

GBD PROFILE: SRI LANKA

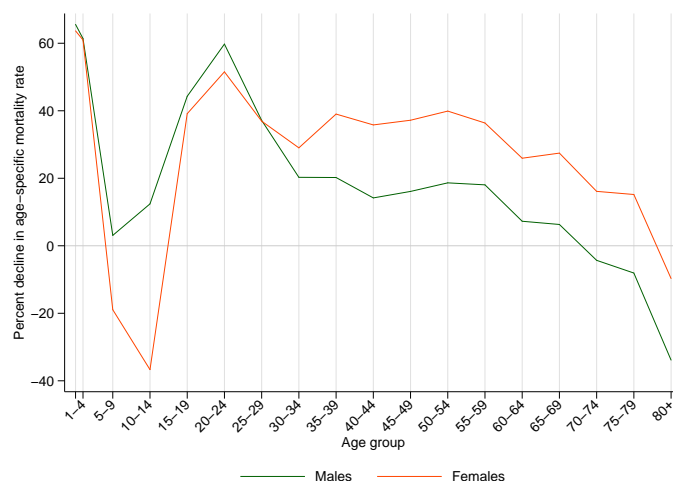
GLOBAL BURDEN OF DISEASES, INJURIES, AND RISK FACTORS STUDY 2010

The Global Burden of Disease Study 2010 (GBD 2010) is a collaborative project of nearly 500 researchers in 50 countries led by the Institute for Health Metrics and Evaluation (IHME) at the University of Washington. It is the largest systematic scientific effort in history to quantify levels and trends of health loss due to diseases, injuries, and risk factors. GBD serves as a global public good to inform evidence-based policymaking and health systems design.

PROFILE OVERVIEW

- In terms of the number of years of life lost (YLLs) due to premature death in Sri Lanka, ischemic heart disease, self-harm, and cerebrovascular disease were the highest ranking causes in 2010.
- Of the 25 most important causes of burden, as measured by disability-adjusted life years (DALYs), interpersonal violence showed the largest decrease, falling by 68% from 1990 to 2010.
- The leading risk factor in Sri Lanka is dietary risks.

Percent decline in age-specific mortality rate by sex from 1990-2010 in Sri Lanka



ALL-CAUSE MORTALITY RATE

- This chart shows the change in mortality rate at every age range. The points above 0 on the chart indicate positive declines in the all-cause mortality rate, while points below 0 indicate an increase in mortality rate between 1990 and 2010.
- The greatest reductions in all-cause mortality rate were experienced by males aged <1 year (66%). Females aged 10-14 years saw the largest increase in mortality rate (37%).

CAUSES OF PREMATURE DEATH

Years of life lost (YLLs) quantify premature mortality by weighting younger deaths more than older deaths.

