

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>

		<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. 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>

		<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	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>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	Identify and describe any categories of input data that have potentially important biases (eg, based on characteristics listed in item 5).	<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>

		<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>

	contact name or the name of the institution that retains the right to the data.	
Data analysis		
9	<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>Provide a conceptual overview of the data analysis method. A diagram may be helpful.</p>	<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> <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>

		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.
10	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>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 detailed descriptions of all steps of the analysis were included in the methodological approaches sections of 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>
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>

		<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	<p>Provide the results of an evaluation of model performance, if done, as well as the results of any relevant sensitivity analysis.</p>	<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	<p>Describe methods of calculating uncertainty of the estimates. State which sources of uncertainty were, and were not, accounted for in the uncertainty analysis.</p>	<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>

		<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).

	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

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

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:

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

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)

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

	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 µg/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

Diet low in whole grains	frozen, cooked, canned, or dried legumes)	per day
	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

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 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	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

Low-income				Lower-middle				Upper-middle				Globe			
year	Countries			Countries			Countries								
	value	lower limit	upper limit	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

	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

	1	2	3	4	5	6	7
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

	1	2	3	4	5	6	7	8
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	

	1	2	3	4	5	6	7
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

	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

	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

	1	2	3	4	5	6	7
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

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

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

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

	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

	1	2	3	4	5	6	7
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

	GDP	GDP per capita	GDP growth	GDP per capita growth	Trade balance	Current account balance	Trade balance / GDP
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

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

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

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^t(%) 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

^t PAF: population attributable fraction

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

	Low-income countries	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		
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	valu e	lower limit	upper limit	valu e	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
50 to 54		82.6	77.2	86.6	72.8	64.8	78.8	79.5	73.2
55 to 59		77.6	71.5	82.4	68.3	60.0	75.0	74.6	68.0
60 to 64		75.5	69.7	80.5	64.8	56.8	71.8	71.6	65.0
65 to 69		69.5	62.9	75.0	60.7	52.6	67.6	66.0	58.8
70 to 74		66.6	60.4	72.2	57.6	50.1	64.4	62.7	55.6
75 to 79		60.8	53.6	67.2	53.8	46.0	60.7	57.4	50.0
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																															
pollution																															
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																															
pollution																															
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																															
pollution																															
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</																						

	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																								

	lower limit	1.0	0.8	1.4	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	0.8	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	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	3.2	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
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	5.2	0.0	
Lead exposure																																															
value																																															
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	5.2	0.0	
Tobacco																																															
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	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
Secondhand smoke																																															
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
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

