | 18.0 | 30.3 | 35.7 | 24.4 | 32.3 | 16.8 | 31.5 | 34.4 | 33.4 | 36.1 | 35.9 | 29.9 | 29.8 | 32.6 | 37.6 | 29.8 |
| upper limit | 59.8 | 54.4 | 56.3 | 59.9 | 60.7 | 65.7 | 50.0 | 52.2 | 50.3 | 46.9 | 50.5 | 38.6 | 50.4 | 51.3 | 52.9 | 33.3 | 47.0 | 51.9 | 40.4 | 48.2 | 32.3 | 47.7 | 51.1 | 49.6 | 52.4 | 51.6 | 46.6 | 46.2 | 49.1 | 53.9 | 45.8 |
| Particulate matter pollution | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 34.9 | 28.9 | 36.8 | 23.2 | 32.2 | 39.5 | 37.1 | 42.6 | 38.5 | 40.8 | 37.4 | 37.8 | 39.6 | 38.1 | 39.0 | 37.1 | 47.5 | 36.1 | 37.2 | 37.5 | 40.1 | 40.6 | 37.2 | 38.8 | 40.5 | 38.6 | 39.5 | 43.5 | 38.8 | 38.1 | 38.1 |
| lower limit | 31.8 | 21.9 | 33.6 | 19.3 | 26.5 | 35.5 | 34.2 | 38.2 | 35.1 | 36.7 | 33.6 | 34.0 | 36.3 | 34.8 | 35.2 | 34.0 | 39.4 | 33.1 | 34.0 | 34.1 | 35.6 | 35.7 | 34.0 | 34.8 | 36.8 | 35.1 | 34.5 | 36.6 | 35.1 | 34.9 | 34.8 |
| upper limit | 38.1 | 35.2 | 40.2 | 27.2 | 37.8 | 44.1 | 40.4 | 48.8 | 42.5 | 47.0 | 41.4 | 42.8 | 42.9 | 41.9 | 44.3 | 40.5 | 61.5 | 39.4 | 40.6 | 41.6 | 47.3 | 48.1 | 41.1 | 44.2 | 45.3 | 42.8 | 46.9 | 54.6 | 43.9 | 41.6 | 41.9 |

* PAF: population attributable fraction

§ DALY: disability adjusted life years

a: Democratic People's Republic of Korea; b: Tajikistan; c: Haiti; d: Syrian Arab Republic; e: Yemen; f: Afghanistan; g: Nepal; h: Central African Republic; I: Democratic Republic of the Congo; J: Burundi; k: Eritrea; l: Ethiopia; m: Madagascar; n: Malawi; o: Mozambique; p: Rwanda; q: Somalia; r: United Republic of Tanzania; s: Uganda; t: Benin; u: Burkina Faso; v: Chad; w: Gambia; x: Guinea; y: Guinea-Bissau; z: Liberia; ab: Mali; ac: Niger; ad: Sierra Leone; ae: Togo; af: South Sudan

Table S20. PAF* of DALYs[§] for modifiable risk factors in 47 lower-middle income countries in 2019

| | a | b | c | d | e | f | g | h | i | j | k | l | m | n | o | p | q | r | s | t | u | v | w | x | y | z | ab | ac | ad | ae | af | ag | ah | ai | aj | ak | al | am | an | ao | ap | aq | ar | as | at | au | Sudan | | |
|--|-------------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|
| Air pollution | | value | 33.9 | 23.5 | 36.6 | 33.6 | 27.1 | 32.0 | 23.4 | 31.5 | 18.8 | 39.0 | 40.8 | 37.0 | 21.6 | 30.5 | 25.5 | 11.1 | 11.3 | 22.9 | 18.8 | 27.2 | 24.3 | 33.6 | 25.0 | 23.8 | 21.6 | 37.0 | 31.1 | 35.8 | 37.8 | 29.3 | 33.3 | 32.6 | 30.6 | 32.8 | 35.1 | 32.2 | 30.0 | 32.2 | 36.1 | 28.6 | 37.7 | 34.8 | 33.2 | 35.5 | 30.5 | 36.2 | 33.8 |
| | lower limit | 30.7 | 18.8 | 33.3 | 30.3 | 22.9 | 27.9 | 19.2 | 25.7 | 10.1 | 35.1 | 37.0 | 32.2 | 16.4 | 26.1 | 18.2 | 6.7 | 7.1 | 18.1 | 13.9 | 23.6 | 20.0 | 29.0 | 21.0 | 18.7 | 16.6 | 34.2 | 28.0 | 33.1 | 34.7 | 24.1 | 28.1 | 29.0 | 22.6 | 29.2 | 31.6 | 28.1 | 25.0 | 28.7 | 32.9 | 24.0 | 34.4 | 31.4 | 29.3 | 32.1 | 25.9 | 32.8 | 29.4 | |
| | upper limit | 37.3 | 27.8 | 39.9 | 36.8 | 31.5 | 35.8 | 27.5 | 36.6 | 27.8 | 43.0 | 44.5 | 40.8 | 26.5 | 34.7 | 32.0 | 15.6 | 15.6 | 27.6 | 24.2 | 30.8 | 28.3 | 37.6 | 29.1 | 28.3 | 26.5 | 40.1 | 34.4 | 38.7 | 41.0 | 34.2 | 37.7 | 35.8 | 37.7 | 36.4 | 38.5 | 35.8 | 34.7 | 35.8 | 39.3 | 32.8 | 41.3 | 38.0 | 37.0 | 39.0 | 34.6 | 39.9 | 37.7 | |
| Ambient particulate matter pollution | | value | 7.2 | 14.2 | 6.9 | 11.5 | 13.4 | 5.7 | 12.7 | 4.0 | 7.7 | 4.1 | 3.5 | 5.1 | 14.1 | 21.3 | 22.9 | 9.8 | 10.6 | 14.7 | 14.3 | 8.8 | 9.1 | 33.6 | 23.6 | 23.4 | 21.6 | 16.6 | 14.0 | 24.2 | 20.1 | 12.1 | 17.9 | 5.0 | 21.8 | 7.9 | 9.5 | 11.6 | 13.1 | 7.1 | 17.4 | 22.0 | 12.0 | 18.8 | 18.3 | 16.0 | 11.6 | 10.3 | 20.5 |
| | lower limit | 3.6 | 10.5 | 3.4 | 7.1 | 10.1 | 2.6 | 8.9 | 1.2 | 2.4 | 1.0 | 1.0 | 1.5 | 8.9 | 15.7 | 15.1 | 5.7 | 6.6 | 9.4 | 9.4 | 5.0 | 5.1 | 29.0 | 19.4 | 18.4 | 16.5 | 10.9 | 8.7 | 19.6 | 14.1 | 6.1 | 10.3 | 2.5 | 11.8 | 4.7 | 5.1 | 6.5 | 8.0 | 3.6 | 11.0 | 15.7 | 6.0 | 12.1 | 11.1 | 10.5 | 6.1 | 5.2 | 12.8 | |
| | upper limit | 12.1 | 18.2 | 10.9 | 15.9 | 16.8 | 10.4 | 16.2 | 9.7 | 16.9 | 10.6 | 8.9 | 11.4 | 20.0 | 26.5 | 30.2 | 14.1 | 14.8 | 20.3 | 19.9 | 13.3 | 13.9 | 37.6 | 27.8 | 27.9 | 26.4 | 22.3 | 19.5 | 28.4 | 26.1 | 18.9 | 26.4 | 8.6 | 31.6 | 12.0 | 15.3 | 17.6 | 18.7 | 11.6 | 23.8 | 27.7 | 19.4 | 25.0 | 25.6 | 21.8 | 18.7 | 17.1 | 28.0 | |
| Household air pollution from solid fuels | | value | 26.7 | 9.3 | 29.7 | 22.1 | 13.7 | 26.3 | 10.8 | 27.5 | 11.1 | 35.0 | 37.2 | 31.9 | 7.5 | 9.1 | 2.6 | 1.3 | 0.7 | 8.1 | 4.5 | 18.4 | 15.1 | 0.0 | 1.4 | 0.4 | 0.1 | 20.4 | 17.0 | 11.6 | 17.7 | 17.2 | 15.4 | 27.5 | 8.7 | 24.9 | 25.6 | 20.6 | 16.9 | 25.1 | 18.7 | 6.6 | 25.7 | 16.0 | 14.9 | 19.5 | 18.9 | 25.9 | 0.0 |
| | lower limit | 21.2 | 5.0 | 24.0 | 16.2 | 8.7 | 20.1 | 5.9 | 21.4 | 5.7 | 28.1 | 31.4 | 24.8 | 4.1 | 4.5 | 1.0 | 0.5 | 0.2 | 4.5 | 2.4 | 13.2 | 10.0 | 0.0 | 0.6 | 0.2 | 0.0 | 14.6 | 11.5 | 7.8 | 11.8 | 12.0 | 9.2 | 22.8 | 4.3 | 19.7 | 19.4 | 14.7 | 10.7 | 19.9 | 12.4 | 3.7 | 18.1 | 10.4 | 9.1 | 13.7 | 13.2 | 18.9 | 0.0 | |
| | upper limit | 31.6 | 15.1 | 34.8 | 27.7 | 19.1 | 31.4 | 17.1 | 33.1 | 17.8 | 40.1 | 42.1 | 37.2 | 11.7 | 15.2 | 5.3 | 2.7 | 1.6 | 12.4 | 7.2 | 23.3 | 20.4 | 0.1 | 2.8 | 0.7 | 0.1 | 26.6 | 23.3 | 16.1 | 24.0 | 22.4 | 22.4 | 32.0 | 14.6 | 30.0 | 31.0 | 26.5 | 23.5 | 30.1 | 25.3 | 10.5 | 32.7 | 22.6 | 21.4 | 25.5 | 24.4 | 32.8 | 0.0 | |
| Other environmental risks | | value | 4.4 | 3.4 | 3.4 | 3.4 | 2.1 | 3.8 | 2.8 | 1.6 | 1.5 | 0.8 | 1.9 | 1.2 | 2.7 | 2.7 | 2.3 | 1.7 | 0.7 | 4.5 | 7.6 | 9.1 | 5.7 | 6.4 | 4.0 | 3.7 | 4.5 | 8.7 | 3.7 | 7.9 | 5.3 | 4.1 | 2.4 | 2.9 | 2.8 | 2.7 | 2.5 | 5.2 | 3.1 | 4.9 | 4.7 | 2.1 | 3.2 | 1.9 | 2.6 | 3.0 | 3.0 | 3.2 | 0.0 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| Lead exposure | lower limit | 2.3 | 1.5 | 1.4 | 1.5 | 0.8 | 1.8 | 0.9 | 0.2 | 0.2 | 0.0 | 0.4 | 0.1 | 0.9 | 0.9 | 0.6 | 0.2 | 0.0 | 2.5 | 5.2 | 6.5 | 3.6 | 4.0 | 2.0 | 1.8 | 2.5 | 6.0 | 1.8 | 5.5 | 3.0 | 2.0 | 0.6 | 1.2 | 1.0 | 1.1 | 0.9 | 2.9 | 1.1 | 2.7 | 2.6 | 0.6 | 1.3 | 0.4 | 0.8 | 1.3 | 1.1 | 1.3 | 0.0 |
| | upper limit | 6.7 | 5.5 | 5.5 | 5.5 | 3.9 | 6.0 | 4.8 | 3.6 | 3.4 | 2.5 | 3.9 | 3.0 | 4.7 | 4.8 | 4.3 | 3.5 | 2.2 | 6.7 | 10.2 | 11.8 | 8.2 | 8.8 | 6.1 | 5.9 | 6.7 | 11.1 | 5.9 | 10.3 | 7.7 | 6.3 | 4.4 | 4.9 | 4.8 | 4.6 | 4.5 | 7.5 | 5.3 | 7.2 | 7.0 | 4.1 | 5.3 | 3.9 | 4.6 | 5.0 | 5.0 | 5.2 | 0.0 |
| | value | 4.4 | 3.4 | 3.4 | 3.4 | 2.1 | 3.8 | 2.8 | 1.6 | 1.5 | 0.8 | 1.9 | 1.2 | 2.7 | 2.7 | 2.3 | 1.7 | 0.7 | 4.5 | 7.6 | 9.1 | 5.7 | 6.4 | 4.0 | 3.7 | 4.5 | 8.7 | 3.7 | 7.9 | 5.3 | 4.1 | 2.4 | 2.9 | 2.8 | 2.7 | 2.5 | 5.2 | 3.1 | 4.9 | 4.7 | 2.1 | 3.2 | 1.9 | 2.6 | 3.0 | 3.0 | 3.2 | 0.0 |
| | lower limit | 2.3 | 1.5 | 1.4 | 1.5 | 0.8 | 1.8 | 0.9 | 0.2 | 0.2 | 0.0 | 0.4 | 0.1 | 0.9 | 0.9 | 0.6 | 0.2 | 0.0 | 2.5 | 5.2 | 6.5 | 3.6 | 4.0 | 2.0 | 1.8 | 2.5 | 6.0 | 1.8 | 5.5 | 3.0 | 2.0 | 0.6 | 1.2 | 1.0 | 1.1 | 0.9 | 2.9 | 1.1 | 2.7 | 2.6 | 0.6 | 1.3 | 0.4 | 0.8 | 1.3 | 1.1 | 1.3 | 0.0 |
| Tobacco | upper limit | 6.7 | 5.5 | 5.5 | 5.5 | 3.9 | 6.0 | 4.8 | 3.6 | 3.4 | 2.5 | 3.9 | 3.0 | 4.7 | 4.8 | 4.3 | 3.5 | 2.2 | 6.7 | 10.2 | 11.8 | 8.2 | 8.8 | 6.1 | 5.9 | 6.7 | 11.1 | 5.9 | 10.3 | 7.7 | 6.3 | 4.4 | 4.9 | 4.8 | 4.6 | 4.5 | 7.5 | 5.3 | 7.2 | 7.0 | 4.1 | 5.3 | 3.9 | 4.6 | 5.0 | 5.0 | 5.2 | 0.0 |
| | value | 35.4 | 33.7 | 32.2 | 27.2 | 36.1 | 28.2 | 32.8 | 53.5 | 43.7 | 36.6 | 41.3 | 28.2 | 32.2 | 36.1 | 25.0 | 26.6 | 29.0 | 13.0 | 13.9 | 20.5 | 16.3 | 31.2 | 22.2 | 34.9 | 31.5 | 27.6 | 16.3 | 22.7 | 28.1 | 20.5 | 15.2 | 16.4 | 26.9 | 15.7 | 17.9 | 28.8 | 13.6 | 24.5 | 15.4 | 12.2 | 22.3 | 9.8 | 15.0 | 10.2 | 10.2 | 17.2 | 0.0 |
| | lower limit | 32.5 | 30.9 | 29.2 | 24.6 | 33.4 | 24.5 | 30.5 | 51.2 | 40.0 | 32.8 | 38.9 | 25.8 | 30.5 | 34.0 | 23.5 | 24.7 | 26.6 | 11.4 | 12.4 | 18.5 | 14.7 | 29.1 | 20.4 | 32.5 | 29.5 | 25.9 | 13.8 | 20.9 | 25.7 | 18.6 | 13.4 | 14.2 | 23.4 | 14.0 | 15.9 | 25.9 | 11.9 | 21.6 | 13.7 | 11.0 | 20.1 | 8.7 | 12.9 | 9.1 | 8.9 | 15.3 | 0.0 |
| | upper limit | 38.3 | 36.5 | 35.1 | 29.7 | 38.7 | 31.9 | 35.2 | 55.7 | 47.4 | 40.7 | 43.7 | 30.6 | 34.1 | 38.1 | 26.4 | 28.5 | 31.5 | 14.5 | 15.4 | 22.6 | 18.1 | 33.4 | 23.9 | 37.5 | 33.5 | 29.5 | 18.8 | 24.5 | 30.4 | 22.3 | 17.0 | 19.0 | 30.4 | 17.4 | 20.2 | 31.6 | 15.7 | 27.6 | 17.0 | 13.4 | 24.5 | 11.0 | 17.2 | 11.6 | 11.6 | 19.3 | 0.0 |
| Smoking | value | 30.7 | 28.5 | 27.0 | 23.1 | 31.3 | 23.8 | 28.2 | 48.5 | 39.4 | 31.1 | 35.8 | 23.7 | 27.5 | 32.1 | 21.0 | 24.0 | 26.1 | 11.1 | 11.8 | 16.9 | 13.0 | 25.6 | 17.3 | 29.2 | 26.4 | 22.8 | 13.0 | 18.1 | 23.1 | 17.3 | 12.2 | 12.3 | 22.4 | 13.3 | 14.6 | 24.2 | 11.0 | 20.8 | 12.9 | 9.5 | 17.9 | 7.7 | 12.1 | 7.5 | 8.6 | 12.3 | 0.0 |
| | lower limit | 27.8 | 25.4 | 24.0 | 20.6 | 28.5 | 19.9 | 26.0 | 46.3 | 35.5 | 27.1 | 33.6 | 21.3 | 26.0 | 30.1 | 19.8 | 22.2 | 23.5 | 9.6 | 10.4 | 15.1 | 11.4 | 23.8 | 15.8 | 27.0 | 24.5 | 21.2 | 10.7 | 16.3 | 20.6 | 15.6 | 10.5 | 10.2 | 18.8 | 11.6 | 12.7 | 21.1 | 9.3 | 17.7 | 11.3 | 8.5 | 15.9 | 6.6 | 10.1 | 6.5 | 7.3 | 10.5 | 0.0 |
| | upper limit | 33.8 | 31.7 | 29.9 | 25.7 | 34.0 | 27.7 | 30.7 | 50.6 | 43.3 | 35.1 | 38.0 | 25.9 | 29.3 | 34.1 | 22.3 | 26.0 | 28.8 | 12.5 | 13.3 | 18.9 | 14.6 | 27.7 | 19.0 | 31.8 | 28.4 | 24.6 | 15.5 | 19.9 | 25.5 | 19.0 | 14.0 | 14.6 | 26.2 | 15.1 | 16.7 | 27.3 | 13.1 | 23.8 | 14.6 | 10.6 | 20.1 | 8.8 | 14.1 | 8.8 | 10.0 | 14.2 | 0.0 |
| | value | 6.1 | 6.5 | 6.7 | 5.2 | 7.0 | 5.6 | 6.0 | 9.9 | 7.2 | 8.3 | 8.6 | 5.9 | 6.4 | 5.6 | 5.0 | 3.4 | 4.2 | 2.2 | 2.5 | 4.4 | 3.9 | 7.1 | 5.9 | 7.9 | 6.9 | 5.8 | 3.8 | 5.5 | 6.4 | 3.9 | 3.4 | 4.7 | 5.5 | 2.7 | 3.8 | 5.8 | 2.8 | 4.5 | 2.8 | 3.0 | 5.4 | 2.4 | 3.5 | 3.0 | 1.8 | 5.6 | 0.0 |
| Secondhand smoke | lower limit | 5.0 | 5.2 | 5.4 | 4.1 | 5.6 | 4.3 | 4.9 | 7.9 | 5.5 | 6.4 | 6.7 | 4.6 | 5.3 | 4.6 | 4.0 | 2.8 | 3.4 | 1.6 | 2.0 | 3.4 | 3.1 | 5.8 | 4.8 | 6.5 | 5.6 | 4.6 | 3.1 | 4.4 | 5.0 | 3.1 | 2.6 | 3.7 | 4.2 | 2.1 | 2.8 | 4.7 | 2.2 | 3.6 | 2.2 | 2.4 | 4.3 | 1.8 | 2.7 | 2.4 | 1.4 | 4.5 | 0.0 |
| | upper limit | 7.3 | 8.0 | 8.1 | 6.4 | 8.4 | 6.9 | 7.2 | 12.1 | 9.0 | 10.2 | 10.6 | 7.5 | 7.6 | 6.8 | 6.1 | 4.1 | 5.0 | 2.8 | 3.1 | 5.4 | 4.8 | 8.5 | 7.1 | 9.4 | 8.2 | 7.1 | 4.7 | 6.8 | 7.8 | 4.8 | 4.3 | 5.8 | 6.8 | 3.4 | 4.9 | 7.0 | 3.6 | 5.5 | 3.5 | 3.7 | 6.6 | 3.0 | 4.4 | 3.7 | 2.3 | 6.8 | 0.0 |

Alcohol use

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|------|------|------|-----|
| value | -1.9 | -1.3 | -3.5 | -1.4 | -2.0 | -1.7 | -2.0 | -2.1 | -1.4 | -3.7 | -3.4 | -1.2 | -1.0 | -2.0 | -2.1 | -3.2 | -2.7 | -4.0 | -1.7 | -0.6 | -0.6 | -0.5 | -0.5 | 0.1 | -0.6 | -0.1 | -1.3 | -0.4 | -0.4 | -2.1 | -4.3 | -0.7 | -2.0 | -2.3 | -2.0 | -2.3 | 0.1 | -2.2 | -0.6 | -0.7 | -2.9 | -2.5 | 0.0 | -0.8 | -0.8 | -0.4 | 0.0 |
| lower limit | -4.5 | -2.3 | -6.3 | -3.0 | -5.0 | -3.4 | -5.5 | -3.4 | -2.8 | -5.8 | -5.2 | -2.3 | -2.6 | -4.8 | -3.7 | -6.6 | -5.4 | -6.2 | -2.9 | -1.7 | -1.7 | -0.8 | -0.8 | -0.4 | -1.2 | -0.3 | -2.1 | -1.7 | -0.9 | -4.7 | -6.8 | -1.1 | -3.2 | -4.6 | -4.2 | -4.5 | -2.0 | -3.9 | -2.8 | -2.5 | -5.4 | -4.5 | 0.0 | -2.5 | -2.9 | -0.7 | 0.0 |
| upper limit | 0.9 | -0.5 | -0.5 | 0.2 | 0.9 | 0.0 | 1.8 | -0.6 | 0.0 | -1.7 | -1.6 | 0.0 | 0.8 | 1.1 | -0.4 | 0.2 | 0.4 | -1.8 | -0.4 | 0.5 | 0.6 | -0.2 | -0.2 | 0.7 | 0.0 | 0.1 | -0.4 | 0.9 | 0.0 | 0.7 | -1.2 | -0.3 | -0.9 | 0.0 | 0.4 | 0.3 | 2.4 | -0.4 | 1.9 | 1.4 | 0.0 | -0.1 | 0.0 | 1.1 | 1.4 | -0.2 | 0.0 |