Ranks for top 25 causes of YLLs 1990-2010, Sri Lanka

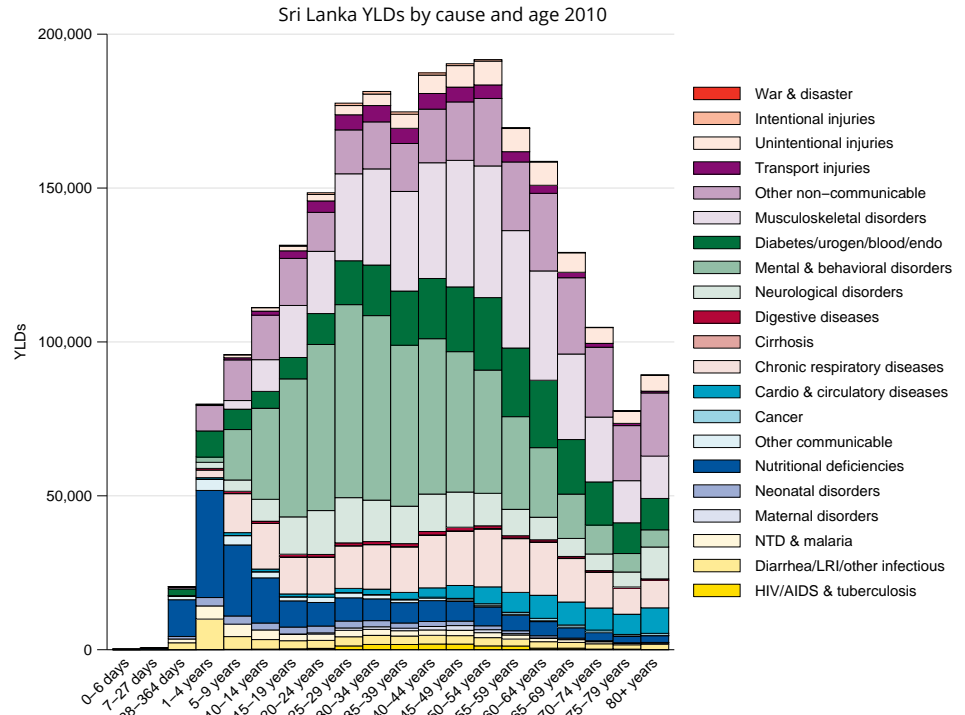
# YLLs in thousands (% of total)	Rank and disorder 1990	Rank and disorder 2010	# YLLs in thousands (% of total)	% change
382 (11.8%)	1 Ischemic heart disease	1 Ischemic heart disease	515 (16.3%)	34
306 (9.5%)	2 Self-harm	2 Self-harm	263 (8.3%)	-18
177 (5.5%)	3 Stroke	3 Stroke	209 (6.6%)	18
191 (5.9%)	4 Interpersonal violence	4 Diabetes	150 (4.8%)	244
178 (5.5%)	5 War & legal intervention	5 Lower respiratory infections	128 (4.1%)	-16
153 (4.7%)	6 Lower respiratory infections	6 Cirrhosis	104 (3.3%)	306
130 (4.0%)	7 Preterm birth complications	7 COPD	90 (2.8%)	127
127 (3.9%)	8 Diarrheal diseases	8 Road injury	91 (2.9%)	58
79 (2.4%)	9 Neonatal encephalopathy	9 Interpersonal violence	88 (2.8%)	-70
66 (2.0%)	10 Other cardio & circulatory	10 Chronic kidney disease	77 (2.5%)	18
64 (2.0%)	11 Chronic kidney disease	11 Asthma	57 (1.8%)	75
59 (1.8%)	12 Tuberculosis	12 Typhoid fevers	69 (2.2%)	17
56 (1.7%)	13 Road injury	13 Congenital anomalies	51 (1.6%)	27
55 (1.7%)	14 Protein-energy malnutrition	14 Other cardio & circulatory	49 (1.6%)	-26
54 (1.7%)	15 Drowning	15 Preterm birth complications	50 (1.6%)	-62
53 (1.6%)	16 Meningitis	16 Drowning	48 (1.5%)	-13
59 (1.8%)	17 Typhoid fevers	17 Falls	46 (1.4%)	55
46 (1.4%)	18 Diabetes	18 Mechanical forces	52 (1.6%)	118
42 (1.3%)	19 Congenital anomalies	19 Hypertensive heart disease	44 (1.4%)	36
40 (1.2%)	20 Rheumatic heart disease	20 Meningitis	42 (1.3%)	-21
40 (1.2%)	21 COPD	21 Tuberculosis	37 (1.2%)	-38
35 (1.1%)	22 Cardiomyopathy	22 Neonatal encephalopathy	35 (1.1%)	-56
33 (1.0%)	23 Asthma	23 Diarrheal diseases	33 (1.0%)	-74
32 (1.0%)	24 Hypertensive heart disease	24 Cardiomyopathy	23 (0.7%)	-34
32 (1.0%)	25 Cirrhosis	25 Adverse medical treatment	24 (0.8%)	96
	26 Falls	34 Rheumatic heart disease		
	27 Mechanical forces	35 Protein-energy malnutrition		
	37 Adverse medical treatment			

This chart shows the change in the top 25 causes of YLLs due to premature mortality from 1990 to 2010. Solid lines indicate a cause has moved up in rank or stayed the same. Broken lines indicate a cause has moved down in rank. The causes are color coded by blue for non-communicable diseases, green for injuries, and red for communicable, maternal, neonatal, and nutritional causes of death.