	value	5.2	5.5	5.3	5.1	5.8	5.0	5.0	6.2	5.9	6.0	6.2	5.9	6.2	6.8	4.6	6.5	4.5	8.5	7.7	7.8	7.6	14.0	7.5	7.6	4.4	10.3	10.1	10.4	11.0	5.1	5.1	4.9	5.1	5.1	4.7	4.7	4.6	5.0	4.7	5.1	5.0	4.8	5.0	4.9	4.8	7.8	
lower limit	value	1.1	1.1	1.1	1.0	1.7	1.0	1.1	1.0	1.0	1.1	1.1	1.0	0.8	0.8	0.9	1.0	1.1	1.4	1.0	1.0	1.0	0.7	0.8	0.8	0.6	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.8					
upper limit	value	8.7	9.1	8.8	8.8	10.1	8.4	8.5	9.9	9.6	9.6	9.9	9.4	9.0	9.8	8.0	9.5	8.2	11.7	10.6	10.7	10.5	18.8	10.0	10.3	6.8	13.5	13.4	13.7	14.5	8.2	8.2	7.9	8.3	8.2	8.4	8.4	8.0	7.6	8.1	8.0	7.8	8.0	7.9	7.8	10.4		
Diet high in sodium																																																
lower limit	value	11.6	12.6	11.5	12.0	11.3	12.7	12.7	6.1	6.8	6.6	5.8	7.8	6.6	7.6	6.6	3.6	3.5	6.5	8.2	8.6	8.5	2.3	2.2	2.2	2.1	6.1	6.1	7.2	6.3	4.2	4.3	8.8	8.0	5.0	7.5	4.5	4.6	6.1	5.4	5.3	5.9	7.8	5.2	4.6	5.4	5.3	2.3
upper limit	value	1.5	2.3	1.7	1.7	1.9	2.0	2.0	0.4	0.5	0.5	0.5	0.7	0.5	0.6	0.5	0.2	0.2	0.3	0.6	0.7	0.6	0.2	0.3	0.3	0.3	0.3	0.8	0.4	0.2	0.2	0.3	0.3	0.6	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3					
Low physical activity																																																
lower limit	value	2.2	3.6	2.0	2.6	1.2	2.5	2.1	3.5	4.7	2.9	3.0	2.2	3.0	2.2	2.3	3.7	2.4	3.3	1.8	1.3	1.6	8.7	9.1	8.0	4.1	3.2	5.1	2.8	4.1	3.4	4.2	1.0	1.1	1.0	2.1	2.6	4.1	1.6	3.4	3.4	3.1	9.2	3.3	3.1	4.2	14.1	
upper limit	value	0.5	0.9	0.5	0.6	0.3	0.6	0.5	0.9	1.3	0.7	0.7	0.6	1.0	0.7	0.7	1.3	0.8	0.7	0.4	0.3	0.4	3.2	3.6	3.0	1.2	1.0	1.8	1.0	1.2	0.9	1.2	0.3	0.3	0.3	0.5	0.6	1.1	0.4	0.9	1.0	0.8	3.4	0.9	0.9	1.1	7.1	
Environmental/occupational risks																																																
lower limit	value	38.9	27.1	40.9	38.8	29.2	35.6	28.2	32.6	20.2	41.7	42.1	38.6	30.9	38.2	34.0	18.7	18.3	29.8	25.9	35.9	29.8	42.3	34.0	32.1	31.6	44.5	39.3	43.8	45.9	34.7	35.8	35.1	37.2	37.0	39.8	40.1	37.0	38.9	41.0	33.3	40.3	37.8	40.8	36.4	32.9	41.5	43.9
upper limit	value	33.0	21.9	37.3	35.2	23.0	31.3	23.6	26.4	11.0	37.7	37.9	33.8	23.0	31.2	26.6	11.4	13.5	25.2	20.4	31.8	25.5	37.9	29.9	26.6	26.3	41.5	35.3	40.4	41.7	29.8	30.7	31.5	27.0	32.9	35.8	35.2	31.8	35.2	37.6	27.9	36.7	32.5	34.2	27.1	28.2	34.2	38.7
Behavioral risks																																																
lower limit	value	43.2	31.5	44.4	42.2	33.9	39.6	32.6	37.8	29.7	45.8	46.0	42.5	38.9	44.9	40.2	26.2	23.6	34.9	31.3	39.9	34.1	46.4	38.0	37.2	36.5	47.8	43.6	47.1	49.9	39.6	40.3	39.0	44.3	40.9	43.7	45.0	41.5	42.8	44.5	38.6	44.1	41.8	46.0	41.7	37.4	46.1	48.3
upper limit	value	70.6	70.8	68.2	65.5	71.1	68.6	67.1	81.8	78.4	75.9	77.7	71.4	74.0	82.3	72.7	67.5	66.8	58.1	56.2	65.1	59.0	64.9	62.3	73.2	63.6	71.6	64.9	69.4	76.7	63.4	61.8	61.0	72.3	59.8	63.7	67.4	62.1	65.1	56.9	55.0	66.2	58.0	68.2	57.3	58.6	62.7	73.8

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
Suboptimal temperature																																															
value																																															
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
Diet low in legumes																																															
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
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
High temperature																																															
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	0.9	0.0	0.4	2.3	3.5	-2.4	-0.2	3.9	2.5	
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
Low temperature																																															
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 limit	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	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	