Metabolic risks

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| value | 78.6 | 86.6 | 83.6 | 83.9 | 83.1 | 82.8 | 84.9 | 87.5 | 88.4 | 83.7 | 84.5 | 90.8 | 77.3 | 87.7 | 87.8 | 85.9 | 84.7 | 79.6 | 87.3 | 86.8 | 87.0 | 88.7 | 90.3 | 88.1 | 87.6 | 78.2 | 84.4 | 82.8 | 85.4 | 83.3 | 86.2 | 81.0 | 80.6 | 79.1 | 75.6 | 79.6 | 86.1 | 85.7 | 79.8 | 85.7 | 85.5 | 86.9 | 82.4 | 84.8 | 86.3 | 84.5 | 0.0 |
| lower limit | 71.7 | 82.1 | 78.4 | 78.6 | 77.8 | 77.1 | 79.1 | 82.5 | 83.4 | 77.3 | 78.2 | 86.9 | 70.1 | 83.1 | 83.0 | 80.2 | 78.9 | 72.9 | 82.1 | 81.3 | 81.9 | 84.5 | 85.9 | 83.2 | 82.4 | 71.5 | 78.8 | 77.4 | 80.6 | 77.6 | 81.1 | 74.5 | 74.1 | 72.8 | 68.4 | 72.4 | 80.8 | 80.4 | 73.1 | 79.4 | 80.3 | 82.1 | 76.6 | 79.8 | 81.0 | 78.7 | 0.0 |
| upper limit | 85.5 | 90.6 | 88.8 | 89.0 | 88.0 | 88.3 | 90.0 | 91.9 | 92.5 | 89.8 | 89.7 | 94.1 | 84.3 | 91.7 | 92.3 | 91.1 | 90.2 | 86.0 | 92.3 | 91.9 | 92.1 | 92.4 | 94.0 | 92.5 | 92.5 | 84.4 | 89.3 | 87.8 | 89.7 | 88.3 | 90.8 | 86.7 | 86.4 | 84.8 | 82.5 | 86.2 | 90.9 | 90.7 | 86.0 | 91.2 | 90.4 | 91.3 | 87.9 | 89.4 | 91.1 | 89.7 | 0.0 |

High fasting plasma glucose

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| value | 27.3 | 17.3 | 25.0 | 24.6 | 16.5 | 25.7 | 24.3 | 35.9 | 37.3 | 37.1 | 31.7 | 31.9 | 12.4 | 8.5 | 28.4 | 17.5 | 14.8 | 24.7 | 33.4 | 35.3 | 34.9 | 27.4 | 33.0 | 34.6 | 34.7 | 17.6 | 21.0 | 27.9 | 21.1 | 21.5 | 22.5 | 14.9 | 14.7 | 14.1 | 15.1 | 24.8 | 25.4 | 27.7 | 16.1 | 28.3 | 19.4 | 22.1 | 13.7 | 15.1 | 22.0 | 25.9 | 0.0 |
| lower limit | 15.9 | 11.2 | 15.4 | 15.2 | 10.7 | 14.7 | 14.4 | 22.6 | 23.4 | 22.7 | 19.5 | 20.9 | 7.5 | 5.6 | 16.5 | 10.6 | 9.6 | 14.7 | 20.1 | 21.4 | 21.3 | 15.6 | 20.1 | 22.1 | 21.6 | 11.4 | 12.9 | 17.5 | 13.9 | 12.9 | 13.8 | 7.9 | 8.7 | 8.7 | 9.3 | 13.9 | 16.6 | 16.6 | 10.5 | 16.5 | 11.7 | 13.1 | 8.1 | 8.8 | 13.0 | 15.5 | 0.0 |
| upper limit | 44.8 | 27.3 | 38.1 | 38.0 | 25.3 | 44.3 | 38.9 | 50.7 | 54.2 | 54.6 | 46.7 | 45.4 | 19.9 | 12.4 | 45.2 | 28.7 | 21.9 | 39.2 | 51.6 | 54.7 | 53.8 | 42.7 | 50.9 | 53.4 | 52.6 | 27.2 | 32.9 | 42.4 | 30.7 | 34.5 | 34.9 | 26.3 | 24.1 | 22.5 | 24.1 | 40.6 | 38.8 | 44.3 | 23.9 | 44.2 | 30.7 | 35.1 | 22.4 | 25.0 | 35.4 | 39.9 | 0.0 |

High systolic blood pressure

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| value | 38.9 | 65.5 | 50.6 | 55.0 | 46.6 | 59.5 | 58.9 | 45.4 | 43.9 | 40.3 | 36.4 | 64.1 | 43.7 | 63.0 | 57.4 | 65.1 | 57.6 | 39.2 | 52.8 | 54.0 | 55.1 | 56.8 | 62.6 | 49.6 | 51.4 | 53.8 | 52.2 | 52.3 | 58.6 | 60.7 | 62.6 | 55.6 | 57.6 | 56.6 | 43.8 | 53.4 | 60.5 | 62.3 | 59.5 | 62.4 | 63.8 | 59.5 | 57.7 | 64.4 | 64.4 | 61.4 | 0.0 |
| lower limit | 31.0 | 58.3 | 42.8 | 47.1 | 38.2 | 51.5 | 50.3 | 36.4 | 35.5 | 30.9 | 27.4 | 55.9 | 35.0 | 55.3 | 49.0 | 56.1 | 47.8 | 30.8 | 43.9 | 44.7 | 46.1 | 48.8 | 54.7 | 41.5 | 42.9 | 46.2 | 44.1 | 45.0 | 50.4 | 52.7 | 53.8 | 47.2 | 49.0 | 49.0 | 34.8 | 45.3 | 52.7 | 54.4 | 51.0 | 53.2 | 55.5 | 52.0 | 48.8 | 56.9 | 56.3 | 53.4 | 0.0 |
| upper limit | 47.0 | 72.3 | 58.6 | 62.4 | 54.4 | 67.1 | 66.8 | 55.0 | 52.8 | 48.9 | 45.4 | 71.5 | 53.1 | 70.5 | 65.0 | 74.0 | 67.4 | 48.9 | 62.3 | 63.0 | 63.5 | 64.3 | 70.5 | 57.1 | 60.0 | 61.6 | 60.3 | 59.5 | 66.0 | 68.5 | 70.5 | 63.4 | 65.6 | 63.6 | 52.5 | 61.7 | 68.0 | 70.0 | 67.2 | 71.1 | 71.1 | 66.9 | 66.2 | 71.1 | 72.3 | 68.6 | 0.0 |

High body-mass

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| index | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 11.7 | 20.7 | 17.7 | 14.4 | 20.7 | 7.6 | 10.4 | 36.5 | 39.6 | 19.5 | 31.3 | 29.5 | 25.0 | 29.0 | 31.9 | 28.5 | 29.3 | 29.7 | 27.0 | 23.9 | 25.1 | 41.2 | 31.8 | 31.7 | 31.1 | 12.6 | 20.4 | 18.5 | 21.4 | 17.3 | 28.2 | 18.2 | 17.8 | 24.0 | 22.4 | 28.2 | 38.3 | 21.7 | 31.7 | 23.7 | 24.5 | 30.5 | 28.9 | 20.8 | 27.4 | 20.8 | 0.0 |
| lower limit | 5.6 | 12.6 | 9.5 | 7.5 | 11.9 | 2.7 | 4.8 | 22.4 | 26.5 | 9.2 | 18.2 | 17.8 | 15.4 | 18.4 | 20.6 | 18.4 | 19.3 | 19.2 | 16.3 | 13.7 | 15.2 | 28.1 | 20.2 | 20.7 | 19.8 | 6.3 | 11.2 | 11.2 | 11.7 | 9.0 | 18.9 | 10.2 | 9.6 | 15.7 | 13.6 | 18.6 | 26.1 | 13.9 | 20.8 | 15.2 | 15.2 | 20.8 | 19.6 | 12.4 | 17.7 | 12.7 | 0.0 |
| upper limit | 19.6 | 29.4 | 26.6 | 22.7 | 29.7 | 14.3 | 17.7 | 51.1 | 53.0 | 31.8 | 45.9 | 42.5 | 35.2 | 40.2 | 43.6 | 39.2 | 39.7 | 40.8 | 38.4 | 35.1 | 35.9 | 53.3 | 43.7 | 43.4 | 42.7 | 20.2 | 31.0 | 26.3 | 32.4 | 26.4 | 37.6 | 27.0 | 27.1 | 33.3 | 32.5 | 38.4 | 49.9 | 30.7 | 43.4 | 33.4 | 34.8 | 40.6 | 39.2 | 30.3 | 38.0 | 30.3 | 0.0 |
| Dietary risks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 55.7 | 56.3 | 55.0 | 53.0 | 57.0 | 57.3 | 52.3 | 61.5 | 61.3 | 63.1 | 63.3 | 60.7 | 62.2 | 73.7 | 64.6 | 57.1 | 54.9 | 52.6 | 49.8 | 56.5 | 51.4 | 45.8 | 47.5 | 56.6 | 46.1 | 60.5 | 56.7 | 60.2 | 67.7 | 54.2 | 55.6 | 53.8 | 63.3 | 53.4 | 56.4 | 55.4 | 54.7 | 54.8 | 48.3 | 47.8 | 57.7 | 53.4 | 59.9 | 51.8 | 53.3 | 54.0 | 0.0 |
| lower limit | 44.7 | 44.8 | 43.4 | 41.9 | 46.2 | 47.2 | 40.7 | 50.6 | 50.7 | 52.3 | 53.0 | 50.3 | 52.6 | 66.1 | 54.9 | 47.7 | 44.4 | 42.3 | 39.6 | 46.4 | 42.8 | 35.2 | 36.8 | 45.8 | 35.5 | 51.0 | 47.2 | 50.6 | 58.6 | 43.6 | 45.1 | 43.3 | 53.9 | 44.6 | 46.2 | 44.8 | 44.2 | 44.3 | 37.6 | 37.4 | 46.7 | 41.5 | 50.9 | 41.1 | 41.9 | 43.4 | 0.0 |
| upper limit | 65.2 | 65.7 | 64.5 | 62.8 | 66.3 | 66.6 | 62.7 | 69.7 | 69.5 | 71.0 | 70.7 | 69.0 | 69.5 | 79.5 | 71.8 | 64.6 | 62.7 | 61.2 | 58.9 | 65.1 | 59.9 | 53.0 | 54.0 | 64.1 | 53.7 | 68.1 | 65.0 | 68.0 | 74.1 | 63.1 | 64.4 | 64.2 | 71.8 | 60.5 | 65.9 | 64.1 | 63.6 | 64.2 | 58.4 | 58.1 | 67.2 | 64.3 | 67.6 | 60.9 | 63.2 | 63.5 | 0.0 |
| Diet low in fruits | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 8.2 | 6.4 | 5.2 | 7.5 | 4.5 | 8.1 | 5.5 | 7.2 | 7.5 | 7.6 | 8.2 | 5.9 | 6.5 | 9.4 | 4.6 | 5.4 | 6.2 | 4.4 | 5.0 | 4.7 | 7.4 | 1.7 | 1.5 | 4.8 | 2.4 | 8.4 | 7.0 | 9.4 | 8.2 | 5.9 | 6.7 | 4.3 | 9.0 | 6.6 | 9.4 | 8.9 | 7.2 | 8.7 | 3.8 | 6.3 | 5.4 | 1.9 | 8.3 | 5.9 | 2.0 | 7.7 | 0.0 |
| lower limit | 3.5 | 2.5 | 1.7 | 3.0 | 1.6 | 3.4 | 1.8 | 2.5 | 2.9 | 2.9 | 3.1 | 1.9 | 2.4 | 4.2 | 1.4 | 1.9 | 2.4 | 1.5 | 1.7 | 1.4 | 3.1 | 0.4 | 0.4 | 1.6 | 0.6 | 3.6 | 2.7 | 4.2 | 3.3 | 2.1 | 2.5 | 1.2 | 3.9 | 2.6 | 4.2 | 3.9 | 2.8 | 3.8 | 1.2 | 2.5 | 1.8 | 0.6 | 3.7 | 2.2 | 0.5 | 3.3 | 0.0 |
| upper limit | 11.7 | 9.5 | 8.1 | 10.8 | 7.0 | 11.6 | 8.3 | 10.7 | 11.1 | 11.2 | 11.9 | 9.1 | 9.5 | 13.4 | 7.2 | 8.1 | 9.2 | 7.0 | 7.7 | 7.4 | 10.6 | 3.1 | 2.8 | 7.6 | 4.2 | 12.0 | 10.2 | 13.4 | 11.9 | 9.0 | 9.8 | 6.7 | 12.8 | 9.7 | 13.3 | 12.6 | 10.5 | 12.4 | 6.2 | 9.2 | 8.3 | 3.4 | 11.8 | 8.7 | 3.7 | 11.0 | 0.0 |
| Diet low in vegetables | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 10.3 | 8.3 | 7.3 | 6.6 | 7.6 | 9.9 | 4.0 | 10.9 | 11.3 | 9.8 | 13.4 | 10.7 | 1.2 | 8.5 | 0.2 | 4.4 | 1.4 | 8.6 | 6.9 | 7.5 | 9.9 | 0.2 | 2.2 | 3.6 | 1.1 | 10.1 | 7.9 | 7.3 | 10.3 | 8.2 | 11.2 | 10.9 | 8.5 | 7.8 | 10.8 | 10.7 | 10.9 | 11.2 | 5.6 | 4.2 | 9.1 | 8.2 | 9.7 | 6.4 | 9.5 | 7.7 | 0.0 |
| lower limit | 6.5 | 4.7 | 3.6 | 3.1 | 4.0 | 6.1 | 1.4 | 6.5 | 7.1 | 5.8 | 9.0 | 6.4 | 0.3 | 4.6 | 0.2 | 1.7 | 0.3 | 5.2 | 3.6 | 4.1 | 6.4 | 0.2 | 0.4 | 1.1 | 0.3 | 6.3 | 4.3 | 3.8 | 6.2 | 4.4 | 7.3 | 7.2 | 4.8 | 4.3 | 6.8 | 6.7 | 6.9 | 7.4 | 2.3 | 1.6 | 5.4 | 4.6 | 6.0 | 3.1 | 5.8 | 4.3 | 0.0 |
| upper limit | 14.0 | 11.7 | 10.6 | 9.7 | 11.0 | 13.4 | 6.3 | 15.0 | 15.4 | 13.7 | 18.0 | 14.6 | 2.3 | 12.2 | 0.2 | 7.0 | 2.6 | 11.8 | 10.1 | 10.5 | 13.4 | 0.2 | 3.8 | 5.8 | 2.1 | 13.8 | 11.3 | 10.5 | 14.1 | 11.7 | 15.2 | 14.9 | 12.2 | 11.1 | 14.6 | 14.5 | 14.8 | 15.1 | 8.6 | 6.5 | 12.7 | 11.5 | 13.2 | 9.5 | 12.9 | 10.9 | 0.0 |
| Diet low in whole grains | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 9.3 | 12.7 | 10.6 | 13.8 | 14.2 | 13.3 | 11.3 | 23.7 | 22.4 | 23.6 | 22.0 | 21.8 | 24.6 | 27.0 | 25.7 | 16.4 | 19.7 | 16.8 | 15.3 | 14.9 | 14.0 | 18.2 | 25.0 | 24.6 | 22.7 | 10.7 | 15.1 | 16.4 | 27.0 | 18.3 | 17.3 | 17.5 | 21.7 | 16.5 | 13.9 | 11.6 | 13.5 | 14.2 | 15.7 | 14.2 | 19.3 | 18.3 | 20.3 | 17.7 | 20.2 | 16.8 | 0.0 |
| lower | 3.6 | 5.3 | 4.4 | 5.4 | 5.7 | 5.2 | 4.7 | 8.1 | 7.5 | 7.9 | 7.7 | 7.4 | 10.7 | 11.5 | 11.0 | 5.7 | 6.7 | 6.0 | 5.6 | 5.5 | 5.4 | 6.5 | 10.7 | 10.2 | 8.9 | 4.4 | 5.8 | 6.1 | 11.2 | 6.6 | 6.4 | 6.3 | 7.3 | 6.2 | 5.6 | 4.9 | 5.5 | 5.5 | 6.0 | 5.5 | 6.7 | 6.5 | 6.8 | 6.3 | 6.8 | 6.0 | 0.0 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|------|
| Suboptimal temperature | lower limit | 63.5 | 63.5 | 60.2 | 57.5 | 64.5 | 61.3 | 59.4 | 76.6 | 72.4 | 68.5 | 71.7 | 63.8 | 67.4 | 77.4 | 65.4 | 60.2 | 59.4 | 49.2 | 47.5 | 57.1 | 52.0 | 57.8 | 54.5 | 66.9 | 56.0 | 65.2 | 57.0 | 62.2 | 70.4 | 55.1 | 52.7 | 52.6 | 64.8 | 52.5 | 54.9 | 60.0 | 53.3 | 57.1 | 48.1 | 45.8 | 57.2 | 47.4 | 61.3 | 48.4 | 48.9 | 54.2 | 67.3 |
| | upper limit | 76.8 | 76.9 | 74.8 | 72.5 | 77.0 | 75.2 | 74.1 | 85.5 | 83.0 | 80.9 | 82.2 | 77.2 | 78.7 | 85.9 | 78.0 | 73.2 | 72.4 | 65.6 | 63.7 | 71.6 | 65.9 | 69.8 | 67.3 | 77.9 | 68.6 | 77.2 | 71.4 | 75.0 | 81.1 | 69.9 | 69.2 | 69.6 | 78.6 | 65.9 | 71.4 | 73.7 | 69.6 | 72.4 | 64.9 | 63.2 | 73.5 | 67.3 | 74.2 | 65.2 | 66.9 | 70.0 | 78.4 |
| | value | 3.2 | 1.3 | 3.4 | 4.5 | 0.8 | 1.6 | 3.5 | 0.0 | 0.2 | 3.6 | 0.2 | 1.2 | 9.4 | 8.5 | 9.2 | 7.0 | 7.3 | 4.8 | 1.2 | 3.1 | 1.5 | 7.2 | 8.2 | 7.5 | 8.6 | 3.5 | 8.4 | 4.9 | 8.2 | 3.8 | 1.3 | 0.8 | 6.9 | 3.4 | 4.7 | 6.8 | 7.1 | 5.3 | 3.1 | 4.5 | 1.0 | 2.7 | 9.0 | -1.7 | 0.4 | 5.4 | 6.8 |
| Diet low in legumes | lower limit | -6.5 | -2.5 | 1.5 | 2.7 | -7.7 | 0.3 | 1.3 | -1.4 | -4.3 | 2.2 | -0.8 | 0.0 | 1.4 | 1.0 | 6.4 | 0.2 | 4.2 | 3.2 | -1.5 | 1.2 | -0.4 | 4.0 | 6.5 | 4.0 | 5.6 | 1.8 | 4.7 | 1.9 | 3.1 | 1.9 | 0.1 | -0.5 | -5.1 | 0.1 | 1.7 | 2.5 | 4.5 | 3.0 | 0.6 | 0.4 | -0.2 | -5.6 | 0.1 | -15.5 | -0.9 | -5.9 | 1.5 |
| | upper limit | 5.7 | 2.6 | 5.3 | 6.1 | 2.7 | 3.1 | 5.4 | 1.8 | 2.1 | 4.9 | 1.2 | 2.7 | 17.9 | 16.7 | 12.1 | 14.3 | 11.1 | 6.4 | 2.5 | 5.1 | 2.8 | 10.2 | 10.1 | 11.0 | 11.6 | 5.1 | 12.3 | 7.3 | 12.3 | 5.9 | 3.1 | 3.1 | 11.0 | 5.7 | 8.1 | 11.6 | 10.1 | 8.0 | 5.1 | 9.5 | 2.0 | 4.7 | 14.5 | 3.3 | 2.3 | 8.6 | 10.3 |
| | value | 17.1 | 18.2 | 18.1 | 12.6 | 18.0 | 14.3 | 15.3 | 17.1 | 16.7 | 17.7 | 17.2 | 16.4 | 17.4 | 22.2 | 22.5 | 17.6 | 15.4 | 13.7 | 10.3 | 13.2 | 6.8 | 2.2 | 2.4 | 16.4 | 11.7 | 16.2 | 12.2 | 14.1 | 16.9 | 15.1 | 16.2 | 9.8 | 16.3 | 9.2 | 17.2 | 15.7 | 16.9 | 16.4 | 10.6 | 11.9 | 18.9 | 15.3 | 11.6 | 12.5 | 15.6 | 16.3 | 15.6 |
| High temperature | lower limit | 4.6 | 5.3 | 5.0 | 1.6 | 4.8 | 2.6 | 3.5 | 2.9 | 3.0 | 3.6 | 3.0 | 3.1 | 5.1 | 8.2 | 9.2 | 6.1 | 4.0 | 2.3 | 1.0 | 2.0 | 0.7 | 0.3 | 0.3 | 4.3 | 1.4 | 4.1 | 1.5 | 2.4 | 3.5 | 2.7 | 3.6 | 0.9 | 3.6 | 1.0 | 4.5 | 3.0 | 4.2 | 4.3 | 1.0 | 1.5 | 5.7 | 3.0 | 1.5 | 1.8 | 3.8 | 4.3 | 3.0 |
| | upper limit | 27.6 | 29.0 | 28.6 | 20.8 | 29.1 | 23.9 | 25.5 | 28.4 | 27.8 | 29.3 | 28.4 | 27.4 | 27.2 | 33.0 | 32.8 | 27.1 | 25.0 | 23.0 | 16.9 | 22.2 | 12.0 | 4.7 | 5.0 | 26.9 | 19.5 | 26.8 | 20.2 | 22.9 | 28.0 | 25.1 | 26.8 | 16.4 | 27.1 | 15.2 | 27.8 | 26.2 | 27.8 | 26.6 | 17.8 | 19.9 | 29.6 | 25.4 | 19.3 | 20.8 | 26.1 | 26.5 | 26.2 |
| | value | 3.0 | 0.0 | 0.1 | 0.5 | 0.3 | -0.1 | 0.4 | 0.0 | 0.2 | 0.0 | -0.1 | -0.1 | 0.0 | 0.1 | 1.0 | 0.0 | 0.2 | 0.0 | 0.7 | 0.1 | 0.3 | 0.6 | 0.2 | 0.1 | 0.4 | 0.4 | 0.0 | 1.3 | 1.8 | -0.1 | -0.1 | -0.1 | 4.1 | -0.8 | -0.1 | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 | 0.4 | 2.3 | 3.5 | -2.4 | -0.2 | 3.9 | 2.5 |
| Low temperature | lower limit | -6.7 | -3.8 | -0.9 | -0.7 | -8.1 | -0.7 | -1.4 | -1.4 | -4.3 | -0.6 | -1.1 | -0.6 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | -0.4 | -2.1 | -0.9 | -1.6 | -1.0 | -0.2 | -0.5 | -0.7 | -1.2 | 0.0 | -1.1 | -1.4 | -0.8 | -0.8 | -0.9 | -5.2 | -4.0 | -0.8 | 0.0 | -0.3 | -0.7 | -1.6 | -0.6 | -0.7 | -5.7 | -2.3 | -16.0 | -1.1 | -6.2 | -1.5 |
| | upper limit | 5.5 | 0.9 | 0.7 | 1.3 | 2.2 | 0.4 | 1.3 | 1.8 | 2.1 | 0.5 | 0.9 | 0.3 | 0.0 | 0.3 | 1.6 | 0.2 | 0.5 | 0.5 | 1.9 | 0.7 | 1.2 | 2.3 | 0.7 | 0.7 | 1.6 | 1.9 | 0.0 | 3.0 | 3.9 | 0.7 | 0.4 | 0.5 | 7.7 | 0.4 | 0.6 | 0.0 | 0.3 | 0.6 | 1.9 | 0.1 | 1.6 | 4.2 | 6.5 | 2.2 | 0.6 | 7.0 | 4.9 |
| | value | 0.3 | 1.3 | 3.3 | 4.1 | 0.5 | 1.7 | 3.1 | 0.0 | 0.0 | 3.5 | 0.3 | 1.3 | 9.3 | 8.5 | 8.3 | 7.0 | 7.1 | 4.8 | 0.5 | 3.0 | 1.2 | 6.6 | 8.0 | 7.4 | 8.2 | 3.1 | 8.4 | 3.6 | 6.5 | 3.8 | 1.4 | 0.9 | 2.9 | 4.2 | 4.8 | 6.8 | 7.1 | 5.3 | 2.3 | 4.5 | 0.6 | 0.5 | 5.7 | 0.7 | 0.6 | 1.5 | 4.4 |
| | lower limit | 0.1 | 0.6 | 1.6 | 2.7 | 0.2 | 0.5 | 1.6 | 0.0 | 0.0 | 2.5 | 0.0 | 0.3 | 1.4 | 1.0 | 5.0 | 0.1 | 3.9 | 3.1 | 0.2 | 1.3 | 0.3 | 3.2 | 6.2 | 3.7 | 4.9 | 1.5 | 4.7 | 1.8 | 2.6 | 2.1 | 0.3 | 0.0 | 0.1 | 2.9 | 1.9 | 2.5 | 4.5 | 3.0 | 1.0 | 0.7 | 0.2 | 0.1 | 0.5 | 0.1 | 0.0 | 0.1 | 1.6 |
| | upper | 0.5 | 2.2 | 5.3 | 5.5 | 0.9 | 3.2 | 4.8 | 0.1 | 0.0 | 4.8 | 0.8 | 2.7 | 17.9 | 16.7 | 11.6 | 14.3 | 11.1 | 6.4 | 1.1 | 5.1 | 2.2 | 9.9 | 9.9 | 11.2 | 11.6 | 4.9 | 12.4 | 5.5 | 10.3 | 5.9 | 3.2 | 3.2 | 5.2 | 5.8 | 8.0 | 11.6 | 10.1 | 8.0 | 3.9 | 9.5 | 1.2 | 0.8 | 10.5 | 1.6 | 2.5 | 2.5 | 7.1 |