YEARS LIVED WITH DISABILITY (YLDs)

Years lived with disability (YLDs) are estimated by weighting the prevalence of different conditions based on severity. The top five leading causes of YLDs in Sri Lanka are major depressive disorder, low back pain, iron-deficiency anemia, chronic obstructive pulmonary disease, and diabetes mellitus.

The size of the colored portion in each bar represents the number of YLDs attributable to each cause. The height of each bar shows which age groups had the most YLDs in 2010. The causes are aggregated. For example, musculoskeletal disorders include low back pain and neck pain.

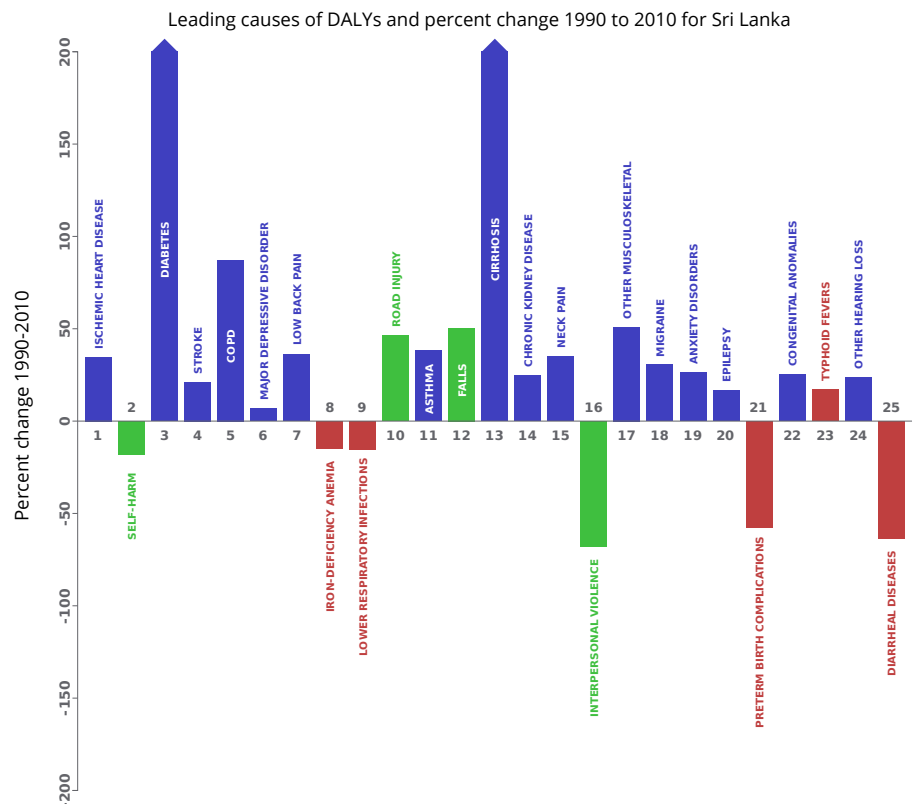


DISABILITY-ADJUSTED LIFE YEARS (DALYs)

Disability-adjusted life years (DALYs) quantify both premature mortality (YLLs) and disability (YLDs) within a population. In Sri Lanka, the top three causes of DALYs in 2010 were ischemic heart disease, self-harm, and diabetes mellitus. The causes that were in the 10 leading causes of DALYs in 2010 and not 1990 were diabetes mellitus, chronic obstructive pulmonary disease, and road injury.

The top 25 causes of DALYs are ranked from left to right in order of the number of DALYs they contributed in 2010. Bars going up show the percent by which DALYs have increased since 1990. Bars going down show the percent by which DALYs have decreased. Globally, non-communicable diseases and injuries are generally on the rise, while communicable, maternal, neonatal, and nutritional causes of DALYs are generally on the decline.

