

GBD PROFILE: GEORGIA

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.

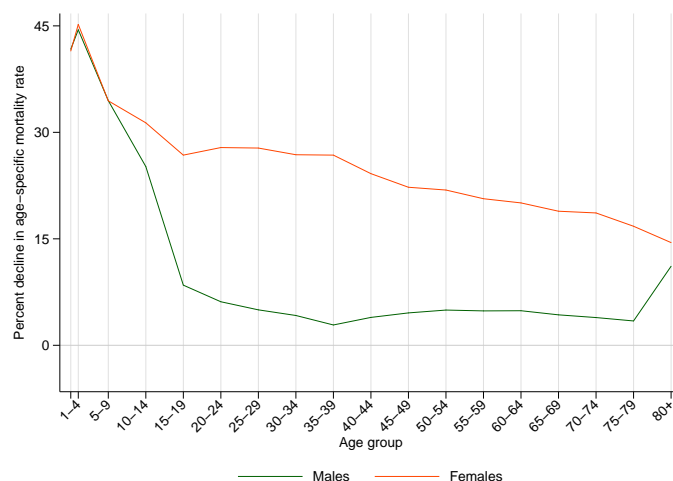
PROFILE OVERVIEW

- In terms of the number of years of life lost (YLLs) due to premature death in Georgia, ischemic heart disease, cerebrovascular disease, and other cardiovascular and circulatory diseases were the highest ranking causes in 2010.
- Of the 25 most important causes of burden, as measured by disability-adjusted life years (DALYs), lower respiratory infections showed the largest decrease, falling by 83% from 1990 to 2010.
- The leading risk factor in Georgia is dietary risks.

ALL-CAUSE MORTALITY RATE

- This chart shows the decline in mortality rate at every age range. The higher points on the chart indicate that declines in mortality rates were faster in those age groups between 1990 and 2010.
- The greatest reductions in all-cause mortality rate were experienced by females aged 1-4 years (45%). Males aged 35-39 years saw the smallest decrease in mortality rate (3%).