| limit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Impaired kidney function | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 11.9 | 12.8 | 13.6 | 13.5 | 14.7 | 13.0 | 12.6 | 14.3 | 16.3 | 10.8 | 13.8 | 13.3 | 10.7 | 12.2 | 13.2 | 10.4 | 10.6 | 12.1 | 19.0 | 16.6 | 20.8 | 16.9 | 16.9 | 17.3 | 17.9 | 9.3 | 11.4 | 11.6 | 10.8 | 7.5 | 8.2 | 8.2 | 8.1 | 7.8 | 8.1 | 10.6 | 12.1 | 10.1 | 11.2 | 10.2 | 9.3 | 9.2 | 10.5 | 9.3 | 11.1 | 8.9 | 13.9 |
| lower limit | 7.9 | 8.6 | 9.6 | 9.4 | 10.6 | 8.8 | 8.3 | 10.4 | 12.3 | 7.2 | 9.9 | 9.6 | 7.2 | 8.8 | 9.6 | 6.2 | 6.3 | 8.9 | 14.4 | 12.5 | 16.0 | 13.3 | 13.1 | 13.7 | 13.9 | 6.4 | 8.0 | 7.8 | 7.7 | 4.9 | 5.5 | 5.5 | 5.5 | 5.2 | 5.6 | 7.8 | 9.0 | 7.1 | 8.3 | 7.0 | 6.6 | 6.5 | 7.5 | 6.5 | 8.0 | 6.1 | 10.6 |
| upper limit | 16.1 | 17.2 | 17.8 | 17.8 | 18.9 | 17.4 | 17.1 | 18.3 | 20.6 | 14.7 | 17.6 | 17.4 | 14.5 | 15.8 | 17.0 | 15.0 | 15.3 | 15.4 | 23.7 | 21.0 | 25.5 | 20.6 | 20.9 | 21.2 | 22.0 | 12.6 | 14.9 | 15.6 | 14.2 | 10.3 | 11.1 | 11.3 | 11.0 | 10.6 | 10.8 | 13.7 | 15.4 | 13.2 | 14.3 | 13.6 | 12.1 | 12.2 | 13.8 | 12.2 | 14.2 | 12.0 | 17.3 |
| High LDL cholesterol | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 46.8 | 44.1 | 48.9 | 46.6 | 54.6 | 39.2 | 45.3 | 56.3 | 57.6 | 54.3 | 56.9 | 56.6 | 44.5 | 57.2 | 52.0 | 41.9 | 49.7 | 43.8 | 49.5 | 46.6 | 46.0 | 50.2 | 50.4 | 53.5 | 49.0 | 36.9 | 52.7 | 44.6 | 51.4 | 42.4 | 45.1 | 44.8 | 40.3 | 35.6 | 41.5 | 29.8 | 37.3 | 40.8 | 22.8 | 39.1 | 43.1 | 49.4 | 41.1 | 43.3 | 42.0 | 39.2 | 47.3 |
| lower limit | 39.0 | 36.4 | 41.3 | 38.9 | 47.5 | 30.6 | 37.3 | 49.1 | 49.8 | 46.9 | 49.5 | 49.2 | 35.7 | 49.9 | 44.0 | 33.0 | 40.3 | 35.4 | 40.8 | 37.7 | 37.4 | 42.4 | 41.9 | 45.8 | 40.2 | 29.3 | 44.5 | 37.0 | 44.2 | 34.2 | 37.1 | 36.6 | 32.0 | 27.9 | 33.8 | 22.0 | 29.3 | 32.6 | 15.7 | 30.5 | 35.4 | 41.8 | 32.9 | 35.3 | 33.8 | 30.8 | 39.5 |
| upper limit | 54.8 | 52.3 | 56.8 | 54.9 | 62.0 | 47.7 | 54.0 | 64.0 | 65.4 | 62.0 | 64.5 | 64.3 | 53.4 | 64.6 | 59.9 | 51.4 | 59.4 | 52.6 | 58.4 | 55.5 | 55.1 | 58.1 | 58.7 | 61.4 | 57.7 | 45.2 | 60.8 | 52.8 | 59.0 | 50.7 | 53.4 | 53.4 | 48.5 | 43.8 | 49.9 | 38.1 | 45.9 | 49.4 | 30.9 | 48.1 | 51.4 | 58.0 | 49.9 | 51.8 | 50.4 | 48.0 | 55.1 |
| Particulate matter pollution | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 33.9 | 23.5 | 36.6 | 33.6 | 27.1 | 32.0 | 23.4 | 31.5 | 18.8 | 39.0 | 40.8 | 37.0 | 21.6 | 30.5 | 25.5 | 11.1 | 11.3 | 22.9 | 18.8 | 27.2 | 24.3 | 33.6 | 25.0 | 23.8 | 21.6 | 37.0 | 31.1 | 35.8 | 37.8 | 29.3 | 33.3 | 32.6 | 30.6 | 32.8 | 35.1 | 32.2 | 30.0 | 32.2 | 36.1 | 28.6 | 37.7 | 34.8 | 33.2 | 35.5 | 30.5 | 36.2 | 33.8 |
| lower limit | 30.7 | 18.8 | 33.3 | 30.3 | 22.9 | 27.9 | 19.2 | 25.7 | 10.1 | 35.1 | 37.0 | 32.2 | 16.4 | 26.1 | 18.2 | 6.7 | 7.1 | 18.1 | 13.9 | 23.6 | 20.0 | 29.0 | 21.0 | 18.7 | 16.6 | 34.2 | 28.0 | 33.1 | 34.7 | 24.1 | 28.1 | 29.0 | 22.6 | 29.2 | 31.6 | 28.1 | 25.0 | 28.7 | 32.9 | 24.0 | 34.4 | 31.4 | 29.3 | 32.1 | 25.9 | 32.8 | 29.4 |
| upper limit | 37.3 | 27.8 | 39.9 | 36.8 | 31.5 | 35.8 | 27.5 | 36.6 | 27.8 | 43.0 | 44.5 | 40.8 | 26.5 | 34.7 | 32.0 | 15.6 | 15.6 | 27.6 | 24.2 | 30.8 | 28.3 | 37.6 | 29.1 | 28.3 | 26.5 | 40.1 | 34.4 | 38.7 | 41.0 | 34.2 | 37.7 | 35.8 | 37.7 | 36.4 | 38.5 | 35.8 | 34.7 | 35.8 | 39.3 | 32.8 | 41.3 | 38.0 | 37.0 | 39.0 | 34.6 | 39.9 | 37.7 |

* PAF: population attributable fraction

§ DALY: disability adjusted life years

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lead exposure | lower limit | 3.4 | 0.2 | 1.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 1.0 | 0.4 | 0.4 | 0.3 | 0.4 | 2.0 | 2.2 | 0.5 | 0.5 | 0.0 | 0.7 | 0.7 | 0.1 | 0.0 | 0.1 | 1.1 | 2.8 | 1.0 | 3.4 | 2.1 | 2.5 | 2.0 | 1.6 | 3.2 | 1.7 | 0.8 | 1.6 | 2.0 | 3.0 | 6.5 | 2.9 | 2.4 | 1.2 | 1.5 | 1.4 | 5.2 | 1.9 | 0.9 | 1.4 | 0.7 | 0.5 | 2.4 | 0.4 | 0.1 | 1.5 | 1.4 | 0.7 | 0.0 | 0.0 | 0.0 |
| | upper limit | 7.7 | 3.7 | 4.9 | 3.0 | 2.7 | 1.7 | 2.9 | 2.0 | 2.1 | 4.6 | 4.0 | 3.7 | 3.6 | 3.8 | 6.0 | 6.3 | 3.9 | 4.1 | 3.0 | 4.4 | 4.3 | 3.3 | 2.4 | 3.3 | 5.0 | 7.1 | 4.6 | 8.0 | 6.2 | 6.9 | 6.2 | 5.6 | 7.7 | 5.8 | 4.4 | 5.6 | 6.1 | 7.4 | 12.1 | 7.1 | 6.6 | 4.9 | 5.4 | 5.3 | 10.1 | 6.2 | 4.8 | 5.1 | 4.1 | 4.0 | 6.5 | 4.0 | 3.2 | 5.6 | 5.4 | 4.3 | 1.3 | 1.6 | 2.1 |
| | value | 5.5 | 1.8 | 2.8 | 1.2 | 1.1 | 0.4 | 1.1 | 0.6 | 0.7 | 2.7 | 2.0 | 1.9 | 1.8 | 1.9 | 3.8 | 4.2 | 2.1 | 2.1 | 1.2 | 2.5 | 2.4 | 1.4 | 0.8 | 1.5 | 2.9 | 4.9 | 2.7 | 5.6 | 4.1 | 4.6 | 4.0 | 3.5 | 5.4 | 3.7 | 2.4 | 3.5 | 3.9 | 5.1 | 9.1 | 4.9 | 4.4 | 2.9 | 3.3 | 3.3 | 7.5 | 4.0 | 2.7 | 3.1 | 2.2 | 2.1 | 4.3 | 2.0 | 1.4 | 3.5 | 3.3 | 2.3 | 0.3 | 0.3 | 0.7 |
| Tobacco | lower limit | 3.4 | 0.2 | 1.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 1.0 | 0.4 | 0.4 | 0.3 | 0.4 | 2.0 | 2.2 | 0.5 | 0.5 | 0.0 | 0.7 | 0.7 | 0.1 | 0.0 | 0.1 | 1.1 | 2.8 | 1.0 | 3.4 | 2.1 | 2.5 | 2.0 | 1.6 | 3.2 | 1.7 | 0.8 | 1.6 | 2.0 | 3.0 | 6.5 | 2.9 | 2.4 | 1.2 | 1.5 | 1.4 | 5.2 | 1.9 | 0.9 | 1.4 | 0.7 | 0.5 | 2.4 | 0.4 | 0.1 | 1.5 | 1.4 | 0.7 | 0.0 | 0.0 | 0.0 |
| | upper limit | 7.7 | 3.7 | 4.9 | 3.0 | 2.7 | 1.7 | 2.9 | 2.0 | 2.1 | 4.6 | 4.0 | 3.7 | 3.6 | 3.8 | 6.0 | 6.3 | 3.9 | 4.1 | 3.0 | 4.4 | 4.3 | 3.3 | 2.4 | 3.3 | 5.0 | 7.1 | 4.6 | 8.0 | 6.2 | 6.9 | 6.2 | 5.6 | 7.7 | 5.8 | 4.4 | 5.6 | 6.1 | 7.4 | 12.1 | 7.1 | 6.6 | 4.9 | 5.4 | 5.3 | 10.1 | 6.2 | 4.8 | 5.1 | 4.1 | 4.0 | 6.5 | 4.0 | 3.2 | 5.6 | 5.4 | 4.3 | 1.3 | 1.6 | 2.1 |
| | value | 33.1 | 31.2 | 34.0 | 18.8 | 26.2 | 33.8 | 34.7 | 42.0 | 35.7 | 32.4 | 34.1 | 31.2 | 30.3 | 31.5 | 32.9 | 38.8 | 33.0 | 40.3 | 44.0 | 27.4 | 34.1 | 30.0 | 33.4 | 31.6 | 22.2 | 31.8 | 15.0 | 25.9 | 18.6 | 22.8 | 22.3 | 20.1 | 17.1 | 32.1 | 15.2 | 9.3 | 17.1 | 22.2 | 14.0 | 17.2 | 22.7 | 29.3 | 29.9 | 27.6 | 25.9 | 35.6 | 41.1 | 42.7 | 30.2 | 34.5 | 14.2 | 16.3 | 26.8 | 30.1 | 19.3 | 24.4 | 38.1 | 43.8 | 37.1 |
| Smoking | lower limit | 30.7 | 29.4 | 32.1 | 17.0 | 24.3 | 31.5 | 31.4 | 39.3 | 32.9 | 30.8 | 31.3 | 29.5 | 28.3 | 29.7 | 30.9 | 36.9 | 31.1 | 38.4 | 41.8 | 25.8 | 32.3 | 28.3 | 31.1 | 30.0 | 20.3 | 29.9 | 13.3 | 23.6 | 16.7 | 20.9 | 20.8 | 18.4 | 15.1 | 29.8 | 13.8 | 8.2 | 15.5 | 20.7 | 12.0 | 15.6 | 20.5 | 27.7 | 27.1 | 25.6 | 24.3 | 33.5 | 38.5 | 40.2 | 28.1 | 32.6 | 11.7 | 13.9 | 25.1 | 27.7 | 17.7 | 22.6 | 34.9 | 40.1 | 33.7 |
| | upper limit | 35.4 | 33.0 | 36.0 | 20.4 | 28.0 | 36.0 | 38.5 | 44.8 | 38.6 | 34.1 | 36.9 | 32.9 | 32.3 | 33.3 | 34.9 | 40.7 | 34.9 | 42.4 | 46.3 | 29.1 | 36.0 | 31.9 | 35.8 | 33.3 | 24.2 | 33.8 | 16.7 | 28.2 | 20.5 | 24.9 | 23.8 | 21.7 | 19.3 | 34.5 | 16.7 | 10.6 | 18.5 | 23.7 | 16.2 | 19.0 | 24.7 | 30.9 | 32.9 | 29.6 | 27.6 | 37.8 | 43.5 | 45.3 | 32.9 | 36.5 | 16.8 | 18.5 | 28.5 | 32.4 | 21.1 | 26.2 | 41.3 | 47.4 | 40.7 |
| | value | 28.4 | 26.6 | 29.2 | 15.3 | 22.9 | 29.6 | 29.3 | 36.5 | 31.1 | 28.2 | 29.0 | 26.9 | 26.7 | 25.5 | 28.6 | 35.2 | 30.0 | 36.3 | 40.2 | 24.1 | 30.7 | 27.4 | 30.6 | 28.3 | 19.1 | 29.2 | 12.8 | 23.1 | 16.0 | 19.5 | 19.4 | 17.8 | 14.5 | 28.3 | 13.2 | 7.2 | 14.1 | 18.9 | 11.6 | 14.8 | 19.0 | 25.8 | 26.4 | 20.9 | 21.3 | 30.0 | 36.6 | 38.2 | 23.0 | 30.8 | 11.4 | 13.4 | 22.2 | 25.3 | 16.2 | 20.8 | 33.3 | 38.9 | 31.8 |
| Secondhand smoke | lower limit | 25.9 | 25.0 | 27.4 | 13.7 | 21.1 | 27.4 | 25.9 | 33.9 | 28.3 | 26.7 | 25.8 | 25.4 | 24.8 | 23.9 | 26.8 | 33.6 | 28.2 | 34.3 | 38.0 | 22.6 | 28.9 | 25.7 | 28.2 | 26.7 | 17.2 | 27.2 | 11.2 | 20.8 | 14.2 | 17.7 | 18.0 | 16.2 | 12.4 | 25.9 | 11.9 | 6.2 | 12.8 | 17.6 | 9.6 | 13.2 | 17.0 | 24.3 | 23.5 | 19.3 | 19.9 | 28.0 | 33.9 | 35.8 | 20.9 | 29.0 | 9.0 | 11.2 | 20.7 | 23.0 | 14.7 | 19.2 | 30.2 | 35.2 | 28.3 |
| | upper limit | 30.8 | 28.1 | 31.1 | 16.8 | 24.7 | 31.6 | 33.2 | 39.2 | 33.9 | 29.8 | 32.1 | 28.5 | 28.7 | 27.3 | 30.5 | 37.0 | 31.7 | 38.2 | 42.5 | 25.7 | 32.4 | 29.3 | 33.2 | 29.8 | 21.2 | 31.1 | 14.3 | 25.4 | 17.9 | 21.5 | 20.9 | 19.4 | 16.7 | 30.7 | 14.8 | 8.3 | 15.5 | 20.4 | 13.7 | 16.5 | 21.0 | 27.4 | 29.5 | 22.8 | 22.8 | 32.0 | 39.0 | 40.9 | 25.5 | 32.7 | 14.0 | 15.7 | 23.7 | 27.6 | 17.8 | 22.5 | 36.5 | 42.6 | 35.4 |
| | value | 6.3 | 6.1 | 6.9 | 4.1 | 4.3 | 6.1 | 7.6 | 9.0 | 6.9 | 5.7 | 6.8 | 6.0 | 4.9 | 8.0 | 6.1 | 6.0 | 4.9 | 6.9 | 6.8 | 4.7 | 5.4 | 3.7 | 4.3 | 4.9 | 3.9 | 4.1 | 2.7 | 3.8 | 3.1 | 4.2 | 3.7 | 2.9 | 3.2 | 5.5 | 2.4 | 2.3 | 3.5 | 4.2 | 2.9 | 3.0 | 4.6 | 4.9 | 5.0 | 8.2 | 6.0 | 7.9 | 7.3 | 7.8 | 9.1 | 5.7 | 3.3 | 3.4 | 5.8 | 6.5 | 3.8 | 4.6 | 7.6 | 8.4 | 7.9 |
| Secondhand smoke | lower limit | 5.3 | 4.9 | 5.6 | 3.2 | 3.5 | 4.7 | 6.0 | 7.3 | 5.5 | 4.7 | 5.5 | 4.9 | 4.0 | 6.7 | 5.0 | 4.9 | 4.0 | 5.7 | 5.6 | 3.8 | 4.3 | 3.0 | 3.4 | 4.0 | 3.1 | 3.3 | 2.1 | 3.0 | 2.4 | 3.3 | 3.0 | 2.3 | 2.5 | 4.5 | 1.7 | 1.8 | 2.8 | 3.4 | 2.2 | 2.2 | 3.6 | 4.0 | 4.0 | 6.8 | 4.9 | 6.4 | 5.9 | 6.5 | 7.5 | 4.7 | 2.5 | 2.6 | 4.7 | 5.1 | 2.9 | 3.6 | 6.1 | 6.4 | 6.3 |
| | upper limit | 7.6 | 7.4 | 8.3 | 5.2 | 5.2 | 7.6 | 9.3 | 10.9 | 8.4 | 6.8 | 8.1 | 7.2 | 5.9 | 9.5 | 7.3 | 7.1 | 5.9 | 8.3 | 8.1 | 5.7 | 6.4 | 4.4 | 5.1 | 6.0 | 4.8 | 5.0 | 3.4 | 4.6 | 4.0 | 5.2 | 4.5 | 3.6 | 3.9 | 6.7 | 3.0 | 2.9 | 4.4 | 5.1 | 3.6 | 3.8 | 5.7 | 6.0 | 6.0 | 9.7 | 7.1 | 9.4 | 8.7 | 9.3 | 10.9 | 6.8 | 4.1 | 4.2 | 7.1 | 7.9 | 4.7 | 5.7 | 9.3 | 10.5 | 9.6 |
| | value | 6.3 | 6.1 | 6.9 | 4.1 | 4.3 | 6.1 | 7.6 | 9.0 | 6.9 | 5.7 | 6.8 | 6.0 | 4.9 | 8.0 | 6.1 | 6.0 | 4.9 | 6.9 | 6.8 | 4.7 | 5.4 | 3.7 | 4.3 | 4.9 | 3.9 | 4.1 | 2.7 | 3.8 | 3.1 | 4.2 | 3.7 | 2.9 | 3.2 | 5.5 | 2.4 | 2.3 | 3.5 | 4.2 | 2.9 | 3.0 | 4.6 | 4.9 | 5.0 | 8.2 | 6.0 | 7.9 | 7.3 | 7.8 | 9.1 | 5.7 | 3.3 | 3.4 | 5.8 | 6.5 | 3.8 | 4.6 | 7.6 | 8.4 | 7.9 |