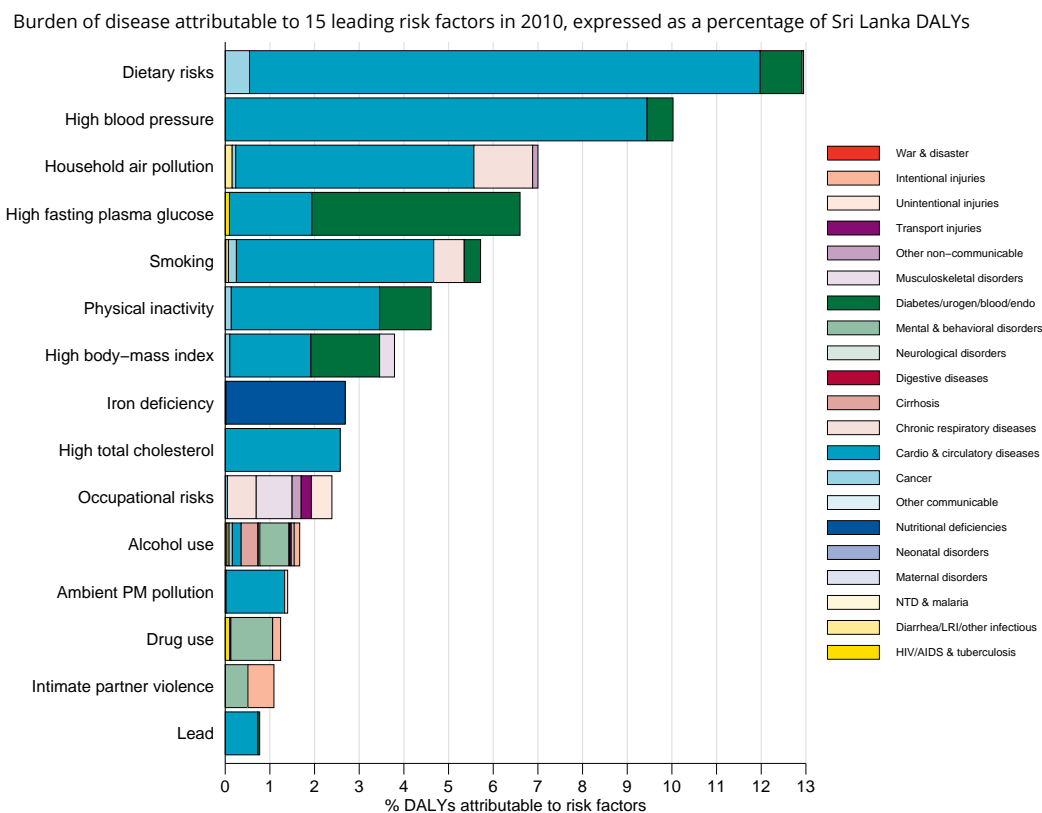
- Communicable, maternal, neonatal, and nutritional
- Non-communicable
- Injuries



RISK FACTORS

Overall, the three risk factors that account for the most disease burden in Sri Lanka are dietary risks, high blood pressure, and household air pollution from solid fuels. The leading risk factors for children under 5 and adults aged 15-49 years were childhood underweight and dietary risks, respectively, in 2010.

The graph shows the top 15 risk factors for Sri Lanka. The colored portion of each bar represents the specific diseases attributable to that risk factor while bar size represents the percentage of DALYs linked to specific risk factors.



COUNTRY BENCHMARKING OF BURDEN OF DISEASE

Understanding the relative performance of Sri Lanka against other comparator countries provides key insight into public health successes and areas where Sri Lanka might be falling behind. The table identifies Sri Lanka's rank across 14 other comparator countries, selected and ordered by income per capita, for five metrics of interest, with 1 indicating the best rank and 15 indicating the worst rank.

- Age-standardized rates are used to make meaningful comparisons across time by adjusting for changes in population size and age structure.
- Life expectancy incorporates mortality, and health-adjusted life expectancy further incorporates years lived in less than ideal health.
- In 2010, Sri Lanka ranked 2nd for age-standardized death rate and 3rd for age-standardized YLD rate.