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



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, Georgia

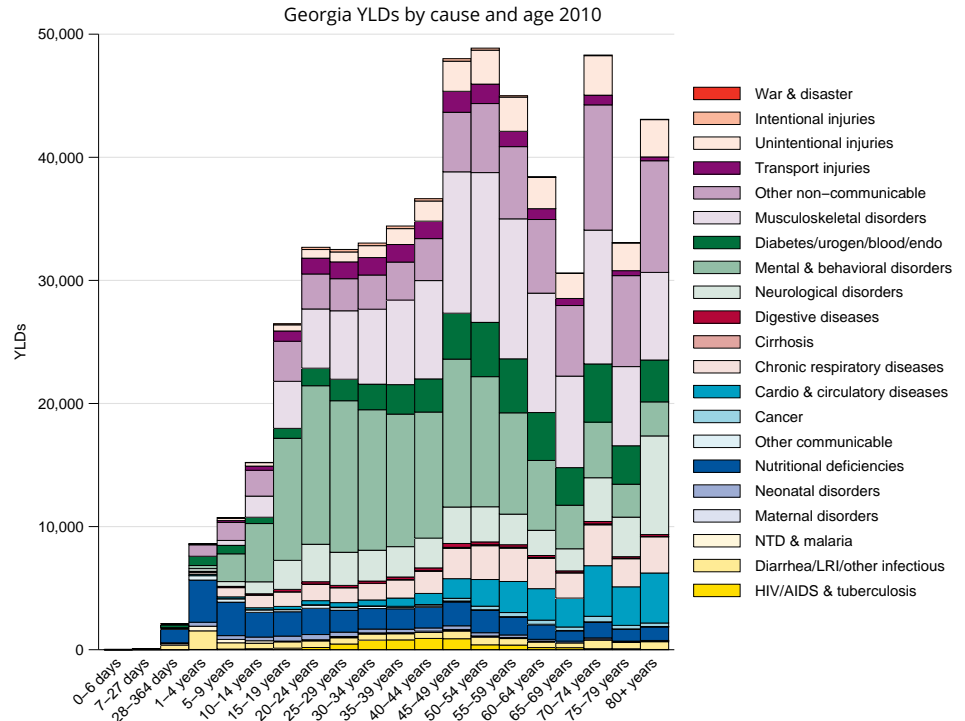
# YLLs in thousands (% of total)	Rank and disorder 1990	Rank and disorder 2010	# YLLs in thousands (% of total)	% change
336 (24.4%)	1 Ischemic heart disease	1 Ischemic heart disease	281 (27.4%)	-17
186 (13.5%)	2 Stroke	2 Stroke	174 (17.0%)	-4
140 (10.2%)	3 Lower respiratory infections	3 Other cardio & circulatory	41 (4.0%)	633
75 (5.4%)	4 Neonatal encephalopathy	4 Neonatal encephalopathy	39 (3.8%)	-49
57 (4.1%)	5 Road injury	5 Cirrhosis	30 (2.9%)	-15
36 (2.6%)	6 Cirrhosis	6 Rheumatic heart disease	27 (2.6%)	189
33 (2.4%)	7 Lung cancer	7 COPD	26 (2.6%)	63
34 (2.5%)	8 Preterm birth complications	8 Lower respiratory infections	26 (2.6%)	-84
22 (1.6%)	9 Congenital anomalies	9 Hypertensive heart disease	25 (2.5%)	60
21 (1.5%)	10 Stomach cancer	10 Lung cancer	24 (2.3%)	-30
21 (1.5%)	11 Breast cancer	11 Road injury	23 (2.2%)	-68
21 (1.5%)	12 Mechanical forces	12 Diabetes	14 (1.4%)	5
19 (1.4%)	13 Diarrheal diseases	13 Breast cancer	13 (1.3%)	-36
17 (1.2%)	14 Hypertensive heart disease	14 Preterm birth complications	13 (1.3%)	-60
16 (1.2%)	15 Meningitis	15 Colorectal cancer	12 (1.1%)	-3
15 (1.1%)	16 Tuberculosis	16 Congenital anomalies	12 (1.1%)	-48
15 (1.1%)	17 COPD	17 Stomach cancer	11 (1.0%)	-49
14 (1.0%)	18 Drowning	18 Self-harm	10 (0.9%)	-23
14 (1.0%)	19 Diabetes	19 Interpersonal violence	9 (0.9%)	-33
13 (1.0%)	20 Interpersonal violence	20 Fire	9 (0.9%)	-26
13 (0.9%)	21 Self-harm	21 Liver cancer	9 (0.9%)	-14
12 (0.9%)	22 Fire	22 Tuberculosis	9 (0.9%)	-42
12 (0.9%)	23 Colorectal cancer	23 Mechanical forces	9 (0.8%)	-61
12 (0.9%)	24 Leukemia	24 Cardiomyopathy	8 (0.8%)	68
10 (0.7%)	25 Liver cancer	25 Drowning	8 (0.8%)	-46
	26 Rheumatic heart disease	26 Leukemia		
	34 Other cardio & circulatory	31 Meningitis		
	36 Cardiomyopathy	47 Diarrheal diseases		

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 Georgia are major depressive disorder, low back pain, iron-deficiency anemia, neck pain, and other musculoskeletal disorders.

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.