Alcohol use

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| value | -0.6 | -1.1 | -3.1 | -0.4 | -1.2 | -1.2 | -3.3 | -3.1 | -3.1 | -2.5 | -0.7 | -1.2 | -2.8 | -2.1 | -2.9 | -1.8 | -1.2 | -2.5 | -2.0 | -1.7 | -0.9 | -1.0 | -1.3 | -3.3 | -0.8 | -1.6 | -1.1 | -2.1 | -0.7 | -1.6 | -2.1 | -1.0 | -1.0 | -1.7 | -1.4 | -3.2 | -1.5 | -2.2 | -1.2 | -1.0 | -0.9 | -1.4 | -1.6 | -0.6 | 0.0 | -0.7 | -0.7 | -0.4 | 0.0 | -0.7 | -2.4 | -1.8 | -3.5 | -0.8 | -2.4 | 0.1 | -2.4 | -2.5 | -3.0 |
| lower limit | -2.9 | -2.0 | -5.0 | -2.4 | -4.1 | -2.7 | -5.4 | -5.1 | -5.0 | -4.2 | -3.1 | -3.3 | -5.1 | -4.2 | -5.2 | -4.0 | -4.8 | -5.5 | -5.4 | -5.0 | -3.6 | -4.5 | -4.3 | -7.3 | -2.8 | -3.4 | -3.1 | -4.2 | -3.2 | -4.2 | -3.7 | -3.5 | -3.1 | -3.9 | -2.9 | -5.5 | -3.0 | -4.1 | -2.1 | -3.1 | -3.0 | -3.4 | -4.8 | -1.0 | -0.2 | -1.0 | -1.1 | -0.9 | -0.1 | -1.3 | -5.0 | -5.0 | -6.0 | -3.1 | -5.2 | -2.2 | -3.8 | -5.3 | -4.8 |
| upper limit | 1.5 | 0.0 | -1.2 | 1.9 | 1.7 | 0.5 | -1.2 | -1.1 | -1.2 | -0.8 | 1.7 | 1.0 | -0.6 | 0.2 | -0.5 | 0.5 | 2.2 | 0.5 | 1.5 | 1.7 | 1.9 | 2.5 | 1.8 | 0.5 | 1.3 | 0.1 | 1.0 | 0.1 | 1.7 | 1.0 | -0.5 | 1.5 | 1.3 | 0.6 | 0.2 | -0.7 | 0.0 | -0.2 | -0.3 | 1.1 | 1.2 | 0.6 | 1.7 | -0.2 | 0.3 | -0.3 | -0.2 | 0.1 | 0.2 | -0.1 | 0.7 | 1.8 | -0.8 | 1.6 | 0.6 | 2.5 | -1.1 | 0.5 | -1.2 |

Metabolic risks

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| value | 80.9 | 91.1 | 87.4 | 87.9 | 84.4 | 92.1 | 88.7 | 87.4 | 89.3 | 85.3 | 86.1 | 86.7 | 90.1 | 87.8 | 84.9 | 88.4 | 86.3 | 89.4 | 90.0 | 88.0 | 90.7 | 85.6 | 87.9 | 84.0 | 85.8 | 82.5 | 85.1 | 84.4 | 86.6 | 87.4 | 85.5 | 85.8 | 84.6 | 87.1 | 82.5 | 81.7 | 85.5 | 90.5 | 84.5 | 88.8 | 88.2 | 88.0 | 87.4 | 87.4 | 86.8 | 91.3 | 90.9 | 89.8 | 90.8 | 86.4 | 85.9 | 85.4 | 88.5 | 87.0 | 83.0 | 88.8 | 90.7 | 93.1 | 87.9 |
| lower limit | 74.5 | 87.5 | 82.8 | 82.9 | 78.8 | 88.8 | 84.3 | 82.1 | 84.9 | 78.8 | 80.4 | 80.5 | 85.6 | 83.1 | 79.0 | 82.9 | 80.2 | 84.6 | 85.0 | 82.6 | 85.6 | 79.6 | 82.9 | 78.3 | 80.7 | 75.9 | 78.6 | 79.2 | 81.0 | 82.4 | 79.6 | 79.9 | 78.5 | 82.1 | 76.3 | 75.5 | 79.5 | 86.1 | 78.7 | 84.4 | 83.3 | 83.6 | 82.4 | 82.4 | 82.0 | 87.9 | 87.3 | 85.4 | 87.2 | 81.3 | 80.5 | 79.9 | 83.9 | 81.9 | 76.8 | 84.2 | 87.1 | 89.9 | 83.0 |
| upper limit | 86.7 | 94.4 | 91.8 | 92.5 | 89.8 | 94.9 | 92.6 | 92.1 | 93.2 | 91.2 | 91.3 | 92.1 | 94.0 | 92.2 | 90.0 | 93.4 | 91.7 | 93.9 | 94.2 | 92.5 | 95.1 | 90.6 | 92.2 | 89.4 | 90.8 | 88.7 | 91.0 | 89.5 | 91.7 | 92.0 | 91.1 | 91.2 | 90.5 | 91.8 | 88.6 | 87.6 | 91.0 | 94.3 | 89.6 | 92.8 | 92.6 | 92.1 | 92.0 | 91.9 | 91.3 | 94.4 | 94.1 | 93.9 | 94.1 | 91.3 | 90.8 | 90.5 | 92.7 | 91.4 | 88.7 | 92.9 | 94.0 | 95.7 | 92.4 |

High fasting plasma glucose

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| value | 17.3 | 24.9 | 22.8 | 34.2 | 21.9 | 37.1 | 43.5 | 38.4 | 33.0 | 30.1 | 28.1 | 33.8 | 30.8 | 20.1 | 15.0 | 36.1 | 26.6 | 35.4 | 34.4 | 17.5 | 36.0 | 14.1 | 19.0 | 24.7 | 24.2 | 30.6 | 37.8 | 19.1 | 37.1 | 37.9 | 35.5 | 36.8 | 37.2 | 36.0 | 26.6 | 17.1 | 33.1 | 32.8 | 32.5 | 34.4 | 32.9 | 24.2 | 25.9 | 32.0 | 28.3 | 31.2 | 28.8 | 34.5 | 33.1 | 23.5 | 23.9 | 28.0 | 31.8 | 25.8 | 24.1 | 27.5 | 39.1 | 32.7 | 36.1 |
| lower limit | 11.3 | 16.0 | 13.8 | 20.6 | 13.2 | 24.3 | 27.3 | 25.1 | 21.7 | 17.0 | 16.4 | 20.3 | 18.3 | 11.5 | 9.5 | 21.3 | 14.7 | 22.0 | 20.3 | 10.7 | 20.5 | 9.0 | 12.4 | 14.3 | 15.3 | 18.4 | 23.5 | 11.3 | 23.1 | 23.9 | 21.6 | 23.6 | 23.2 | 24.1 | 16.2 | 10.1 | 19.2 | 20.5 | 20.4 | 22.9 | 20.3 | 14.8 | 15.6 | 20.3 | 17.8 | 20.0 | 18.9 | 21.4 | 21.0 | 14.6 | 14.7 | 17.0 | 20.8 | 15.4 | 14.4 | 16.9 | 25.5 | 19.8 | 23.8 |
| upper limit | 26.2 | 37.0 | 34.6 | 53.5 | 34.6 | 53.8 | 62.8 | 57.0 | 48.2 | 49.1 | 45.3 | 54.0 | 49.3 | 32.5 | 22.2 | 55.9 | 43.4 | 54.3 | 54.2 | 26.8 | 57.1 | 20.3 | 26.9 | 39.5 | 36.8 | 47.0 | 57.3 | 31.0 | 55.9 | 54.9 | 54.8 | 55.2 | 55.2 | 52.5 | 42.4 | 27.6 | 52.8 | 49.2 | 49.7 | 50.3 | 50.4 | 36.8 | 40.5 | 48.6 | 42.6 | 45.8 | 42.8 | 52.6 | 49.1 | 36.8 | 37.0 | 42.9 | 45.4 | 39.5 | 38.6 | 42.0 | 55.1 | 48.5 | 52.1 |

High systolic blood pressure

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| value | 53.5 | 64.7 | 55.9 | 56.9 | 45.6 | 63.5 | 44.7 | 52.4 | 58.2 | 59.1 | 55.7 | 61.4 | 66.9 | 61.4 | 61.0 | 59.8 | 56.2 | 60.4 | 62.1 | 64.4 | 63.9 | 63.6 | 60.8 | 49.5 | 50.9 | 46.7 | 51.4 | 51.9 | 52.6 | 52.0 | 51.0 | 54.9 | 51.8 | 47.1 | 38.5 | 48.2 | 48.7 | 62.9 | 52.7 | 53.0 | 58.5 | 56.1 | 54.4 | 52.1 | 52.0 | 65.2 | 55.4 | 57.1 | 62.0 | 54.6 | 63.0 | 58.4 | 53.1 | 63.5 | 57.1 | 63.6 | 59.8 | 63.4 | 51.7 |
| lower limit | 44.7 | 56.8 | 47.6 | 48.3 | 37.3 | 56.1 | 35.7 | 44.2 | 50.3 | 50.3 | 47.2 | 51.8 | 58.6 | 53.0 | 51.7 | 49.9 | 46.5 | 52.0 | 52.7 | 54.2 | 54.0 | 54.2 | 52.7 | 40.8 | 42.3 | 38.1 | 42.4 | 43.6 | 43.4 | 43.1 | 42.0 | 46.1 | 43.2 | 39.0 | 30.3 | 39.4 | 40.2 | 53.7 | 44.3 | 45.0 | 50.5 | 48.7 | 46.3 | 43.4 | 44.5 | 57.6 | 47.1 | 48.7 | 54.4 | 46.4 | 55.2 | 49.8 | 44.0 | 56.3 | 48.8 | 55.5 | 51.1 | 53.5 | 42.6 |
| upper limit | 62.2 | 71.9 | 63.8 | 65.3 | 54.8 | 70.9 | 53.9 | 60.8 | 65.9 | 67.9 | 64.1 | 70.5 | 74.5 | 69.0 | 69.8 | 68.7 | 65.6 | 68.9 | 70.4 | 73.1 | 73.3 | 72.4 | 68.8 | 58.6 | 59.1 | 55.7 | 60.7 | 60.8 | 61.4 | 60.2 | 59.6 | 63.1 | 60.5 | 55.2 | 46.8 | 57.3 | 57.3 | 71.3 | 60.2 | 61.5 | 67.0 | 63.4 | 62.4 | 61.2 | 59.4 | 72.0 | 63.3 | 64.7 | 69.2 | 63.5 | 70.5 | 66.6 | 61.5 | 70.3 | 65.2 | 71.3 | 68.0 | 71.4 | 60.1 |