Age-standardized death rates, YLL rates, YLD rates, and life expectancy at birth and health-adjusted life expectancy at birth for 1990 and 2010, both sexes combined																				
Country	Age-standardized death rate (per 100,000)				Age-standardized YLL rate (per 100,000)				Age-standardized YLD rate (per 100,000)				Life expectancy at birth				Health-adjusted life expectancy at birth			
	1990		2010		1990		2010		1990		2010		1990		2010		1990		2010	
	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	LE	Rank	LE	Rank	HALE	Rank	HALE	Rank
Angola	1,995	15	1,257	13	82,686	15	44,380	14	15,039	15	13,712	13	47.4	15	60.7	14	40.2	15	51.7	14
Swaziland	1,239	12	2,186	15	39,973	11	80,065	15	13,819	13	15,781	15	62.3	11	49.4	15	53	12	41.8	15
Fiji	1,184	10	1,068	11	32,309	8	28,494	11	13,180	9	12,351	9	65.4	8	67.2	11	56	9	58	11
Georgia	825	5	716	4	24,291	4	19,529	4	11,437	1	11,256	2	70.1	4	72.6	5	60.8	3	63	3
Syria	797	3	513	1	21,457	3	12,094	1	13,133	7	12,031	7	71.4	3	77.6	1	60.3	4	66	1
Bhutan	1,284	13	822	9	49,438	14	26,020	10	13,781	12	12,113	8	58.8	14	69.4	10	50	14	59.7	10
Paraguay	682	1	725	5	18,868	1	18,059	3	12,337	5	12,006	5	73.2	1	73.2	3	62.4	1	62.8	4
Sri Lanka	712	2	620	2	20,846	2	14,898	2	12,231	4	11,452	3	72.3	2	75.5	2	62.1	2	65.3	2
Guyana	1,199	11	1,124	12	35,469	10	31,305	12	13,663	11	14,024	14	64.1	10	66	12	54.6	10	55	13
Bolivia	1,136	9	751	6	41,077	12	23,965	8	13,140	8	12,020	6	62.2	12	70.7	8	53.2	11	60.8	9
Morocco	912	7	696	3	29,826	7	19,672	5	14,217	14	13,384	12	67.4	7	72.7	4	56.3	7	61.1	6
Indonesia	1,033	8	867	10	34,584	9	24,178	9	12,101	2	11,107	1	65	9	69.7	9	56.2	8	60.9	7
Honduras	869	6	784	8	26,454	6	20,507	6	12,940	6	12,485	10	68.9	6	71.8	6	58.8	6	61.6	5
Iraq	809	4	783	7	24,631	5	22,488	7	12,166	3	11,933	4	69.9	5	70.9	7	59.8	5	60.8	8
Federated States of Micronesia	1,476	14	1,258	14	42,732	13	31,526	13	13,632	10	12,681	11	61.1	13	65.6	13	52.3	13	56.7	12

COUNTRY BENCHMARKING OF BURDEN OF DISEASE, CONTINUED

This figure shows the rank of Sri Lanka relative to the same comparator countries for the leading causes of DALYs in 1990 (top) and 2010 (bottom).

- The columns are ordered by the absolute number of DALYs in Sri Lanka for that particular year, with greatest burden on the left.
- The numbers indicate the rank across countries for each cause in terms of age-standardized DALY rates, with 1 as the best performance and 15 as the worst.