* PAF: population attributable fraction

[§] DALY: disability adjusted life years

Table S21. PAF* of IHD DALYs§ for modifiable risk factors in 59 upper-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	av	aw	ax	ay	az	bc	bd	be	bf	bg	bh	bi	Tuval u
Air 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
Ambient particulate matter pollution																																																											
value	23.3	14.4	8.4	12.8	18.7	8.9	6.5	6.3	7.4	21.0	18.5	11.9	14.9	19.9	12.0	17.0	13.4	19.4	14.8	11.0	16.0	12.2	8.3	10.0	15.1	12.7	13.1	13.5	16.4	15.9	11.4	15.8	15.3	16.1	15.3	17.9	14.9	13.5	11.9	14.4	17.5	9.2	8.6	23.1	24.7	29.1	24.1	21.0	26.9	19.4	24.0	23.9	12.4	16.5	14.0	19.9	4.7	4.2	4.0
lower limit	19.7	10.6	5.3	8.8	15.3	2.9	2.3	1.9	2.5	15.3	11.8	8.4	10.2	12.7	9.3	13.9	11.1	16.2	11.8	8.8	13.4	9.0	4.9	6.3	5.9	6.5	5.7	6.1	6.6	6.8	7.3	7.3	6.2	7.8	10.9	13.5	11.4	10.2	7.2	11.1	12.4	6.4	5.5	17.3	21.7	24.4	20.4	16.8	20.7	16.0	15.8	16.0	6.3	11.4	8.6	16.1	1.9	1.1	1.6
upper limit	26.3	18.2	11.9	17.2	22.1	19.0	13.3	14.2	15.8	26.5	25.5	15.9	20.0	27.4	14.7	20.1	15.7	22.3	17.9	13.3	18.7	15.6	12.0	14.1	25.5	20.3	21.8	22.5	26.5	26.6	16.1	25.0	25.3	25.9	19.7	22.3	18.7	16.9	16.8	17.7	22.8	12.3	12.7	28.4	27.8	33.6	27.8	25.2	32.3	22.6	31.7	31.4	18.7	22.2	19.6	24.0	9.3	10.0	8.7
Household air pollution from solid fuels																																																											
value	5.6	0.1	3.7	11.2	4.1	7.6	12.2	20.5	10.3	0.5	1.5	5.8	2.0	0.0	5.5	5.2	2.6	3.6	4.2	1.8	2.9	0.1	0.3	0.5	4.6	0.4	1.6	3.2	0.7	2.0	2.3	0.8	1.0	2.7	1.6	4.6	2.7	1.4	15.9	3.5	0.1	2.6	9.3	0.1	0.1	0.1	0.1	4.8	1.9	0.3	10.3	12.7	2.9	3.4	1.3	3.1			
lower limit	2.9	0.0	1.6	5.6	1.7	3.2	7.3	13.8	5.2	0.2	0.5	2.3	0.7	0.0	2.6	2.1	0.8	1.3	1.4	0.6	1.0	0.0	0.1	0.2	2.1	0.1	0.6	1.4	0.3	0.9	0.9	0.3	0.4	1.1	0.7	2.3	1.2	0.5	10.4	2.0	0.0	1.2	5.0	0.0	0.0	0.0	0.0	2.0	0.8	0.1	5.6	7.2	1.4	0.8	0.3	1.0			
upper limit	9.5	0.3	7.0	18.6	8.2	13.5	18.0	26.6	16.3	1.2	3.2	10.8	4.3	0.1	10.3	10.3	5.8	7.3	9.0	4.2	6.4	0.3	0.7	1.2	8.0	1.0	3.7	5.9	1.5	3.7	4.9	1.8	2.1	5.4	3.3	8.0	5.0	3.1	22.0	5.5	0.3	4.7	14.8	0.1	0.1	0.1	0.0	0.1	0.2	0.3	9.2	3.7	0.6	16.5	19.4	4.9	8.0	3.4	6.0
Other environmental risks																																																											
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

Alcohol use

value -0.6 -1.1 -3.1 -0.4 -1.2 -1.2 -3.3 -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 -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 -6.0 -3.1 -5.2 -2.2 -3.8 -5.3 -4.8
limit

upper 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
limit

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 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 82.0 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
limit
upper 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
limit

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 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
limit
upper 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 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
limit
upper 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
limit

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	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
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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

	70.7	76.0	64.8	58.7	65.7	51.4	65.1	71.1	58.5
Behavioral risks									
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

	7.4	18.3	1.0	4.9	14.6	0.4	6.4	16.6	0.7
Diet high in sodium									
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

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

	3.7	6.3	1.5	3.7	6.1	1.5	3.7	6.2	1.5
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

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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

	-1.1	-3.0	0.9	-0.6	-1.0	0.0	-0.9	-2.1	0.4
Alcohol use									
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

	6.6	4.2	9.0	4.6	2.6	6.8	5.8	3.6	8.1
Lead exposure									
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

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

^DALY: disability adjusted years

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