High body-mass

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| index | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 14.6 | 26.4 | 18.0 | 17.5 | 20.5 | 40.1 | 31.1 | 37.6 | 36.0 | 29.3 | 31.9 | 26.2 | 33.7 | 35.6 | 26.3 | 27.1 | 28.1 | 31.6 | 33.7 | 29.2 | 29.2 | 28.2 | 31.4 | 25.1 | 35.2 | 25.7 | 29.0 | 28.7 | 27.1 | 29.6 | 29.6 | 27.3 | 26.6 | 30.0 | 35.3 | 27.6 | 25.4 | 28.8 | 22.2 | 32.1 | 28.2 | 32.3 | 29.2 | 34.0 | 29.8 | 36.4 | 44.7 | 34.1 | 41.5 | 34.7 | 32.0 | 30.7 | 24.8 | 32.7 | 25.3 | 35.7 | 45.8 | 43.1 | 30.6 |
| lower limit | 6.8 | 17.0 | 10.0 | 9.8 | 12.2 | 27.2 | 17.6 | 24.7 | 24.1 | 19.3 | 20.2 | 16.6 | 22.4 | 23.4 | 15.9 | 16.8 | 17.8 | 20.6 | 22.4 | 20.3 | 18.6 | 18.0 | 20.5 | 14.6 | 23.1 | 16.0 | 18.3 | 17.4 | 17.0 | 18.1 | 19.5 | 16.9 | 16.3 | 18.4 | 23.6 | 16.4 | 15.4 | 17.5 | 12.6 | 20.4 | 17.0 | 21.4 | 18.3 | 23.0 | 20.3 | 24.0 | 31.7 | 22.4 | 28.5 | 22.5 | 22.3 | 20.0 | 15.5 | 22.5 | 17.1 | 25.4 | 34.1 | 27.8 | 18.1 |
| upper limit | 24.3 | 35.7 | 27.3 | 25.3 | 30.1 | 51.6 | 45.9 | 49.7 | 47.0 | 39.8 | 43.7 | 36.9 | 45.0 | 47.6 | 37.7 | 38.0 | 38.8 | 43.0 | 45.1 | 39.2 | 39.8 | 39.2 | 42.4 | 36.4 | 46.8 | 36.0 | 40.2 | 40.7 | 37.8 | 42.1 | 40.4 | 38.4 | 37.6 | 42.1 | 46.0 | 39.4 | 36.0 | 40.6 | 32.9 | 43.7 | 40.3 | 43.7 | 40.6 | 45.2 | 40.0 | 48.6 | 56.3 | 45.9 | 53.2 | 46.5 | 42.3 | 42.0 | 34.8 | 43.1 | 33.9 | 46.4 | 56.0 | 57.2 | 43.9 |
| Dietary risks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 57.8 | 55.8 | 60.1 | 53.9 | 50.1 | 58.4 | 62.3 | 56.4 | 57.8 | 59.7 | 62.3 | 61.3 | 61.4 | 66.7 | 62.7 | 57.4 | 59.9 | 57.6 | 60.3 | 61.2 | 57.6 | 59.7 | 59.6 | 60.8 | 47.2 | 41.5 | 51.3 | 46.7 | 52.7 | 51.5 | 50.3 | 54.3 | 50.7 | 50.8 | 58.3 | 53.8 | 53.8 | 55.3 | 50.6 | 49.1 | 57.2 | 47.5 | 53.5 | 54.3 | 53.5 | 57.0 | 54.8 | 46.5 | 55.6 | 39.3 | 50.0 | 50.8 | 54.2 | 60.5 | 58.9 | 55.2 | 54.1 | 61.6 | 60.2 |
| lower limit | 47.6 | 44.3 | 49.3 | 42.8 | 38.6 | 47.6 | 52.0 | 45.7 | 47.7 | 49.7 | 51.1 | 51.6 | 51.7 | 57.5 | 52.7 | 47.1 | 49.4 | 46.2 | 49.4 | 51.5 | 46.9 | 49.9 | 49.4 | 51.6 | 36.5 | 32.4 | 39.8 | 35.6 | 42.4 | 40.4 | 39.5 | 43.7 | 39.9 | 40.4 | 48.5 | 43.6 | 44.3 | 44.8 | 40.7 | 40.6 | 47.3 | 38.4 | 43.2 | 44.4 | 42.4 | 47.4 | 44.1 | 35.8 | 45.1 | 27.7 | 39.4 | 39.9 | 43.1 | 50.8 | 49.3 | 45.6 | 43.1 | 50.6 | 50.2 |
| upper limit | 66.7 | 65.9 | 69.0 | 63.8 | 60.3 | 67.2 | 70.4 | 63.9 | 66.5 | 67.5 | 70.1 | 69.1 | 69.1 | 73.6 | 71.4 | 67.1 | 69.1 | 67.4 | 69.7 | 70.0 | 67.1 | 66.9 | 67.8 | 68.2 | 55.8 | 49.9 | 60.1 | 55.7 | 61.3 | 60.2 | 59.1 | 62.2 | 59.2 | 59.7 | 66.0 | 62.3 | 62.5 | 64.0 | 59.4 | 57.0 | 65.9 | 55.8 | 62.5 | 61.3 | 60.9 | 63.9 | 62.2 | 53.9 | 63.0 | 45.8 | 59.2 | 60.0 | 63.9 | 68.3 | 66.5 | 63.1 | 62.3 | 69.6 | 68.4 |
| Diet low in fruits | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 4.2 | 4.4 | 6.5 | 7.0 | 2.7 | 8.6 | 7.8 | 6.5 | 6.3 | 2.2 | 3.1 | 5.6 | 5.5 | 4.0 | 1.2 | 3.6 | 5.2 | 2.7 | 1.1 | 3.8 | 2.1 | 5.0 | 5.3 | 2.0 | 0.6 | 2.5 | 0.3 | 0.9 | 2.6 | 6.6 | 3.7 | 3.9 | 2.5 | 4.8 | 1.5 | 4.3 | 2.9 | 2.7 | 5.5 | 3.2 | 3.9 | 2.7 | 3.2 | 3.0 | 1.3 | 5.5 | 5.2 | 1.2 | 3.7 | 0.6 | 3.2 | 1.8 | 7.5 | 8.9 | 8.0 | 7.8 | 5.2 | 7.1 | 7.1 |
| lower limit | 1.4 | 1.3 | 2.3 | 2.8 | 0.7 | 3.7 | 3.0 | 2.3 | 2.3 | 0.6 | 0.8 | 1.9 | 1.8 | 1.2 | 0.4 | 1.2 | 1.9 | 0.7 | 0.3 | 1.2 | 0.5 | 1.6 | 1.9 | 0.5 | 0.2 | 0.7 | 0.2 | 0.3 | 0.7 | 2.4 | 1.1 | 1.1 | 0.7 | 1.5 | 0.4 | 1.4 | 0.9 | 0.7 | 1.8 | 1.1 | 1.2 | 0.9 | 0.9 | 0.9 | 0.4 | 1.9 | 1.6 | 0.3 | 1.1 | 0.2 | 1.0 | 0.5 | 3.1 | 3.8 | 3.4 | 3.4 | 1.8 | 2.6 | 2.7 |
| upper limit | 6.5 | 7.0 | 9.7 | 10.2 | 4.6 | 12.4 | 11.4 | 9.8 | 9.4 | 3.8 | 5.2 | 8.3 | 8.2 | 6.5 | 2.2 | 5.8 | 7.9 | 4.6 | 2.1 | 6.0 | 3.7 | 7.6 | 8.0 | 3.5 | 1.2 | 4.3 | 0.4 | 1.8 | 4.5 | 9.7 | 6.0 | 6.3 | 4.4 | 7.5 | 2.7 | 6.8 | 4.9 | 4.6 | 8.4 | 5.2 | 6.4 | 4.6 | 5.4 | 5.1 | 2.3 | 8.4 | 8.0 | 2.3 | 6.3 | 1.2 | 5.2 | 3.2 | 10.8 | 12.7 | 11.5 | 11.2 | 8.2 | 10.9 | 10.5 |
| Diet low in vegetables | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 0.4 | 7.1 | 6.0 | 7.6 | 7.9 | 9.0 | 11.6 | 11.4 | 10.0 | 0.2 | 0.4 | 4.2 | 0.6 | 0.3 | 0.4 | 1.6 | 0.8 | 0.4 | 0.4 | 0.3 | 3.5 | 1.3 | 4.1 | 5.1 | 8.7 | 3.5 | 5.4 | 7.0 | 9.0 | 7.5 | 6.1 | 8.8 | 8.1 | 8.2 | 8.5 | 7.2 | 6.9 | 8.0 | 7.4 | 6.3 | 7.3 | 7.3 | 8.3 | 4.1 | 1.1 | 1.6 | 4.1 | 0.3 | 4.0 | 0.2 | 9.6 | 9.5 | 6.1 | 9.7 | 9.1 | 8.0 | 9.4 | 11.4 | 10.7 |
| lower limit | 0.2 | 3.5 | 2.5 | 4.2 | 4.4 | 5.2 | 7.3 | 7.3 | 6.2 | 0.2 | 0.2 | 1.5 | 0.2 | 0.2 | 0.2 | 0.4 | 0.3 | 0.2 | 0.2 | 0.2 | 1.1 | 0.4 | 1.5 | 2.0 | 5.1 | 1.1 | 2.3 | 3.4 | 5.5 | 3.8 | 2.8 | 5.3 | 4.8 | 4.6 | 5.1 | 3.9 | 3.7 | 4.6 | 3.8 | 3.1 | 3.8 | 3.9 | 4.9 | 1.3 | 0.3 | 0.3 | 1.3 | 0.2 | 1.2 | 0.2 | 5.9 | 5.8 | 2.7 | 5.8 | 5.5 | 4.5 | 5.7 | 6.9 | 6.7 |
| upper limit | 0.6 | 10.4 | 9.1 | 10.9 | 11.2 | 12.6 | 15.8 | 15.4 | 13.6 | 0.3 | 0.7 | 6.5 | 1.1 | 0.5 | 0.7 | 2.9 | 1.5 | 0.8 | 0.6 | 0.4 | 5.5 | 2.4 | 6.3 | 7.8 | 12.2 | 5.5 | 8.3 | 10.3 | 12.3 | 11.0 | 9.2 | 12.1 | 11.3 | 11.7 | 11.8 | 10.4 | 10.1 | 11.2 | 10.7 | 9.3 | 10.6 | 10.5 | 11.7 | 6.5 | 1.9 | 3.0 | 6.6 | 0.4 | 6.4 | 0.2 | 13.2 | 13.1 | 9.4 | 13.4 | 12.6 | 11.3 | 12.9 | 15.7 | 14.7 |
| Diet low in whole grains | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| value | 17.4 | 17.5 | 21.0 | 14.7 | 12.4 | 21.2 | 23.1 | 22.7 | 20.1 | 24.0 | 25.0 | 23.9 | 24.8 | 25.7 | 23.3 | 14.6 | 18.2 | 20.6 | 19.3 | 16.0 | 17.7 | 21.4 | 18.8 | 19.3 | 18.4 | 15.8 | 23.5 | 17.3 | 21.7 | 17.2 | 19.3 | 21.2 | 19.2 | 16.7 | 17.8 | 15.4 | 15.5 | 18.3 | 16.4 | 12.3 | 14.4 | 15.8 | 16.0 | 23.7 | 25.1 | 22.8 | 26.2 | 24.5 | 24.9 | 24.4 | 14.9 | 14.3 | 18.2 | 17.3 | 16.4 | 12.3 | 20.3 | 23.9 | 21.4 |
| lower limit | 6.1 | 6.3 | 7.0 | 5.6 | 5.0 | 7.2 | 7.9 | 7.6 | 6.8 | 10.4 | 10.9 | 10.4 | 10.9 | 11.1 | 10.2 | 5.4 | 6.0 | 7.1 | 6.4 | 5.6 | 5.9 | 8.1 | 6.4 | 6.4 | 6.5 | 5.7 | 10.3 | 6.3 | 8.1 | 6.3 | 6.6 | 7.7 | 6.6 | 6.2 | 6.3 | 5.7 | 5.6 | 6.4 | 6.0 | 5.0 | 5.6 | 5.9 | 5.9 | 9.6 | 10.9 | 8.4 | 11.3 | 10.5 | 9.8 | 10.5 | 5.7 | 5.6 | 6.4 | 6.4 | 6.1 | 5.1 | 7.0 | 8.2 | 7.2 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|-----|------|------|------|------|-----|------|------|------|-----|------|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|------|-----|------|-----|------|-----|------|------|-----|-----|------|-----|------|------|-----|-----|-----|------|-----|-----|-----|-----|-----|------|------|------|-----|------|-----|------|------|------|-----|
| | upper limit | 2.7 | 2.2 | 3.6 | 2.6 | 3.1 | 2.9 | 2.6 | 3.0 | 2.4 | 2.9 | 2.9 | 2.5 | 3.4 | 3.9 | 3.8 | 3.1 | 3.5 | 3.4 | 2.4 | 4.0 | 2.5 | 3.2 | 2.7 | 5.5 | 3.0 | 3.7 | 2.9 | 3.1 | 3.2 | 3.1 | 2.8 | 2.8 | 2.8 | 3.3 | 4.5 | 2.7 | 3.0 | 3.9 | 3.2 | 5.7 | 2.5 | 4.2 | 3.0 | 2.8 | 3.3 | 3.4 | 2.8 | 2.8 | 2.9 | 3.0 | 3.5 | 3.0 | 3.1 | 3.7 | 3.8 | 3.2 | 3.3 | 3.4 | 2.6 | |
| Diet low in fiber | value | 2.4 | 8.9 | 9.7 | 2.9 | 11.7 | 1.3 | 0.9 | 0.2 | 0.6 | 3.5 | 2.2 | 3.3 | 3.7 | 5.3 | 2.3 | 0.4 | 6.0 | 2.5 | 1.5 | 1.4 | 3.6 | 0.8 | 3.7 | 6.8 | 2.7 | 0.7 | 0.6 | 6.3 | 3.8 | 5.9 | 2.9 | 7.9 | 5.3 | 12.5 | 10.7 | 2.4 | 5.1 | 7.6 | 1.4 | 1.0 | 7.1 | 4.6 | 1.2 | 1.7 | 1.7 | 4.3 | 4.7 | 1.0 | 3.8 | 0.5 | 0.9 | 2.1 | 6.2 | 3.9 | 5.9 | 2.3 | 0.3 | 0.4 | 0.9 | |
| | lower limit | 0.8 | 3.8 | 4.2 | 0.9 | 5.5 | 0.4 | 0.3 | 0.2 | 0.3 | 1.1 | 0.7 | 1.1 | 1.2 | 1.8 | 0.7 | 0.2 | 2.2 | 0.8 | 0.5 | 0.5 | 1.2 | 0.3 | 1.4 | 2.8 | 0.8 | 0.3 | 0.3 | 2.4 | 1.1 | 2.1 | 0.9 | 3.2 | 1.9 | 6.2 | 5.1 | 0.8 | 1.8 | 3.1 | 0.5 | 0.4 | 2.8 | 1.8 | 0.4 | 0.6 | 0.6 | 1.4 | 1.6 | 0.4 | 1.2 | 0.2 | 0.3 | 0.6 | 2.4 | 1.2 | 2.1 | 0.8 | 0.2 | 0.2 | 0.3 | |
| | upper limit | 4.3 | 13.9 | 15.0 | 5.5 | 17.1 | 2.7 | 2.0 | 0.2 | 1.2 | 6.4 | 4.3 | 6.3 | 6.8 | 9.2 | 4.5 | 0.7 | 9.8 | 4.9 | 3.1 | 2.8 | 6.6 | 1.6 | 6.6 | 11.0 | 5.3 | 1.3 | 1.1 | 10.7 | 7.3 | 9.9 | 5.5 | 12.6 | 9.0 | 18.2 | 15.9 | 4.6 | 8.7 | 12.1 | 2.8 | 1.9 | 11.5 | 7.7 | 2.3 | 3.4 | 3.3 | 7.7 | 8.4 | 2.1 | 7.1 | 0.9 | 1.9 | 4.1 | 10.5 | 7.1 | 10.0 | 4.4 | 0.6 | 0.9 | 1.8 | |
| Diet low in seafood omega-3 fatty acids | value | 4.1 | 3.6 | 4.3 | 3.9 | 3.8 | 4.4 | 5.0 | 3.7 | 4.3 | 3.6 | 3.9 | 3.7 | 3.7 | 3.9 | 3.6 | 3.6 | 3.5 | 3.7 | 3.5 | 3.5 | 3.4 | 3.4 | 3.6 | 3.0 | 3.8 | 3.7 | 3.3 | 3.8 | 3.4 | 4.0 | 3.6 | 3.1 | 3.1 | 3.8 | 3.9 | 3.9 | 3.6 | 3.7 | 4.2 | 3.8 | 3.9 | 3.7 | 3.9 | 4.2 | 4.2 | 4.5 | 4.1 | 3.6 | 4.5 | 3.9 | 4.3 | 4.2 | 3.7 | 4.4 | 4.1 | 4.1 | 4.3 | 4.8 | 5.3 | |
| | lower limit | 1.8 | 2.5 | 2.4 | 1.4 | 2.3 | 2.3 | 1.9 | 1.8 | 1.9 | 2.2 | 1.6 | 1.8 | 2.3 | 2.2 | 2.2 | 1.4 | 2.0 | 1.8 | 1.8 | 1.6 | 2.0 | 2.2 | 2.3 | 2.1 | 2.2 | 1.8 | 2.0 | 2.4 | 2.1 | 2.4 | 2.5 | 2.6 | 2.6 | 2.5 | 2.4 | 1.7 | 2.4 | 2.4 | 2.1 | 2.3 | 2.5 | 2.4 | 2.1 | 1.3 | 2.1 | 1.8 | 2.4 | 2.1 | 1.8 | 2.1 | 2.6 | 2.2 | 2.5 | 1.3 | 2.0 | 2.5 | 2.7 | 2.4 | 2.5 | |
| | upper limit | 5.3 | 4.4 | 5.5 | 5.2 | 4.8 | 5.5 | 6.7 | 4.7 | 5.7 | 4.5 | 5.1 | 4.7 | 4.5 | 4.9 | 4.4 | 4.7 | 4.3 | 4.6 | 4.4 | 4.5 | 4.2 | 4.0 | 4.3 | 3.8 | 4.8 | 4.6 | 4.1 | 4.6 | 4.1 | 5.0 | 4.5 | 3.5 | 3.5 | 4.7 | 4.8 | 5.1 | 4.4 | 4.5 | 5.3 | 4.6 | 4.9 | 4.5 | 4.9 | 5.7 | 5.3 | 6.0 | 5.1 | 4.5 | 5.9 | 4.9 | 5.4 | 5.4 | 4.5 | 5.9 | 5.2 | 5.0 | 5.5 | 6.3 | 6.9 | |
| Diet low in polyunsaturated fatty acids | value | 4.5 | 3.9 | 5.8 | 6.4 | 4.6 | 1.9 | 6.3 | 5.3 | 5.3 | 4.2 | 5.1 | 4.4 | 3.2 | 6.0 | 4.7 | 4.4 | 2.2 | 3.5 | 4.6 | 3.8 | 3.6 | 3.7 | 4.3 | 2.9 | 2.0 | 2.6 | 3.5 | 0.9 | 1.5 | 5.3 | 2.5 | 4.1 | 3.6 | 1.1 | 2.2 | 4.0 | 3.3 | 2.0 | 3.0 | 3.4 | 1.6 | 1.0 | 1.1 | 3.1 | 2.0 | 3.5 | 2.2 | 1.3 | 1.6 | 4.2 | 5.4 | 5.8 | 0.7 | 4.4 | 5.3 | 2.4 | 4.7 | 5.9 | 5.8 | |
| | lower limit | 0.6 | 0.4 | 0.7 | 0.9 | 0.4 | 0.3 | 0.6 | 0.5 | 0.5 | 0.4 | 0.5 | 0.4 | 0.3 | 0.8 | 0.5 | 0.4 | 0.3 | 0.4 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.5 | 0.3 | 0.6 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.4 | 0.6 | 0.7 | 0.3 | 0.5 | 0.6 | 0.3 | 0.4 | 0.5 | 0.6 | |
| | upper limit | 9.2 | 8.4 | 11.8 | 12.4 | 9.6 | 4.7 | 12.7 | 10.9 | 10.7 | 8.9 | 10.4 | 9.0 | 7.2 | 11.9 | 9.6 | 9.1 | 4.9 | 7.6 | 9.4 | 7.9 | 7.7 | 7.9 | 8.9 | 6.5 | 4.7 | 5.9 | 7.4 | 1.9 | 3.5 | 10.9 | 5.8 | 8.5 | 7.6 | 2.3 | 4.8 | 8.3 | 7.1 | 4.7 | 6.6 | 7.6 | 3.7 | 2.3 | 2.4 | 7.0 | 4.6 | 7.6 | 5.0 | 3.1 | 3.5 | 8.9 | 11.1 | 11.7 | 1.4 | 9.3 | 10.7 | 5.4 | 10.0 | 12.3 | 11.8 | |
| Diet high in trans fatty acids | value | 6.2 | 6.4 | 5.3 | 5.0 | 4.5 | 5.7 | 6.1 | 5.7 | 5.5 | 6.0 | 11.5 | 6.9 | 4.1 | 6.4 | 6.1 | 4.1 | 5.7 | 5.7 | 6.2 | 6.1 | 5.7 | 4.6 | 5.8 | 5.5 | 5.4 | 5.1 | 5.1 | 4.8 | 5.3 | 5.5 | 5.3 | 5.2 | 5.2 | 5.4 | 10.1 | 8.8 | 6.8 | 8.3 | 6.4 | 10.5 | 8.3 | 8.0 | 7.9 | 6.1 | 12.4 | 7.6 | 7.8 | 7.2 | 7.9 | 4.1 | 4.9 | 4.9 | 5.1 | 4.7 | 4.5 | 4.4 | 5.7 | 6.4 | 5.7 | |
| | lower limit | 0.6 | 0.6 | 1.0 | 1.0 | 1.1 | 1.0 | 1.0 | 1.0 | 0.8 | 0.7 | 1.1 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 1.1 | 0.8 | 0.9 | 1.0 | 1.0 | 1.2 | 1.1 | 0.6 | 1.4 | 1.4 | 1.3 | 1.1 | 1.3 | 1.5 | 1.3 | 1.3 | 1.4 | 1.4 | 1.0 | 1.0 | 0.9 | 1.0 | 1.0 | 2.0 | 1.2 | 0.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.7 | 0.4 | 0.8 | 0.6 | 0.8 | 0.8 | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | upper limit | 8.4 | 8.5 | 8.8 | 8.3 | 8.1 | 9.3 | 9.7 | 9.2 | 8.8 | 8.8 | 15.4 | 10.0 | 7.2 | 9.3 | 8.9 | 7.3 | 8.9 | 8.8 | 9.1 | 9.0 | 8.8 | 8.4 | 9.0 | 8.0 | 9.6 | 8.9 | 9.0 | 8.5 | 9.2 | 9.6 | 9.2 | 9.1 | 9.1 | 9.5 | 13.2 | 11.7 | 9.6 | 11.3 | 9.7 | 14.0 | 11.5 | 10.6 | 10.6 | 9.0 | 16.6 | 10.3 | 10.4 | 9.5 | 10.6 | 6.6 | 7.9 | 7.9 | 8.6 | 8.3 | 8.3 | 7.9 | 9.0 | 10.1 | 9.3 |
| Diet high in sodium | value | 20.3 | 12.8 | 11.7 | 12.5 | 11.3 | 8.3 | 6.5 | 2.3 | 8.6 | 7.3 | 6.9 | 7.5 | 7.4 | 7.1 | 18.7 | 18.2 | 18.1 | 18.4 | 18.9 | 18.7 | 18.8 | 3.7 | 7.9 | 6.5 | 4.3 | 4.3 | 4.3 | 4.2 | 4.3 | 4.2 | 4.2 | 4.5 | 4.3 | 4.3 | 6.5 | 6.6 | 13.3 | 9.5 | 7.7 | 5.8 | 9.6 | 7.2 | 7.1 | 2.1 | 2.2 | 2.3 | 2.4 | 2.2 | 2.3 | 1.5 | 4.3 | 4.2 | 12.3 | 4.6 | 4.2 | 3.7 | 3.3 | 5.6 | 7.6 |
| | lower limit | 9.3 | 1.9 | 1.7 | 1.7 | 1.7 | 0.7 | 0.6 | 0.3 | 0.7 | 0.6 | 0.5 | 0.6 | 0.6 | 0.6 | 6.7 | 6.0 | 6.3 | 6.3 | 6.5 | 6.4 | 6.5 | 0.2 | 0.8 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 3.4 | 0.8 | 0.5 | 0.3 | 0.8 | 0.5 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 1.6 | 0.2 | 0.2 | 0.2 | 0.2 | 0.4 | 0.6 |
| | upper limit | 33.1 | 26.3 | 24.5 | 25.7 | 23.9 | 19.8 | 16.6 | 8.6 | 20.0 | 18.8 | 18.3 | 19.3 | 19.3 | 18.1 | 32.4 | 31.7 | 31.8 | 32.0 | 32.7 | 32.8 | 32.8 | 12.5 | 19.4 | 17.9 | 14.1 | 14.0 | 14.6 | 14.1 | 14.6 | 14.2 | 14.3 | 14.7 | 14.3 | 14.2 | 17.3 | 17.9 | 26.1 | 22.1 | 19.2 | 16.7 | 22.2 | 18.9 | 19.0 | 7.9 | 8.3 | 9.0 | 8.9 | 8.5 | 8.3 | 6.2 | 16.5 | 16.4 | 25.5 | 17.7 | 16.4 | 14.8 | 12.0 | 15.5 | 18.5 |
| Low physical activity | value | 3.5 | 6.0 | 5.0 | 2.4 | 3.7 | 4.0 | 4.4 | 5.1 | 4.6 | 3.5 | 2.9 | 3.4 | 4.1 | 3.0 | 3.1 | 3.3 | 3.2 | 3.0 | 3.3 | 4.6 | 3.5 | 3.7 | 3.4 | 1.0 | 6.6 | 8.1 | 7.2 | 8.8 | 6.1 | 6.0 | 8.4 | 7.0 | 7.2 | 6.5 | 3.9 | 4.1 | 3.1 | 1.7 | 0.7 | 3.8 | 1.4 | 11.2 | 3.3 | 9.7 | 7.5 | 9.5 | 6.9 | 10.4 | 9.4 | 8.4 | 4.9 | 3.8 | 5.0 | 3.6 | 6.0 | 5.3 | 6.0 | 3.3 | 4.0 |
| | lower limit | 1.0 | 1.6 | 1.4 | 0.6 | 0.9 | 1.1 | 1.1 | 1.7 | 1.4 | 1.2 | 0.9 | 1.1 | 1.4 | 0.9 | 1.0 | 1.0 | 1.1 | 1.0 | 1.0 | 1.7 | 1.2 | 1.3 | 1.2 | 0.3 | 2.0 | 2.7 | 2.4 | 2.9 | 1.8 | 1.6 | 3.1 | 2.2 | 2.3 | 1.9 | 0.9 | 0.9 | 0.7 | 0.4 | 0.3 | 0.9 | 0.4 | 4.6 | 0.7 | 4.0 | 2.7 | 3.8 | 2.4 | 4.5 | 3.6 | 3.2 | 1.4 | 1.1 | 1.3 | 0.9 | 1.8 | 1.7 | 1.9 | 0.8 | 1.2 |
| | upper limit | 8.2 | 13.5 | 11.8 | 6.4 | 9.1 | 9.7 | 10.8 | 11.1 | 10.5 | 7.9 | 7.1 | 7.8 | 9.0 | 7.1 | 7.3 | 7.7 | 7.3 | 7.3 | 7.7 | 9.9 | 8.0 | 8.0 | 7.5 | 3.3 | 14.4 | 15.7 | 14.7 | 17.2 | 13.4 | 13.9 | 15.9 | 14.4 | 14.5 | 14.3 | 9.9 | 10.0 | 8.0 | 5.0 | 3.3 | 9.8 | 4.2 | 19.7 | 8.9 | 17.8 | 15.1 | 17.6 | 14.5 | 18.3 | 17.7 | 16.1 | 11.2 | 9.1 | 11.8 | 9.2 | 13.5 | 11.7 | 13.1 | 8.9 | 9.4 |
| Environmental/occupational risks | value | 38.0 | 17.1 | 15.0 | 26.7 | 25.6 | 18.2 | 19.8 | 27.5 | 19.5 | 29.2 | 28.3 | 25.1 | 24.7 | 29.3 | 26.7 | 30.6 | 23.7 | 30.0 | 25.5 | 20.8 | 26.4 | 19.2 | 16.6 | 18.4 | 22.9 | 18.2 | 17.9 | 23.1 | 20.9 | 22.7 | 17.5 | 20.0 | 21.4 | 22.2 | 22.3 | 29.6 | 23.8 | 22.0 | 36.7 | 26.5 | 23.7 | 16.5 | 24.1 | 31.7 | 36.4 | 37.9 | 32.4 | 29.8 | 33.6 | 27.1 | 33.3 | 28.2 | 16.3 | 33.0 | 32.8 | 29.9 | 9.5 | 6.1 | 8.8 |
| | lower limit | 35.0 | 12.6 | 9.3 | 19.9 | 21.3 | 9.7 | 11.8 | 20.5 | 11.4 | 22.3 | 21.9 | 19.7 | 19.0 | 22.7 | 22.2 | 25.7 | 18.8 | 25.1 | 20.9 | 16.4 | 21.4 | 14.1 | 9.9 | 13.9 | 13.5 | 12.1 | 9.9 | 15.6 | 11.1 | 13.5 | 12.9 | 11.4 | 12.0 | 13.5 | 17.5 | 25.2 | 19.8 | 18.0 | 32.8 | 22.7 | 17.9 | 12.2 | 19.0 | 25.9 | 33.1 | 33.1 | 28.0 | 25.2 | 27.1 | 23.0 | 25.9 | 20.7 | 9.1 | 27.3 | 27.9 | 25.9 | 3.7 | -6.7 | -0.2 |
| | upper limit | 41.1 | 21.5 | 20.2 | 32.2 | 29.7 | 27.8 | 27.7 | 34.0 | 27.5 | 35.5 | 34.7 | 31.0 | 30.2 | 36.3 | 31.0 | 35.4 | 28.9 | 34.8 | 30.0 | 25.6 | 31.7 | 24.2 | 24.1 | 23.5 | 32.5 | 25.7 | 26.6 | 32.1 | 31.0 | 32.4 | 22.5 | 29.4 | 31.1 | 31.8 | 26.9 | 33.7 | 27.9 | 26.1 | 40.8 | 30.4 | 29.5 | 20.7 | 29.1 | 37.0 | 40.0 | 42.6 | 36.5 | 34.3 | 39.5 | 31.1 | 39.8 | 35.4 | 23.7 | 38.1 | 37.8 | 34.2 | 16.4 | 14.3 | 15.7 |
| Behavioral risks | value | 71.4 | 70.3 | 73.3 | 62.8 | 63.3 | 72.8 | 75.1 | 74.6 | 72.8 | 72.2 | 74.6 | 72.8 | 72.5 | 76.3 | 74.3 | 73.5 | 72.6 | 74.0 | 77.5 | 71.8 | 72.3 | 71.6 | 72.4 | 71.5 | 61.0 | 62.6 | 60.9 | 62.9 | 63.3 | 63.7 | 63.5 | 65.3 | 61.4 | 67.7 | 64.8 | 58.1 | 61.8 | 64.4 | 56.5 | 58.7 | 66.4 | 66.2 | 67.3 | 69.3 | 67.4 | 74.1 | 74.1 | 71.7 | 70.8 | 62.6 | 57.5 | 59.0 | 66.4 | 72.4 | 67.7 | 67.3 | 72.0 | 77.9 | 74.6 |
| | lower limit | 64.9 | 62.9 | 66.3 | 53.9 | 55.2 | 65.6 | 68.2 | 68.5 | 66.0 | 65.5 | 67.5 | 66.3 | 65.9 | 70.1 | 67.7 | 67.4 | 66.0 | 67.5 | 71.6 | 65.0 | 65.6 | 65.2 | 65.5 | 64.7 | 53.2 | 56.4 | 52.1 | 54.8 | 55.1 | 55.6 | 55.5 | 57.1 | 52.6 | 60.9 | 57.0 | 49.1 | 54.4 | 56.6 | 48.0 | 51.9 | 59.1 | 60.6 | 59.9 | 62.6 | 59.4 | 67.9 | 68.2 | 66.0 | 64.0 | 55.6 | 48.6 | 50.1 | 58.4 | 66.1 | 60.4 | 60.0 | 65.5 | 71.4 | 68.0 |
| | upper limit | 77.2 | 76.5 | 78.8 | 70.4 | 70.4 | 78.3 | 80.4 | 78.9 | 78.0 | 77.2 | 79.9 | 77.9 | 77.8 | 81.0 | 79.9 | 79.1 | 78.8 | 79.8 | 82.7 | 78.3 | 78.3 | 76.5 | 77.6 | 76.8 | 67.4 | 68.1 | 67.7 | 69.3 | 69.7 | 70.3 | 70.1 | 71.4 | 68.1 | 73.5 | 71.0 | 65.5 | 68.8 | 71.1 | 64.2 | 64.6 | 72.9 | 71.7 | 73.5 | 74.0 | 72.7 | 78.3 | 78.5 | 76.0 | 75.7 | 67.5 | 65.0 | 66.6 | 73.2 | 77.8 | 73.7 | 73.1 | 77.0 | 82.6 | 80.0 |