Ranking of leading age-standardized rates of disability-adjusted life years (DALYs) relative to comparator countries in 1990																									
Country	Ischemic heart disease	Self-harm	Stroke	Major depressive disorder	Interpersonal violence	War & legal intervention	Iron-deficiency anemia	Lower respiratory infections	Diarrheal diseases	Low back pain	Preterm birth complications	COPD	Neonatal encephalopathy	Road injury	Asthma	Diabetes	Chronic kidney disease	Protein-energy malnutrition	Other cardio & circulatory	Meningitis	Neck pain	Tuberculosis	Falls	Anxiety disorders	Migraine
Angola	6	10	10	11	6	14	14	15	15	8	10	14	4	15	12	6	5	15	7	15	14	15	11	12	5
Swaziland	3	5	9	6	14	1	9	11	12	2	6	13	8	1	14	11	7	4	14	7	15	13	1	1	4
Fiji	13	11	15	3	5	1	1	7	3	10	9	8	3	5	13	14	15	6	5	11	7	8	14	3	7
Georgia	14	7	11	5	7	1	3	9	2	1	3	2	15	12	1	1	1	1	1	5	13	4	10	9	14
Syria	15	1	8	14	3	1	6	2	1	13	2	7	2	3	6	3	8	5	13	2	2	2	8	11	1
Bhutan	2	12	1	4	4	1	10	14	13	15	15	15	14	10	11	5	9	14	2	10	3	12	12	10	15
Paraguay	4	6	4	12	11	1	2	4	6	11	7	1	5	8	2	7	4	2	3	4	12	1	3	13	13
Sri Lanka	9	15	2	9	13	15	11	1	4	3	1	6	1	2	7	2	11	8	8	6	5	6	5	5	11
Guyana	12	14	14	10	12	1	15	6	9	4	14	3	11	4	9	12	6	7	11	3	10	5	13	14	10
Bolivia	5	9	5	7	9	1	13	13	14	6	12	10	12	14	4	8	12	11	6	9	11	11	9	8	9
Morocco	7	2	6	13	2	1	7	8	7	14	13	4	13	6	8	13	2	12	15	12	1	9	6	15	2
Indonesia	1	4	12	8	1	1	12	12	10	7	5	9	10	13	3	9	10	10	10	13	6	14	4	6	12
Honduras	10	8	3	15	15	1	8	3	11	5	11	11	9	9	10	4	3	9	4	1	9	7	2	7	8
Iraq	11	3	7	1	8	13	5	5	5	12	4	5	6	7	5	10	13	3	12	8	4	3	7	2	3
Federated States of Micronesia	8	13	13	2	10	1	4	10	8	9	8	12	7	11	15	15	14	13	9	14	8	10	15	4	6
Ranking of leading age-standardized rates of disability-adjusted life years (DALYs) relative to comparator countries in 2010																									
Country	Ischemic heart disease	Self-harm	Diabetes	Stroke	COPD	Major depressive disorder	Low back pain	Iron-deficiency anemia	Lower respiratory infections	Road injury	Asthma	Falls	Cirrhosis	Chronic kidney disease	Neck pain	Interpersonal violence	Other musculoskeletal	Migraine	Anxiety disorders	Epilepsy	Preterm birth complications	Congenital anomalies	Typhoid fevers	Other hearing loss	Diarrheal diseases
Angola	7	9	4	8	13	9	8	13	14	15	10	13	11	3	15	7	10	4	14	14	10	13	11	1	14
Swaziland	5	11	11	12	14	10	2	7	15	11	15	2	15	13	14	15	12	5	2	15	9	10	13	12	15
Fiji	15	10	15	9	7	1	11	1	9	2	13	9	4	11	7	6	14	6	6	10	11	8	2	2	6
Georgia	14	5	1	11	8	7	1	8	3	6	1	10	8	1	13	5	8	13	11	3	4	5	1	11	1
Syria	13	1	2	5	4	14	13	5	1	2	5	1	5	3	2	5	3	9	1	3	9	8	5	2	2
Bhutan	2	12	5	1	15	2	15	6	12	7	7	14	9	6	4	4	1	15	5	6	15	11	14	8	9
Paraguay	6	6	8	7	3	12	9	4	5	10	3	3	3	9	12	12	11	14	8	7	5	7	6	14	5
Sri Lanka	8	14	7	2	10	6	3	11	2	3	11	11	6	7	5	10	2	11	7	9	1	3	12	6	3
Guyana	12	15	13	14	1	11	4	15	8	12	9	15	14	8	10	13	7	10	13	8	13	12	4	3	10
Bolivia	3	7	6	3	6	3	5	14	13	13	4	4	10	12	11	8	9	8	10	11	12	14	7	13	13
Morocco	4	3	12	6	2	13	14	9	7	4	8	6	5	2	1	3	6	2	15	4	14	6	10	7	4
Indonesia	1	4	9	15	11	8	7	12	6	14	5	7	12	10	6	1	3	12	4	5	8	4	15	10	12
Honduras	10	8	3	4	9	15	6	2	4	9	12	1	7	4	9	14	13	9	12	13	7	1	5	15	11
Iraq	11	2	10	10	5	5	12	10	10	5	6	8	2	14	2	11	4	1	1	2	6	15	9	9	7
Federated States of Micronesia	9	13	14	13	12	4	10	3	11	8	14	12	13	15	8	9	15	7	3	12	2	2	3	4	8
Ranking Legend	1 - 3			4 - 7			8 - 11			12 - 15															