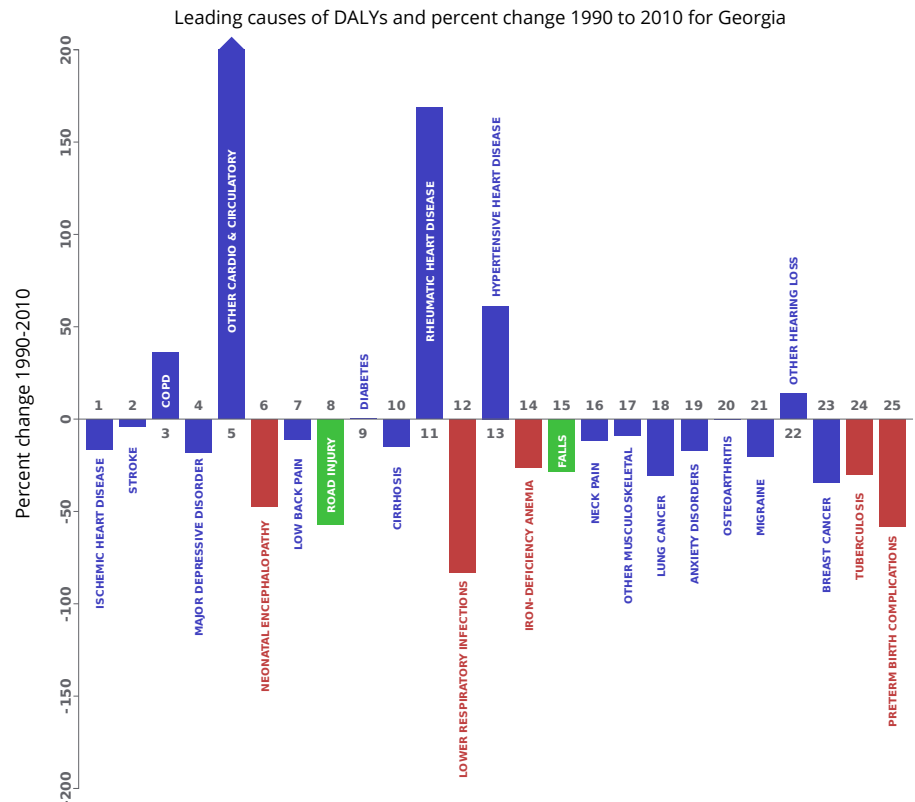


DISABILITY-ADJUSTED LIFE YEARS (DALYs)

Disability-adjusted life years (DALYs) quantify both premature mortality (YLLs) and disability (YLDs) within a population. In Georgia, the top three causes of DALYs in 2010 were ischemic heart disease, cerebrovascular disease, and chronic obstructive pulmonary disease. Two causes that appeared in the 10 leading causes of DALYs in 2010 and not 1990 were other cardiovascular and circulatory diseases and diabetes mellitus.

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

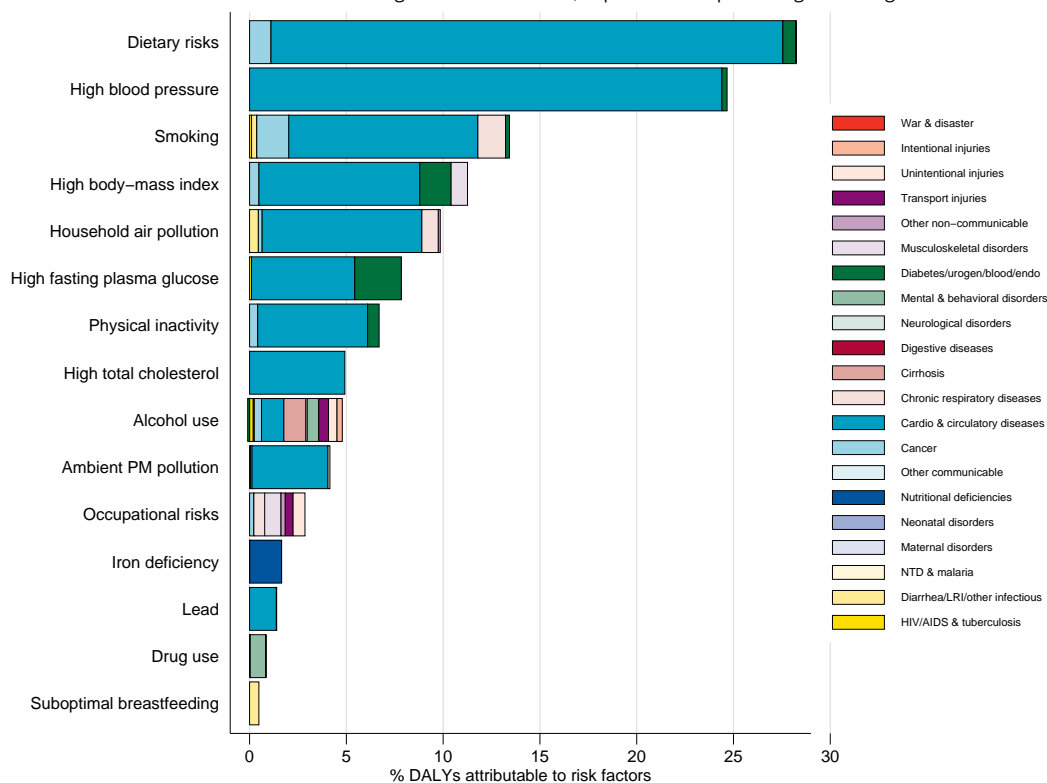


RISK FACTORS

Overall, the three risk factors that account for the most disease burden in Georgia are dietary risks, high blood pressure, and tobacco smoking. The leading risk factors for children under 5 and adults aged 15-49 years were suboptimal breastfeeding and dietary risks, respectively, in 2010.