Suboptimal
temperature

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|-----|-----|------|------|------|-----|------|------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|------|-----|------|-----|------|------|------|------|-----|-----|-----|-----|-----|-----|------|------|-----|------|------|------|------|------|------|------|-----|-----|------|-----|-----|-----|------|-------|------|
| value | 7.6 | 1.3 | 0.5 | 2.2 | 2.5 | 1.6 | 0.3 | 0.4 | 1.5 | 7.2 | 8.4 | 7.3 | 7.7 | 10.0 | 7.5 | 6.8 | 7.2 | 7.2 | 7.0 | 6.9 | 7.1 | 6.5 | 8.0 | 7.4 | 1.1 | 1.0 | 0.9 | 2.2 | 0.5 | 1.3 | 0.4 | 0.6 | 0.6 | 0.5 | 4.2 | 5.7 | 3.7 | 3.3 | 3.5 | 5.8 | 3.1 | 2.4 | 4.2 | 8.1 | 8.5 | 8.6 | 8.4 | 8.1 | 7.0 | 7.5 | 2.1 | 1.2 | 2.8 | 5.0 | 5.3 | 7.0 | 1.3 | 0.3 | 1.1 |
| lower limit | 5.5 | 0.0 | -3.7 | -4.2 | -1.8 | 0.2 | -4.2 | -0.5 | 0.3 | 2.0 | 6.3 | 3.1 | 4.1 | 8.4 | 4.4 | 2.7 | 2.7 | 2.7 | 4.1 | 2.9 | 2.0 | 1.9 | 2.3 | 4.5 | 0.1 | 0.1 | -0.5 | 1.0 | -0.5 | 0.3 | -0.8 | -0.4 | -0.4 | -0.2 | 2.9 | 3.5 | 2.1 | 1.9 | 2.3 | 3.9 | -1.1 | -0.7 | 2.3 | 4.9 | 6.6 | 5.7 | 5.4 | 5.1 | 3.7 | 4.8 | 0.1 | 0.0 | -0.3 | 2.1 | 2.9 | 5.6 | -3.0 | -14.8 | -9.5 |
| upper limit | 9.9 | 2.4 | 2.6 | 3.9 | 4.0 | 3.2 | 2.2 | 1.8 | 3.1 | 12.8 | 10.5 | 11.6 | 11.3 | 11.8 | 10.7 | 11.2 | 12.4 | 11.8 | 10.4 | 11.1 | 12.5 | 11.2 | 15.7 | 10.3 | 2.1 | 2.1 | 3.4 | 3.6 | 1.6 | 2.5 | 1.5 | 1.7 | 1.6 | 1.4 | 5.5 | 7.8 | 5.0 | 4.8 | 4.7 | 7.6 | 4.7 | 4.1 | 6.3 | 11.1 | 10.5 | 11.3 | 11.4 | 11.3 | 10.1 | 10.3 | 5.1 | 2.7 | 7.7 | 8.3 | 8.0 | 8.6 | 3.1 | 4.0 | 3.5 |

Diet low in
legumes

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|------|-----|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|
| value | 11.8 | 16.4 | 17.7 | 14.1 | 14.1 | 15.5 | 17.1 | 14.1 | 14.8 | 18.3 | 19.1 | 18.2 | 18.5 | 19.5 | 14.3 | 13.9 | 13.8 | 14.0 | 14.2 | 15.2 | 12.8 | 20.4 | 16.3 | 16.6 | 11.9 | 6.0 | 15.3 | 14.3 | 14.8 | 14.2 | 15.9 | 15.0 | 15.0 | 17.4 | 16.6 | 13.6 | 8.1 | 11.9 | 11.5 | 5.0 | 13.8 | 2.1 | 13.5 | 12.5 | 14.6 | 13.7 | 14.4 | 11.2 | 16.7 | 0.8 | 13.6 | 14.5 | 13.8 | 14.7 | 14.8 | 16.2 | 13.8 | 16.8 | 15.8 |
| lower limit | 1.6 | 4.2 | 4.6 | 2.4 | 2.3 | 2.7 | 3.0 | 2.0 | 2.5 | 6.3 | 6.6 | 6.3 | 6.2 | 6.7 | 3.7 | 3.0 | 2.9 | 2.7 | 3.1 | 4.2 | 2.2 | 8.6 | 4.6 | 4.8 | 1.3 | 0.6 | 4.1 | 2.3 | 3.0 | 2.1 | 4.2 | 3.4 | 3.5 | 4.7 | 4.4 | 2.4 | 0.8 | 1.5 | 1.3 | 0.6 | 2.2 | 0.3 | 2.0 | 1.5 | 2.7 | 1.9 | 2.3 | 1.3 | 4.3 | 0.2 | 2.1 | 2.5 | 2.1 | 2.3 | 2.8 | 4.2 | 1.9 | 2.4 | 2.9 |
| upper limit | 19.5 | 27.1 | 28.2 | 23.4 | 23.7 | 25.6 | 28.3 | 23.5 | 24.7 | 28.1 | 29.3 | 27.9 | 28.4 | 29.8 | 23.7 | 23.3 | 23.3 | 23.6 | 23.9 | 24.5 | 21.7 | 29.7 | 26.0 | 26.3 | 19.6 | 10.7 | 24.9 | 23.8 | 24.6 | 23.8 | 25.9 | 25.0 | 24.9 | 27.7 | 26.5 | 22.7 | 13.9 | 19.6 | 19.1 | 9.0 | 23.1 | 4.1 | 22.4 | 20.7 | 24.2 | 22.8 | 24.0 | 18.7 | 27.5 | 1.6 | 22.5 | 24.2 | 23.0 | 24.5 | 24.8 | 26.6 | 22.8 | 27.4 | 26.5 |

High
temperature

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|-----|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|------|------|-----|------|-----|------|------|------|------|------|------|------|-------|------|
| value | 0.2 | 0.2 | 0.5 | 1.2 | 1.4 | -0.1 | 0.2 | -0.1 | 0.0 | 0.1 | 0.3 | 0.1 | 0.6 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | -0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | -0.1 | 0.0 | 0.5 | 0.0 | 0.2 | 0.0 | 1.0 | -0.5 | 0.2 | 1.4 | 0.7 | 1.2 | 0.4 | 0.0 | 0.5 | 0.2 | -0.1 | -0.1 | -0.1 | 0.0 | 0.0 | -0.1 | 0.8 | 0.2 | 0.9 |
| lower limit | 0.0 | -1.0 | -3.7 | -4.6 | -2.8 | -0.8 | -4.2 | -0.6 | -0.5 | 0.0 | 0.1 | 0.0 | 0.2 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | -0.8 | -0.8 | -0.9 | -0.6 | -0.9 | -0.7 | -1.0 | -0.9 | -0.9 | -0.7 | -0.4 | -0.3 | -0.8 | -0.8 | -0.6 | -1.0 | -3.0 | -3.5 | -0.9 | -0.7 | 0.2 | -0.9 | -0.3 | 0.0 | -1.3 | 0.1 | -0.6 | -0.8 | -0.8 | -1.2 | -0.9 | -0.5 | -3.0 | -14.8 | -9.5 |
| upper limit | 0.4 | 1.2 | 2.6 | 2.8 | 2.8 | 0.4 | 2.2 | 0.6 | 0.6 | 0.1 | 0.5 | 0.1 | 1.0 | 1.6 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 | 1.1 | 0.9 | 0.6 | 0.5 | 1.4 | 0.6 | 0.8 | 1.6 | 1.3 | 0.9 | 0.2 | 0.2 | 1.2 | 0.4 | 0.9 | 0.4 | 2.2 | 0.5 | 1.3 | 3.2 | 1.3 | 3.2 | 1.1 | 0.1 | 2.5 | 0.3 | 0.2 | 0.4 | 0.4 | 1.4 | 1.1 | 0.1 | 2.7 | 3.7 | 3.3 |

Low
temperature

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|-----|-----|------|-----|-----|-----|-----|-----|-----|
| value | 7.4 | 1.1 | 0.0 | 1.1 | 1.1 | 1.7 | 0.0 | 0.5 | 1.5 | 7.2 | 8.1 | 7.2 | 7.2 | 9.0 | 7.5 | 6.8 | 7.2 | 7.1 | 7.0 | 6.9 | 7.1 | 6.5 | 7.9 | 7.3 | 1.1 | 0.9 | 1.0 | 2.2 | 0.5 | 1.3 | 0.4 | 0.5 | 0.5 | 0.5 | 4.2 | 5.7 | 3.3 | 3.3 | 3.3 | 5.8 | 2.1 | 2.9 | 4.1 | 6.8 | 7.8 | 7.5 | 8.0 | 8.1 | 6.5 | 7.3 | 2.1 | 1.3 | 2.9 | 4.9 | 5.3 | 7.1 | 0.5 | 0.1 | 0.2 |
| lower limit | 5.3 | 0.4 | 0.0 | 0.5 | 0.5 | 0.5 | 0.0 | 0.0 | 0.3 | 2.0 | 6.0 | 3.0 | 3.4 | 7.2 | 4.4 | 2.7 | 2.7 | 2.6 | 4.1 | 2.9 | 2.0 | 1.9 | 2.3 | 4.4 | 0.4 | 0.3 | 0.0 | 1.2 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.1 | 3.0 | 3.6 | 2.2 | 2.1 | 2.3 | 4.2 | 1.2 | 1.8 | 2.0 | 4.0 | 5.7 | 4.8 | 4.8 | 5.1 | 3.0 | 4.5 | 0.2 | 0.3 | -0.1 | 1.8 | 2.7 | 5.8 | 0.0 | 0.0 | 0.0 |
| upper limit | 9.7 | 1.9 | 0.0 | 1.7 | 1.8 | 3.2 | 0.0 | 1.8 | 3.1 | 12.8 | 10.3 | 11.5 | 11.0 | 11.1 | 10.7 | 11.2 | 12.4 | 11.8 | 10.4 | 11.1 | 12.5 | 11.2 | 15.6 | 10.2 | 1.9 | 2.0 | 3.5 | 3.5 | 1.4 | 2.5 | 1.4 | 1.4 | 1.5 | 1.4 | 5.6 | 7.8 | 4.4 | 4.7 | 4.4 | 7.6 | 3.1 | 4.2 | 6.3 | 9.4 | 9.9 | 10.3 | 11.4 | 11.3 | 10.1 | 10.3 | 5.1 | 2.8 | 7.6 | 8.3 | 8.0 | 8.6 | 1.0 | 0.4 | 0.6 |

Impaired
kidney
function

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| value | 10.9 | 14.7 | 15.0 | 16.3 | 16.2 | 15.7 | 14.4 | 15.5 | 15.2 | 12.0 | 12.5 | 11.8 | 12.1 | 12.2 | 11.2 | 12.2 | 12.6 | 13.4 | 13.6 | 11.7 | 13.2 | 11.1 | 13.1 | 12.0 | 14.6 | 13.6 | 15.9 | 12.2 | 16.8 | 14.7 | 14.5 | 15.4 | 14.7 | 14.7 | 14.2 | 12.4 | 16.1 | 20.7 | 17.4 | 21.2 | 18.3 | 11.7 | 13.5 | 17.3 | 16.5 | 18.1 | 17.3 | 18.9 | 15.8 | 17.5 | 8.7 | 9.2 | 19.7 | 11.8 | 10.9 | 12.1 | 16.9 | 16.3 | 14.8 |
| lower limit | 7.2 | 10.6 | 10.8 | 11.7 | 11.6 | 11.5 | 10.6 | 11.5 | 11.1 | 8.0 | 8.8 | 7.9 | 8.4 | 8.6 | 7.7 | 8.4 | 8.8 | 9.6 | 9.8 | 8.1 | 9.0 | 6.8 | 8.8 | 8.6 | 11.1 | 9.8 | 11.8 | 9.0 | 12.7 | 11.3 | 10.7 | 11.5 | 10.8 | 11.1 | 10.7 | 8.9 | 11.7 | 16.0 | 13.3 | 16.4 | 13.9 | 8.7 | 10.3 | 13.2 | 12.5 | 14.2 | 13.6 | 14.7 | 12.4 | 13.4 | 5.8 | 6.3 | 14.6 | 8.7 | 7.8 | 8.9 | 12.7 | 12.2 | 10.8 |
| upper limit | 14.8 | 18.9 | 19.5 | 20.9 | 20.8 | 20.2 | 18.2 | 19.8 | 19.5 | 16.3 | 16.3 | 16.0 | 16.1 | 16.0 | 14.7 | 16.0 | 16.4 | 17.0 | 17.4 | 15.2 | 17.2 | 15.7 | 17.7 | 15.3 | 18.2 | 17.3 | 19.9 | 15.4 | 20.9 | 18.4 | 18.5 | 19.4 | 18.7 | 18.3 | 17.7 | 16.0 | 20.3 | 25.1 | 21.8 | 25.9 | 22.8 | 14.7 | 16.9 | 21.4 | 20.3 | 22.1 | 21.0 | 23.1 | 19.3 | 21.6 | 11.7 | 12.3 | 24.7 | 15.1 | 14.2 | 15.6 | 21.1 | 20.6 | 19.0 |

High LDL
cholesterol

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| value | 44.3 | 58.7 | 55.3 | 51.0 | 54.3 | 58.2 | 59.9 | 46.5 | 54.2 | 38.7 | 46.6 | 40.7 | 46.6 | 49.9 | 46.1 | 47.8 | 48.3 | 49.6 | 49.4 | 50.2 | 52.4 | 44.7 | 53.5 | 49.3 | 49.1 | 41.9 | 40.1 | 50.8 | 44.8 | 49.6 | 44.7 | 39.5 | 39.7 | 54.1 | 48.8 | 46.2 | 48.3 | 50.6 | 45.9 | 51.6 | 44.8 | 55.2 | 53.7 | 47.2 | 50.6 | 51.7 | 57.5 | 53.1 | 54.0 | 44.8 | 41.0 | 43.0 | 54.0 | 39.3 | 38.0 | 45.2 | 52.0 | 64.2 | 52.7 |
| lower limit | 35.9 | 50.7 | 47.8 | 42.4 | 46.2 | 50.9 | 52.9 | 38.7 | 46.7 | 30.3 | 38.7 | 32.3 | 38.0 | 42.1 | 36.8 | 38.3 | 38.9 | 40.4 | 39.9 | 40.1 | 41.5 | 35.8 | 44.8 | 40.6 | 41.5 | 33.1 | 31.7 | 42.9 | 36.3 | 41.6 | 36.2 | 31.2 | 31.4 | 46.3 | 40.8 | 37.9 | 39.3 | 42.0 | 38.2 | 43.3 | 36.8 | 47.3 | 45.8 | 39.0 | 42.6 | 43.9 | 50.0 | 44.6 | 46.5 | 36.5 | 33.0 | 34.9 | 46.1 | 30.9 | 30.0 | 37.3 | 44.5 | 57.4 | 45.2 |
| upper limit | 53.4 | 66.7 | 63.1 | 59.9 | 62.8 | 65.4 | 67.4 | 54.7 | 62.2 | 47.9 | 55.1 | 49.8 | 55.5 | 58.1 | 55.9 | 57.7 | 58.3 | 58.8 | 58.7 | 60.4 | 63.1 | 54.3 | 62.9 | 58.3 | 57.4 | 51.2 | 49.1 | 58.5 | 53.5 | 57.6 | 53.7 | 48.3 | 48.5 | 62.2 | 57.0 | 55.2 | 57.4 | 59.4 | 54.3 | 60.0 | 53.1 | 63.1 | 62.1 | 55.6 | 59.0 | 59.9 | 65.1 | 62.0 | 61.5 | 53.5 | 49.5 | 51.5 | 62.4 | 47.6 | 46.4 | 53.4 | 59.9 | 71.1 | 60.4 |

Particulate
matter
pollution

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| value | 28.9 | 14.5 | 12.1 | 24.0 | 22.8 | 16.5 | 18.7 | 26.8 | 17.8 | 21.5 | 20.1 | 17.7 | 16.9 | 20.0 | 17.5 | 22.2 | 16.0 | 23.0 | 18.9 | 12.7 | 18.8 | 12.3 | 8.6 | 10.5 | 19.6 | 13.2 | 14.8 | 16.7 | 17.1 | 17.9 | 13.7 | 16.6 | 16.3 | 18.8 | 16.9 | 22.6 | 17.6 | 14.9 | 27.9 | 17.9 | 17.6 | 11.8 | 18.0 | 23.2 | 24.8 | 29.2 | 24.1 | 21.1 | 26.9 | 19.5 | 28.8 | 25.8 | 12.7 | 26.8 | 26.6 | 22.8 | 8.1 | 5.5 | 7.1 |
| lower limit | 26.4 | 10.7 | 8.1 | 18.8 | 19.3 | 7.8 | 11.8 | 19.8 | 9.9 | 15.8 | 13.2 | 13.1 | 11.9 | 12.7 | 14.0 | 18.9 | 13.0 | 19.8 | 14.9 | 10.1 | 15.9 | 9.1 | 5.0 | 6.8 | 10.1 | 6.9 | 7.1 | 9.0 | 7.4 | 8.3 | 9.4 | 7.8 | 7.2 | 10.2 | 12.1 | 18.5 | 13.8 | 11.4 | 24.0 | 14.3 | 12.5 | 8.4 | 12.8 | 17.4 | 21.7 | 24.5 | 20.4 | 16.9 | 20.7 | 16.2 | 21.6 | 18.3 | 6.5 | 21.7 | 21.5 | 19.1 | 2.8 | 1.4 | 2.9 |
| upper limit | 31.4 | 18.4 | 16.3 | 29.3 | 26.5 | 25.9 | 26.3 | 33.1 | 25.5 | 27.0 | 27.0 | 22.5 | 21.8 | 27.4 | 21.3 | 25.8 | 19.2 | 26.3 | 23.2 | 15.7 | 22.1 | 15.7 | 12.4 | 14.9 | 29.6 | 20.7 | 23.1 | 25.5 | 27.2 | 28.4 | 18.8 | 26.0 | 26.1 | 28.6 | 21.5 | 26.6 | 21.5 | 18.7 | 31.6 | 21.4 | 23.0 | 15.4 | 22.9 | 28.5 | 27.9 | 33.7 | 27.8 | 25.3 | 32.4 | 22.7 | 34.9 | 32.9 | 18.9 | 32.0 | 31.6 | 27.1 | 14.2 | 12.0 | 13.1 |

* PAF: population attributable fraction

§ DALY: disability adjusted life years

Table S22. PAF* of IHD[§] death for modifiable risk factors by sex in LMICs[¶] in 2019

| Upper-middle countries | Males | | | Females | | | Both | | |
|--|-------|-------|-------|---------|-------|-------|-------|-------|-------|
| | value | lower | upper | value | lower | upper | value | lower | upper |
| Risk Factors | | | | | | | | | |
| Air pollution | 20.4 | 22.9 | 17.9 | 17.0 | 19.2 | 14.9 | 18.8 | 21.1 | 16.6 |
| Ambient particulate matter pollution | 17.6 | 19.9 | 15.1 | 13.8 | 16.2 | 11.6 | 15.8 | 18.0 | 13.5 |
| Household air pollution from solid fuels | 2.8 | 5.1 | 1.3 | 3.2 | 5.3 | 1.7 | 3.0 | 5.1 | 1.5 |
| Other environmental risks | 5.1 | 7.4 | 3.1 | 3.2 | 5.2 | 1.6 | 4.2 | 6.3 | 2.4 |
| Lead exposure | 5.1 | 7.4 | 3.1 | 3.2 | 5.2 | 1.6 | 4.2 | 6.3 | 2.4 |
| Tobacco | 34.1 | 35.6 | 32.7 | 13.1 | 14.3 | 11.9 | 24.2 | 25.8 | 22.8 |
| Smoking | 31.4 | 32.9 | 30.1 | 8.1 | 8.8 | 7.3 | 20.4 | 21.9 | 19.1 |
| Secondhand smoke | 4.2 | 5.1 | 3.4 | 5.6 | 6.7 | 4.6 | 4.9 | 5.8 | 4.0 |
| Alcohol use | -1.0 | 2.1 | -4.0 | -0.9 | 0.1 | -1.8 | -1.0 | 0.7 | -2.6 |
| Metabolic risks | 82.0 | 88.2 | 75.4 | 81.8 | 88.9 | 73.9 | 81.9 | 88.3 | 74.8 |
| High fasting plasma glucose | 22.4 | 34.5 | 13.5 | 21.8 | 35.4 | 12.0 | 22.1 | 34.5 | 12.7 |
| High systolic blood pressure | 53.8 | 63.2 | 44.4 | 53.4 | 65.0 | 41.0 | 53.6 | 63.7 | 42.9 |

| | | | | | | | | | |
|---|------|------|------|------|------|------|------|------|------|
| High body-mass index | 18.1 | 27.3 | 10.2 | 17.3 | 25.8 | 10.1 | 17.7 | 26.7 | 10.2 |
| Dietary risks | 55.2 | 63.6 | 45.7 | 49.6 | 57.9 | 40.7 | 52.6 | 60.9 | 43.3 |
| Diet low in fruits | 3.7 | 5.7 | 1.3 | 3.5 | 5.5 | 1.2 | 3.6 | 5.6 | 1.2 |
| Diet low in vegetables | 2.1 | 3.1 | 1.1 | 2.0 | 3.0 | 1.0 | 2.1 | 3.0 | 1.1 |
| Diet low in whole grains | 17.1 | 22.1 | 6.2 | 15.3 | 19.9 | 5.6 | 16.2 | 21.1 | 5.9 |
| Diet low in nuts and seeds | 5.2 | 7.6 | 2.5 | 5.1 | 7.5 | 2.3 | 5.2 | 7.5 | 2.3 |
| Diet high in red meat | 5.3 | 9.7 | 0.9 | 4.5 | 8.5 | 0.7 | 4.9 | 9.1 | 0.8 |
| Diet high in processed meat | 1.7 | 3.5 | 0.3 | 1.8 | 3.8 | 0.3 | 1.7 | 3.6 | 0.3 |
| Diet high in sugar-sweetened beverages | 2.4 | 3.0 | 1.6 | 2.0 | 2.7 | 1.3 | 2.2 | 2.8 | 1.5 |
| Diet low in fiber | 2.7 | 4.6 | 1.0 | 2.6 | 4.5 | 1.0 | 2.6 | 4.6 | 1.0 |
| Diet low in seafood omega-3 fatty acids | 3.7 | 4.7 | 2.0 | 3.5 | 4.4 | 1.8 | 3.6 | 4.5 | 1.9 |
| Diet low in polyunsaturated fatty acids | 3.6 | 7.5 | 0.4 | 3.5 | 7.2 | 0.4 | 3.6 | 7.3 | 0.4 |
| Diet high in trans fatty acids | 6.1 | 8.4 | 0.7 | 5.8 | 8.3 | 0.8 | 6.0 | 8.4 | 0.8 |
| Diet high in sodium | 14.7 | 26.8 | 5.6 | 8.5 | 19.5 | 1.8 | 11.8 | 23.3 | 3.9 |
| Low physical activity | 4.6 | 9.9 | 1.5 | 6.8 | 13.1 | 2.7 | 5.6 | 11.4 | 2.1 |
| All risk factors | 94.1 | 96.2 | 91.7 | 92.4 | 95.4 | 88.8 | 93.3 | 95.8 | 90.4 |
| Environmental/occupational risks | 29.8 | 33.2 | 26.6 | 25.5 | 28.7 | 22.3 | 27.8 | 31.0 | 24.7 |

| | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|------|
| Behavioral risks | 70.7 | 76.0 | 64.8 | 58.7 | 65.7 | 51.4 | 65.1 | 71.1 | 58.5 |
| Suboptimal temperature | 7.3 | 9.7 | 5.2 | 7.4 | 10.1 | 5.1 | 7.4 | 9.9 | 5.2 |
| Diet low in legumes | 11.8 | 19.0 | 2.4 | 10.6 | 17.2 | 2.2 | 11.2 | 18.1 | 2.3 |
| High temperature | 0.2 | 0.5 | -0.1 | 0.2 | 0.5 | -0.1 | 0.2 | 0.5 | -0.1 |
| Low temperature | 7.1 | 9.4 | 5.0 | 7.2 | 9.8 | 4.8 | 7.1 | 9.6 | 4.9 |
| Impaired kidney function | 12.6 | 16.6 | 8.7 | 14.1 | 18.9 | 9.2 | 13.3 | 17.7 | 9.0 |
| High LDL cholesterol | 42.9 | 52.7 | 33.6 | 41.6 | 54.6 | 29.1 | 42.3 | 53.6 | 31.6 |
| Particulate matter pollution | 20.4 | 22.9 | 17.9 | 17.0 | 19.2 | 14.9 | 18.8 | 21.1 | 16.6 |
| Lower-middle countries | | | | | | | | | |
| Air pollution | 28.7 | 31.5 | 26.1 | 25.6 | 28.2 | 23.2 | 27.4 | 30.0 | 25.0 |
| Ambient particulate matter pollution | 19.8 | 23.2 | 16.1 | 15.8 | 18.7 | 12.8 | 18.1 | 21.2 | 14.8 |
| Household air pollution from solid fuels | 8.9 | 12.8 | 5.7 | 9.8 | 13.0 | 7.0 | 9.3 | 12.8 | 6.4 |
| Other environmental risks | 6.9 | 9.2 | 4.6 | 5.1 | 7.3 | 3.2 | 6.1 | 8.3 | 4.1 |
| Lead exposure | 6.9 | 9.2 | 4.6 | 5.1 | 7.3 | 3.2 | 6.1 | 8.3 | 4.1 |
| Tobacco | 29.8 | 31.2 | 28.4 | 10.9 | 12.1 | 9.7 | 21.7 | 22.9 | 20.5 |
| Smoking | 26.9 | 28.2 | 25.6 | 5.4 | 6.0 | 4.8 | 17.7 | 18.7 | 16.7 |
| Secondhand smoke | 4.2 | 5.1 | 3.4 | 5.9 | 7.1 | 4.9 | 4.9 | 5.9 | 4.0 |

| | | | | | | | | | |
|---|------|------|------|------|------|------|------|------|------|
| Alcohol use | -1.1 | 0.7 | -2.9 | -0.6 | -0.1 | -1.1 | -0.9 | 0.2 | -2.0 |
| Metabolic risks | 82.6 | 88.1 | 76.7 | 83.4 | 89.2 | 77.2 | 82.9 | 88.7 | 76.9 |
| High fasting plasma glucose | 27.6 | 42.1 | 16.8 | 26.8 | 42.1 | 15.5 | 27.3 | 42.3 | 16.6 |
| High systolic blood pressure | 54.0 | 61.6 | 46.1 | 55.9 | 64.9 | 46.9 | 54.8 | 63.2 | 46.7 |
| High body-mass index | 17.3 | 25.0 | 10.5 | 19.0 | 26.2 | 12.4 | 18.0 | 25.5 | 11.4 |
| Dietary risks | 56.6 | 64.4 | 47.3 | 52.5 | 59.9 | 43.5 | 54.9 | 62.4 | 45.7 |
| Diet low in fruits | 6.8 | 9.7 | 3.0 | 6.3 | 9.0 | 2.7 | 6.6 | 9.4 | 2.9 |
| Diet low in vegetables | 5.9 | 8.3 | 3.2 | 5.4 | 7.6 | 3.0 | 5.7 | 8.0 | 3.2 |
| Diet low in whole grains | 16.7 | 21.7 | 6.5 | 15.0 | 19.6 | 5.9 | 16.0 | 20.9 | 6.2 |
| Diet low in nuts and seeds | 8.1 | 10.8 | 4.6 | 7.3 | 9.7 | 4.1 | 7.8 | 10.3 | 4.4 |
| Diet high in red meat | 2.1 | 4.0 | 0.3 | 2.0 | 3.7 | 0.3 | 2.1 | 3.9 | 0.3 |
| Diet high in processed meat | 1.4 | 2.7 | 0.7 | 1.3 | 2.7 | 0.6 | 1.4 | 2.7 | 0.6 |
| Diet high in sugar-sweetened beverages | 2.0 | 2.4 | 1.4 | 1.7 | 2.2 | 1.2 | 1.8 | 2.3 | 1.3 |
| Diet low in fiber | 5.1 | 8.0 | 2.3 | 4.6 | 7.4 | 2.0 | 4.9 | 7.7 | 2.2 |
| Diet low in seafood omega-3 fatty acids | 4.1 | 5.4 | 1.6 | 3.9 | 5.1 | 1.6 | 4.0 | 5.3 | 1.6 |
| Diet low in polyunsaturated fatty acids | 5.1 | 10.3 | 0.6 | 4.7 | 9.5 | 0.6 | 4.9 | 10.0 | 0.6 |
| Diet high in trans fatty acids | 8.2 | 11.0 | 0.9 | 7.6 | 10.5 | 1.1 | 8.0 | 10.7 | 1.0 |

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|--|------|------|------|------|------|------|------|------|------|
| Diet high in sodium | 7.4 | 18.3 | 1.0 | 4.9 | 14.6 | 0.4 | 6.4 | 16.6 | 0.7 |
| Low physical activity | 4.0 | 8.8 | 1.4 | 5.2 | 10.2 | 2.2 | 4.6 | 9.5 | 1.7 |
| All risk factors | 94.6 | 96.4 | 92.7 | 93.5 | 95.8 | 90.9 | 94.2 | 96.2 | 91.9 |
| Environmental/occupational risks | 36.9 | 40.0 | 33.7 | 33.0 | 35.9 | 29.7 | 35.2 | 38.2 | 32.0 |
| Behavioral risks | 69.9 | 75.1 | 63.7 | 59.5 | 65.9 | 52.0 | 65.4 | 71.0 | 58.7 |
| Suboptimal temperature | 5.1 | 6.9 | 2.5 | 5.2 | 6.8 | 2.8 | 5.1 | 6.8 | 2.7 |
| Diet low in legumes | 13.4 | 21.5 | 3.1 | 12.6 | 20.3 | 2.9 | 13.0 | 21.0 | 3.0 |
| High temperature | 0.9 | 2.2 | -1.2 | 0.8 | 2.0 | -1.2 | 0.9 | 2.1 | -1.2 |
| Low temperature | 4.3 | 5.7 | 2.7 | 4.4 | 5.8 | 3.0 | 4.3 | 5.7 | 2.8 |
| Impaired kidney function | 12.4 | 16.7 | 8.4 | 13.3 | 17.9 | 8.9 | 12.8 | 17.2 | 8.7 |
| High LDL cholesterol | 40.9 | 49.4 | 32.7 | 40.2 | 50.0 | 31.1 | 40.6 | 49.5 | 32.2 |
| Particulate matter pollution | 28.7 | 31.5 | 26.1 | 25.6 | 28.2 | 23.2 | 27.4 | 30.0 | 25.0 |
| Low-income countries | | | | | | | | | |
| Air pollution | 35.5 | 39.4 | 32.4 | 33.6 | 38.4 | 29.9 | 34.6 | 39.0 | 31.2 |
| Ambient particulate matter pollution | 8.6 | 13.1 | 4.9 | 5.9 | 9.2 | 3.4 | 7.4 | 11.2 | 4.2 |
| Household air pollution from solid fuels | 26.9 | 33.3 | 20.9 | 27.7 | 34.4 | 22.3 | 27.2 | 33.6 | 21.8 |
| Other environmental risks | 7.0 | 9.5 | 4.7 | 4.7 | 6.9 | 2.7 | 5.9 | 8.3 | 3.8 |

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|--|------|------|------|------|------|------|------|------|------|
| Lead exposure | 7.0 | 9.5 | 4.7 | 4.7 | 6.9 | 2.7 | 5.9 | 8.3 | 3.8 |
| Tobacco | 21.8 | 23.5 | 20.2 | 9.0 | 10.3 | 7.9 | 15.8 | 17.1 | 14.6 |
| Smoking | 19.4 | 20.9 | 17.9 | 5.3 | 6.1 | 4.5 | 12.8 | 13.9 | 11.8 |
| Secondhand smoke | 3.2 | 3.9 | 2.5 | 4.0 | 4.9 | 3.2 | 3.6 | 4.3 | 2.9 |
| Alcohol use | -2.1 | 0.0 | -4.3 | -1.3 | -0.3 | -2.3 | -1.8 | -0.5 | -3.0 |
| Metabolic risks | 78.6 | 84.8 | 72.3 | 78.6 | 85.3 | 72.1 | 78.6 | 85.0 | 72.2 |
| High fasting plasma glucose | 22.3 | 34.8 | 13.3 | 22.4 | 36.2 | 13.1 | 22.4 | 35.2 | 13.3 |
| High systolic blood pressure | 53.1 | 60.5 | 45.6 | 51.5 | 60.1 | 43.3 | 52.4 | 60.3 | 44.3 |
| High body-mass index | 12.2 | 19.9 | 6.1 | 14.4 | 21.8 | 8.4 | 13.2 | 20.8 | 7.3 |
| Dietary risks | 55.8 | 64.1 | 46.6 | 52.3 | 60.7 | 43.4 | 54.1 | 62.4 | 45.0 |
| Diet low in fruits | 6.4 | 9.3 | 2.6 | 6.0 | 8.8 | 2.6 | 6.2 | 9.0 | 2.6 |
| Diet low in vegetables | 9.1 | 12.3 | 5.7 | 8.4 | 11.4 | 5.3 | 8.7 | 11.9 | 5.5 |
| Diet low in whole grains | 17.1 | 22.4 | 6.4 | 15.4 | 20.4 | 5.9 | 16.3 | 21.5 | 6.2 |
| Diet low in nuts and seeds | 5.7 | 7.9 | 3.0 | 4.8 | 6.7 | 2.7 | 5.3 | 7.3 | 2.8 |
| Diet high in red meat | 2.6 | 4.9 | 0.2 | 2.3 | 4.3 | 0.2 | 2.4 | 4.6 | 0.2 |
| Diet high in processed meat | 1.3 | 3.5 | 0.2 | 1.2 | 3.2 | 0.2 | 1.2 | 3.4 | 0.2 |
| Diet high in sugar-sweetened beverages | 2.5 | 2.9 | 2.1 | 2.2 | 2.6 | 1.7 | 2.3 | 2.8 | 1.9 |

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|---|------|------|------|------|------|------|------|------|------|
| Diet low in fiber | 3.7 | 6.3 | 1.5 | 3.7 | 6.1 | 1.5 | 3.7 | 6.2 | 1.5 |
| Diet low in seafood omega-3 fatty acids | 4.2 | 5.6 | 1.3 | 3.9 | 5.3 | 1.3 | 4.1 | 5.5 | 1.3 |
| Diet low in polyunsaturated fatty acids | 4.9 | 9.8 | 0.7 | 4.7 | 9.3 | 0.7 | 4.8 | 9.6 | 0.7 |
| Diet high in trans fatty acids | 5.5 | 8.2 | 0.7 | 5.3 | 8.3 | 1.0 | 5.4 | 8.3 | 0.8 |
| Diet high in sodium | 7.5 | 20.1 | 0.9 | 6.7 | 18.9 | 0.6 | 7.1 | 19.6 | 0.8 |
| Low physical activity | 3.0 | 7.1 | 0.9 | 4.2 | 9.1 | 1.5 | 3.5 | 8.0 | 1.2 |
| All risk factors | 93.0 | 95.0 | 90.7 | 91.9 | 94.5 | 89.1 | 92.5 | 94.7 | 90.0 |
| Environmental/occupational risks | 43.3 | 47.2 | 39.7 | 40.0 | 44.8 | 36.1 | 41.7 | 45.9 | 38.1 |
| Behavioral risks | 65.0 | 71.3 | 57.8 | 57.5 | 64.9 | 49.6 | 61.5 | 68.1 | 54.1 |
| Suboptimal temperature | 5.4 | 7.0 | 2.9 | 5.4 | 7.1 | 2.9 | 5.4 | 7.1 | 2.9 |
| Diet low in legumes | 12.6 | 20.2 | 3.0 | 11.1 | 18.0 | 2.6 | 11.9 | 19.3 | 2.8 |
| High temperature | 0.7 | 1.5 | -1.3 | 0.7 | 1.6 | -1.3 | 0.7 | 1.5 | -1.3 |
| Low temperature | 4.7 | 6.2 | 3.3 | 4.7 | 6.2 | 3.2 | 4.7 | 6.2 | 3.2 |
| Impaired kidney function | 9.3 | 12.3 | 6.4 | 11.0 | 14.6 | 7.5 | 10.1 | 13.3 | 7.0 |
| High LDL cholesterol | 37.1 | 45.7 | 29.4 | 37.5 | 46.7 | 29.0 | 37.3 | 46.1 | 29.1 |
| Particulate matter pollution | 35.5 | 39.4 | 32.4 | 33.6 | 38.4 | 29.9 | 34.6 | 39.0 | 31.2 |

* PAF: population attributable fraction; [§] IHD: ischemic heart disease; [¶] LMIC: low- and middle-income countries

Table S23. PAF* of IHD[§] DALY[†] for modifiable risk factors by sex in LMICs[¶] in 2019

| Upper-middle income countries | Males | | | Females | | | Both | | |
|--|-------|-------|-------|---------|-------|-------|-------|-------|-------|
| | value | lower | upper | value | lower | upper | value | lower | upper |
| Risk Factors | | | | | | | | | |
| Air pollution | 23.4 | 20.6 | 26.1 | 20.4 | 18.0 | 22.8 | 22.2 | 19.6 | 24.7 |
| Ambient particulate matter pollution | 20.2 | 17.2 | 22.9 | 16.5 | 13.8 | 19.2 | 18.7 | 15.9 | 21.3 |
| Household air pollution from solid fuels | 3.2 | 1.5 | 5.8 | 3.9 | 2.1 | 6.3 | 3.5 | 1.8 | 5.9 |
| Other environmental risks | 4.7 | 2.8 | 6.8 | 3.1 | 1.5 | 5.0 | 4.0 | 2.3 | 6.1 |
| Lead exposure | 4.7 | 2.8 | 6.8 | 3.1 | 1.5 | 5.0 | 4.0 | 2.3 | 6.1 |
| Tobacco | 40.8 | 39.4 | 42.3 | 17.2 | 15.8 | 18.6 | 31.4 | 29.9 | 33.0 |
| Smoking | 38.0 | 36.6 | 39.5 | 11.1 | 10.2 | 12.1 | 27.3 | 25.7 | 28.8 |
| Secondhand smoke | 4.8 | 3.9 | 5.7 | 7.0 | 5.8 | 8.3 | 5.6 | 4.6 | 6.7 |
| Alcohol use | -0.9 | -4.3 | 2.6 | -1.0 | -2.0 | 0.2 | -0.9 | -3.0 | 1.1 |
| Metabolic risks | 84.5 | 79.3 | 89.4 | 83.7 | 77.4 | 89.6 | 84.2 | 78.7 | 89.3 |
| High fasting plasma glucose | 20.8 | 13.5 | 31.4 | 21.1 | 13.1 | 32.3 | 20.9 | 13.6 | 31.5 |
| High systolic blood pressure | 55.9 | 47.8 | 63.2 | 54.9 | 45.3 | 64.0 | 55.5 | 47.2 | 63.4 |

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|---|------|------|------|------|------|------|------|------|------|
| High body-mass index | 23.1 | 13.6 | 33.8 | 22.0 | 13.5 | 31.6 | 22.6 | 13.6 | 32.9 |
| Dietary risks | 59.0 | 49.4 | 67.1 | 52.4 | 43.2 | 60.7 | 56.3 | 46.9 | 64.5 |
| Diet low in fruits | 4.2 | 1.4 | 6.5 | 3.7 | 1.2 | 5.8 | 4.0 | 1.4 | 6.2 |
| Diet low in vegetables | 2.4 | 1.2 | 3.4 | 2.1 | 1.1 | 3.1 | 2.2 | 1.2 | 3.3 |
| Diet low in whole grains | 19.0 | 6.9 | 24.5 | 16.6 | 6.1 | 21.6 | 18.1 | 6.6 | 23.4 |
| Diet low in nuts and seeds | 5.6 | 2.6 | 8.1 | 5.3 | 2.4 | 7.7 | 5.5 | 2.5 | 7.9 |
| Diet high in red meat | 6.3 | 1.2 | 11.4 | 5.3 | 0.9 | 9.7 | 5.9 | 1.1 | 10.7 |
| Diet high in processed meat | 1.9 | 0.3 | 4.3 | 2.0 | 0.3 | 4.2 | 2.0 | 0.3 | 4.2 |
| Diet high in sugar-sweetened beverages | 2.4 | 1.5 | 3.1 | 2.1 | 1.3 | 2.7 | 2.3 | 1.5 | 2.9 |
| Diet low in fiber | 3.2 | 1.2 | 5.5 | 2.8 | 1.1 | 5.0 | 3.0 | 1.2 | 5.2 |
| Diet low in seafood omega-3 fatty acids | 4.0 | 2.1 | 5.1 | 3.7 | 1.8 | 4.7 | 3.9 | 2.0 | 4.9 |
| Diet low in polyunsaturated fatty acids | 4.0 | 0.5 | 8.3 | 3.7 | 0.5 | 7.7 | 3.9 | 0.4 | 8.1 |
| Diet high in trans fatty acids | 6.7 | 0.8 | 9.1 | 6.3 | 0.9 | 8.9 | 6.5 | 0.8 | 9.0 |
| Diet high in sodium | 16.5 | 7.1 | 28.4 | 10.0 | 2.7 | 21.3 | 13.9 | 5.4 | 25.3 |
| Low physical activity | 3.7 | 1.2 | 8.4 | 5.7 | 2.1 | 11.5 | 4.5 | 1.6 | 9.5 |
| All risk factors | 95.4 | 93.7 | 96.8 | 93.5 | 90.9 | 95.7 | 94.6 | 92.6 | 96.3 |
| Environmental/occupational risks | 31.9 | 28.5 | 35.4 | 28.1 | 25.0 | 31.4 | 30.4 | 27.2 | 33.8 |

| | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|------|
| Behavioral risks | 75.4 | 70.1 | 79.9 | 62.2 | 55.1 | 68.7 | 70.1 | 64.0 | 75.5 |
| Suboptimal temperature | 7.0 | 4.9 | 9.4 | 7.0 | 4.8 | 9.5 | 7.0 | 4.8 | 9.4 |
| Diet low in legumes | 12.8 | 2.7 | 20.7 | 11.0 | 2.2 | 17.8 | 12.1 | 2.5 | 19.5 |
| High temperature | 0.2 | -0.1 | 0.5 | 0.2 | -0.1 | 0.5 | 0.2 | -0.1 | 0.5 |
| Low temperature | 6.8 | 4.7 | 9.1 | 6.8 | 4.6 | 9.2 | 6.8 | 4.6 | 9.1 |
| Impaired kidney function | 11.9 | 8.5 | 15.4 | 13.7 | 9.3 | 18.1 | 12.6 | 8.9 | 16.4 |
| High LDL cholesterol | 49.2 | 41.3 | 57.5 | 45.4 | 35.8 | 55.7 | 47.7 | 39.1 | 56.8 |
| Particulate matter pollution | 23.4 | 20.6 | 26.1 | 20.4 | 18.0 | 22.8 | 22.2 | 19.6 | 24.7 |
| Lower-middle income countries | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Air pollution | 32.4 | 29.5 | 35.4 | 30.0 | 27.4 | 32.8 | 31.5 | 28.8 | 34.4 |
| Ambient particulate matter pollution | 22.2 | 18.0 | 26.1 | 18.3 | 14.8 | 21.6 | 20.7 | 16.8 | 24.3 |
| Household air pollution from solid fuels | 10.2 | 6.5 | 14.5 | 11.7 | 8.5 | 15.3 | 10.8 | 7.4 | 14.6 |
| Other environmental risks | 6.4 | 4.2 | 8.7 | 5.1 | 3.1 | 7.2 | 5.9 | 3.8 | 8.1 |
| Lead exposure | 6.4 | 4.2 | 8.7 | 5.1 | 3.1 | 7.2 | 5.9 | 3.8 | 8.1 |
| Tobacco | 33.8 | 32.2 | 35.3 | 13.3 | 11.8 | 14.7 | 25.9 | 24.5 | 27.2 |
| Smoking | 30.7 | 29.1 | 32.1 | 6.4 | 5.7 | 7.2 | 21.4 | 20.1 | 22.6 |
| Secondhand smoke | 4.6 | 3.7 | 5.5 | 7.4 | 6.0 | 8.8 | 5.7 | 4.6 | 6.8 |

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|---|------|------|------|------|------|------|------|------|------|
| Alcohol use | -1.1 | -3.0 | 0.9 | -0.6 | -1.0 | 0.0 | -0.9 | -2.1 | 0.4 |
| Metabolic risks | 84.1 | 79.0 | 88.9 | 84.3 | 79.3 | 89.0 | 84.2 | 79.2 | 88.9 |
| High fasting plasma glucose | 24.7 | 15.8 | 37.1 | 24.3 | 15.4 | 36.8 | 24.5 | 15.4 | 36.9 |
| High systolic blood pressure | 54.8 | 47.7 | 61.9 | 55.8 | 48.0 | 62.8 | 55.2 | 47.7 | 62.2 |
| High body-mass index | 21.0 | 13.2 | 29.7 | 23.3 | 15.9 | 31.3 | 21.9 | 14.2 | 30.3 |
| Dietary risks | 59.9 | 50.6 | 67.2 | 55.7 | 46.5 | 63.0 | 58.3 | 49.0 | 65.5 |
| Diet low in fruits | 7.7 | 3.4 | 11.0 | 7.1 | 3.1 | 10.1 | 7.5 | 3.3 | 10.7 |
| Diet low in vegetables | 6.6 | 3.6 | 9.4 | 6.2 | 3.5 | 8.6 | 6.4 | 3.6 | 9.1 |
| Diet low in whole grains | 18.3 | 7.1 | 23.8 | 16.3 | 6.4 | 21.4 | 17.6 | 6.9 | 22.9 |
| Diet low in nuts and seeds | 9.1 | 5.2 | 12.0 | 8.2 | 4.6 | 10.9 | 8.7 | 5.0 | 11.6 |
| Diet high in red meat | 2.4 | 0.3 | 4.4 | 2.1 | 0.3 | 4.1 | 2.3 | 0.3 | 4.3 |
| Diet high in processed meat | 1.6 | 0.7 | 3.0 | 1.5 | 0.6 | 3.0 | 1.5 | 0.7 | 3.0 |
| Diet high in sugar-sweetened beverages | 2.0 | 1.3 | 2.5 | 1.8 | 1.1 | 2.3 | 1.9 | 1.2 | 2.4 |
| Diet low in fiber | 5.8 | 2.6 | 9.0 | 5.2 | 2.3 | 8.1 | 5.6 | 2.5 | 8.7 |
| Diet low in seafood omega-3 fatty acids | 4.5 | 1.7 | 6.0 | 4.2 | 1.6 | 5.6 | 4.4 | 1.7 | 5.8 |
| Diet low in polyunsaturated fatty acids | 5.7 | 0.7 | 11.5 | 5.3 | 0.6 | 10.7 | 5.5 | 0.6 | 11.2 |
| Diet high in trans fatty acids | 9.0 | 1.0 | 12.1 | 8.5 | 1.1 | 11.5 | 8.8 | 1.0 | 11.8 |

| | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|------|
| Diet high in sodium | 7.9 | 1.1 | 19.0 | 5.3 | 0.4 | 15.0 | 6.9 | 0.9 | 17.4 |
| Low physical activity | 3.2 | 1.0 | 7.3 | 4.2 | 1.6 | 8.7 | 3.6 | 1.2 | 7.9 |
| All risk factors | 95.2 | 93.8 | 96.5 | 93.9 | 92.0 | 95.6 | 94.7 | 93.1 | 96.1 |
| Environmental/occupational risks | 39.8 | 36.5 | 43.1 | 36.8 | 33.4 | 40.1 | 38.7 | 35.4 | 41.9 |
| Behavioral risks | 73.4 | 67.5 | 78.1 | 62.6 | 55.1 | 68.8 | 69.2 | 62.8 | 74.3 |
| Suboptimal temperature | 5.0 | 2.3 | 6.8 | 5.0 | 2.5 | 6.7 | 5.0 | 2.4 | 6.7 |
| Diet low in legumes | 14.7 | 3.3 | 23.5 | 13.6 | 3.0 | 22.0 | 14.3 | 3.2 | 22.9 |
| High temperature | 0.9 | -1.2 | 2.2 | 0.9 | -1.2 | 2.1 | 0.9 | -1.2 | 2.2 |
| Low temperature | 4.2 | 2.6 | 5.6 | 4.2 | 2.7 | 5.6 | 4.2 | 2.6 | 5.6 |
| Impaired kidney function | 11.8 | 8.3 | 15.6 | 12.6 | 8.8 | 16.7 | 12.1 | 8.5 | 16.0 |
| High LDL cholesterol | 46.9 | 39.4 | 55.0 | 45.2 | 37.2 | 53.6 | 46.2 | 38.6 | 54.3 |
| Particulate matter pollution | 32.4 | 29.5 | 35.4 | 30.0 | 27.4 | 32.8 | 31.5 | 28.8 | 34.4 |
| Low-income countries | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Air pollution | 38.7 | 35.4 | 42.4 | 37.4 | 33.7 | 42.0 | 38.2 | 34.8 | 42.4 |
| Ambient particulate matter pollution | 9.4 | 5.3 | 14.3 | 6.5 | 3.8 | 10.2 | 8.2 | 4.7 | 12.6 |
| Household air pollution from solid fuels | 29.4 | 23.1 | 35.7 | 30.8 | 25.1 | 37.4 | 30.0 | 24.1 | 36.3 |
| Other environmental risks | 6.6 | 4.2 | 9.0 | 4.6 | 2.6 | 6.8 | 5.8 | 3.6 | 8.1 |

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|--|------|------|------|------|------|------|------|------|------|
| Lead exposure | 6.6 | 4.2 | 9.0 | 4.6 | 2.6 | 6.8 | 5.8 | 3.6 | 8.1 |
| Tobacco | 24.9 | 23.1 | 26.7 | 11.0 | 9.6 | 12.5 | 19.0 | 17.7 | 20.5 |
| Smoking | 22.3 | 20.6 | 23.9 | 6.4 | 5.5 | 7.4 | 15.6 | 14.5 | 16.8 |
| Secondhand smoke | 3.6 | 2.8 | 4.4 | 5.0 | 4.0 | 6.2 | 4.2 | 3.3 | 5.1 |
| Alcohol use | -2.2 | -4.5 | 0.1 | -1.4 | -2.4 | -0.3 | -1.9 | -3.2 | -0.5 |
| Metabolic risks | 79.9 | 74.2 | 85.3 | 80.4 | 74.7 | 85.9 | 80.1 | 74.5 | 85.4 |
| High fasting plasma glucose | 18.8 | 11.8 | 28.7 | 20.6 | 13.1 | 32.0 | 19.6 | 12.3 | 30.1 |
| High systolic blood pressure | 53.9 | 47.0 | 60.5 | 52.0 | 44.3 | 59.5 | 53.1 | 46.1 | 60.0 |
| High body-mass index | 14.7 | 7.5 | 23.7 | 18.8 | 11.5 | 27.4 | 16.4 | 9.2 | 25.1 |
| Dietary risks | 58.5 | 49.2 | 66.2 | 55.4 | 46.2 | 63.4 | 57.2 | 48.1 | 65.1 |
| Diet low in fruits | 7.2 | 2.9 | 10.5 | 6.8 | 2.9 | 9.9 | 7.0 | 2.9 | 10.2 |
| Diet low in vegetables | 10.0 | 6.4 | 13.6 | 9.4 | 6.0 | 12.7 | 9.8 | 6.2 | 13.3 |
| Diet low in whole grains | 19.0 | 7.2 | 24.7 | 17.4 | 6.6 | 23.0 | 18.4 | 6.9 | 24.0 |
| Diet low in nuts and seeds | 6.3 | 3.2 | 8.6 | 5.3 | 2.8 | 7.4 | 5.9 | 3.0 | 8.0 |
| Diet high in red meat | 3.0 | 0.2 | 5.7 | 2.7 | 0.2 | 5.2 | 2.8 | 0.2 | 5.5 |
| Diet high in processed meat | 1.4 | 0.2 | 4.0 | 1.4 | 0.2 | 3.8 | 1.4 | 0.2 | 3.9 |
| Diet high in sugar-sweetened beverages | 2.4 | 1.9 | 2.9 | 2.1 | 1.6 | 2.6 | 2.3 | 1.8 | 2.7 |

| | | | | | | | | | |
|---|------|------|------|------|------|------|------|------|------|
| Diet low in fiber | 4.3 | 1.8 | 7.3 | 4.2 | 1.7 | 7.0 | 4.3 | 1.7 | 7.2 |
| Diet low in seafood omega-3 fatty acids | 4.6 | 1.4 | 6.2 | 4.3 | 1.3 | 5.8 | 4.5 | 1.4 | 6.0 |
| Diet low in polyunsaturated fatty acids | 5.5 | 0.7 | 10.9 | 5.2 | 0.7 | 10.5 | 5.4 | 0.7 | 10.8 |
| Diet high in trans fatty acids | 5.9 | 0.8 | 8.9 | 5.9 | 1.0 | 9.0 | 5.9 | 0.8 | 8.9 |
| Diet high in sodium | 7.0 | 0.9 | 19.3 | 6.5 | 0.6 | 18.4 | 6.8 | 0.8 | 18.9 |
| Low physical activity | 2.5 | 0.7 | 6.3 | 3.6 | 1.2 | 8.2 | 2.9 | 0.9 | 7.1 |
| All risk factors | 93.3 | 91.5 | 94.9 | 92.5 | 90.4 | 94.4 | 93.0 | 91.1 | 94.7 |
| Environmental/occupational risks | 45.8 | 42.2 | 49.6 | 43.4 | 39.6 | 48.0 | 44.8 | 41.2 | 48.9 |
| Behavioral risks | 68.0 | 61.0 | 73.7 | 60.7 | 52.8 | 67.6 | 64.9 | 57.7 | 71.1 |
| Suboptimal temperature | 5.2 | 3.0 | 6.9 | 5.3 | 3.0 | 7.0 | 5.3 | 3.0 | 6.9 |
| Diet low in legumes | 13.8 | 3.3 | 22.1 | 12.5 | 3.1 | 20.1 | 13.2 | 3.2 | 21.3 |
| High temperature | 0.6 | -1.2 | 1.4 | 0.7 | -1.3 | 1.5 | 0.6 | -1.2 | 1.5 |
| Low temperature | 4.6 | 3.2 | 6.1 | 4.6 | 3.2 | 6.1 | 4.6 | 3.2 | 6.1 |
| Impaired kidney function | 8.6 | 6.1 | 11.3 | 10.4 | 7.4 | 13.6 | 9.4 | 6.7 | 12.2 |
| High LDL cholesterol | 42.9 | 35.7 | 51.0 | 43.0 | 35.5 | 51.5 | 43.0 | 35.7 | 51.1 |
| Particulate matter pollution | 38.7 | 35.4 | 42.4 | 37.4 | 33.7 | 42.0 | 38.2 | 34.8 | 42.4 |

* PAF: population attributable fraction; § IHD: ischemic heart disease; † DALY: disability adjusted life years; ¶ LMIC: low- and middle-income countries

Table S24. Risk-attributable IHD* deaths with percentage change by age and sex in LMICs§ from 2000 to 2019

| | males | | | females | | | both | | |
|-------------------------------|--------|-------------|-------------|---------|-------------|-------------|---------|-------------|-------------|
| | value | lower limit | upper limit | value | lower limit | upper limit | value | lower limit | upper limit |
| 2000 | | | | | | | | | |
| Upper-middle Countries | | | | | | | | | |
| 15-49 years | 147616 | 140975 | 154686 | 57644 | 53551 | 62034 | 205260 | 196719 | 214048 |
| 50-69 years | 479196 | 460469 | 498641 | 237666 | 227499 | 248987 | 716862 | 694522 | 740292 |
| >70 years | 584759 | 550133 | 616379 | 756227 | 686690 | 807002 | 1340986 | 1241048 | 1416258 |
| Lower-middle Countries | | | | | | | | | |
| 15-49 years | 174425 | 162570 | 187161 | 74956 | 68106 | 83583 | 249381 | 235272 | 266778 |
| 50-69 years | 486981 | 459318 | 516700 | 267667 | 246207 | 292058 | 754648 | 715642 | 796274 |
| >70 years | 449393 | 416992 | 480479 | 483106 | 438407 | 525172 | 932499 | 869443 | 992322 |
| Low-income Countries | | | | | | | | | |
| 15-49 years | 13204 | 11545 | 15146 | 7651 | 6323 | 9446 | 20855 | 18141 | 24271 |
| 50-69 years | 45706 | 40146 | 51298 | 29124 | 25026 | 34270 | 74831 | 65950 | 84728 |
| >70 years | 40722 | 35746 | 45210 | 42365 | 35909 | 49302 | 83087 | 72607 | 93336 |
| 2019 | | | | | | | | | |

Upper-middle Countries

| | | | | | | | | | |
|-------------|---------|--------|---------|---------|---------|---------|---------|---------|---------|
| 15-49 years | 133433 | 116705 | 150725 | 39373 | 34342 | 45097 | 172806 | 155116 | 191009 |
| 50-69 years | 601920 | 533385 | 674607 | 287882 | 254371 | 324148 | 889802 | 809779 | 971068 |
| >70 years | 1087649 | 959404 | 1196328 | 1266524 | 1076247 | 1418385 | 2354173 | 2090659 | 2571832 |

Lower-middle Countries

| | | | | | | | | | |
|-------------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| 15-49 years | 243428 | 214735 | 276812 | 102144 | 87021 | 116883 | 345572 | 309892 | 382985 |
| 50-69 years | 790452 | 701281 | 889082 | 440452 | 381557 | 495270 | 1230905 | 1111314 | 1353197 |
| >70 years | 799366 | 713786 | 885837 | 811574 | 704294 | 906745 | 1610941 | 1449401 | 1753870 |

Low-income Countries

| | | | | | | | | | |
|-------------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| 15-49 years | 21449 | 17099 | 26572 | 11369 | 9158 | 13972 | 32818 | 26362 | 39908 |
| 50-69 years | 65981 | 54270 | 78444 | 43461 | 36397 | 51408 | 109441 | 91281 | 128963 |
| >70 years | 65023 | 55037 | 74563 | 77322 | 64166 | 89813 | 142345 | 120964 | 163403 |

* IHD: ischemic heart disease

§ LMICs: low- and middle-income countries

Table S25. Risk-attributable IHD* DALY[‡] with percentage change by age and sex in LMICs[§] from 2000 to 2019

| | males | | | females | | | both | | |
|--------------|----------|-------------|-------------|----------|-------------|-------------|----------|-------------|-------------|
| | value | lower limit | upper limit | value | lower limit | upper limit | value | lower limit | upper limit |
| 2000 | | | | | | | | | |
| Upper-middle | | | | | | | | | |
| 15-49 years | 7091450 | 6757196 | 7430854 | 2857853 | 2652419 | 3081504 | 9949303 | 9519740 | 10392553 |
| 50-69 years | 14170729 | 13615385 | 14740575 | 6873486 | 6553640 | 7198561 | 21044214 | 20321597 | 21827850 |
| >70 years | 8681200 | 8215161 | 9148065 | 10005777 | 9242486 | 10645755 | 18686977 | 17559136 | 19651351 |
| Lower-middle | | | | | | | | | |
| 15-49 years | 8414185 | 7853599 | 9042017 | 3684589 | 3349555 | 4109111 | 12098773 | 11398111 | 12956095 |
| 50-69 years | 14349052 | 13517655 | 15220910 | 7680976 | 7076297 | 8358561 | 22030028 | 20883044 | 23250026 |
| >70 years | 6807283 | 6357669 | 7249789 | 6718428 | 6143723 | 7260493 | 13525711 | 12682766 | 14380025 |
| Low-income | | | | | | | | | |
| 15-49 years | 637199 | 556863 | 729349 | 371516 | 308283 | 461689 | 1008715 | 878870 | 1172607 |
| 50-69 years | 1357440 | 1195496 | 1525518 | 848602 | 724734 | 994668 | 2206042 | 1946070 | 2497595 |
| >70 years | 624463 | 551752 | 691696 | 611995 | 523555 | 710241 | 1236458 | 1089916 | 1379118 |

2019

Upper-middle

| | | | | | | | | | |
|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 15-49 years | 6452912 | 5672093 | 7282418 | 1967584 | 1720754 | 2236205 | 8420495 | 7568173 | 9306468 |
| 50-69 years | 17944643 | 15926281 | 20059280 | 8479845 | 7525346 | 9486375 | 26424488 | 24034804 | 28829259 |
| >70 years | 14640043 | 13035756 | 16139959 | 15122536 | 13150393 | 16875440 | 29762579 | 26650602 | 32327928 |

Lower-middle

| | | | | | | | | | |
|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 15-49 years | 11705050 | 10332717 | 13278114 | 4955622 | 4233535 | 5671655 | 16660672 | 14952516 | 18463198 |
| 50-69 years | 23481135 | 20774046 | 26417491 | 12817715 | 11109266 | 14383380 | 36298849 | 32716809 | 39978735 |
| >70 years | 11425926 | 10238870 | 12630486 | 10858476 | 9511484 | 12090164 | 22284402 | 20203145 | 24228641 |

Low-income

| | | | | | | | | | |
|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 15-49 years | 1031591 | 823748 | 1272864 | 543810 | 439536 | 670191 | 1575400 | 1262791 | 1913585 |
| 50-69 years | 1985236 | 1640498 | 2357276 | 1275675 | 1070100 | 1502712 | 3260912 | 2730119 | 3829612 |
| >70 years | 960606 | 823534 | 1099127 | 1055016 | 888215 | 1228241 | 2015623 | 1738930 | 2307015 |

* IHD: ischemic heart disease

§ LMICs: low- and middle-income countries

⁹DALY: disability adjusted years

Figure S1. Simplified flowchart for the estimation of risk-attributable IHD burden.