The graph shows the top 15 risk factors for Georgia. 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.

Burden of disease attributable to 15 leading risk factors in 2010, expressed as a percentage of Georgia DALYs



COUNTRY BENCHMARKING OF BURDEN OF DISEASE

Understanding the relative performance of Georgia against other comparator countries provides key insight into public health successes and areas where Georgia might be falling behind. The table identifies Georgia'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, Georgia ranked 1st for age-standardized YLD rate and 8th for life expectancy.

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
Armenia	809	5	674	5	24,125	5	17,197	5	11,778	2	11,588	4	70.3	5	73.9	5	60.6	5	63.7	5
Jordan	792	3	619	3	21,127	3	14,448	3	12,452	5	12,527	10	71.5	3	75.4	4	60.9	3	64	4
Vanuatu	1,507	14	1,291	14	41,590	13	34,595	13	13,346	10	12,657	11	61.6	13	64.3	13	53	13	55.7	12
Maldives	997	8	440	1	34,466	9	11,060	1	13,138	7	11,281	2	65.1	9	78.8	1	55.7	9	68	1
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	8	58	11
Georgia	825	6	716	7	24,291	6	19,529	7	11,437	1	11,256	1	70.1	6	72.6	8	60.8	4	63	6
Syria	797	4	513	2	21,457	4	12,094	2	13,133	6	12,031	7	71.4	4	77.6	2	60.3	6	66	2
Bhutan	1,284	13	822	10	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	8	18,868	1	18,059	6	12,337	4	12,006	5	73.2	1	73.2	6	62.4	1	62.8	7
Sri Lanka	712	2	620	4	20,846	2	14,898	4	12,231	3	11,452	3	72.3	2	75.5	3	62.1	2	65.3	3
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	9	41,077	12	23,965	9	13,140	8	12,020	6	62.2	12	70.7	9	53.2	11	60.8	9
Morocco	912	7	696	6	29,826	7	19,672	8	14,217	14	13,384	12	67.4	7	72.7	7	56.3	7	61.1	8

COUNTRY BENCHMARKING OF BURDEN OF DISEASE, CONTINUED

This figure shows the rank of Georgia 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 Georgia 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	Stroke	Lower respiratory infections	Neonatal encephalopathy	Road injury	Major depressive disorder	Low back pain	Cirrhosis	COPD	Iron-deficiency anemia	Diabetes	Falls	Preterm birth complications	Lung cancer	Neck pain	Other musculoskeletal	Diarrheal diseases	Congenital anomalies	Anxiety disorders	Mechanical forces	Migraine	Breast cancer	Stomach cancer	Osteoarthritis	Tuberculosis
Armenia	12	4	6	12	12	3	9	6	8	2	8	8	5	15	12	11	7	10	8	11	12	13	13	9	2
Jordan	10	8	2	1	11	12	13	5	9	3	10	6	9	12	1	5	1	13	6	6	2	12	4	13	1
Vanuatu	9	13	11	2	10	1	10	15	13	6	13	15	4	10	8	14	10	2	3	7	6	11	14	14	11
Maldives	1	3	10	13	8	13	5	1	11	12	5	5	6	2	5	15	6	15	5	3	11	1	3	1	9
Angola	6	11	15	6	15	10	7	13	14	14	6	11	11	6	14	10	15	12	12	15	5	4	7	5	15
Swaziland	3	10	12	8	1	6	2	9	12	9	11	1	7	11	15	12	12	6	1	13	4	6	6	4	14
Fiji	13	15	7	5	5	2	8	7	7	1	15	14	10	9	7	13	4	3	2	10	7	15	12	15	8
Georgia	14	12	9	15	13	5	1	10	2	5	1	10	3	14	13	8	3	4	9	8	14	14	11	10	5
Syria	15	9	3	4	3	15	12	4	6	7	3	7	2	3	3	3	2	14	11	1	1	2	1	12	4
Bhutan	2	1	14	14	9	4	15	11	15	10	4	12	15	5	4	2	13	11	10	14	15	5	5	3	13
Paraguay	4	5	4	7	7	11	11	2	1	4	7	2	8	7	11	7	8	5	13	5	13	9	8	8	3
Sri Lanka	8	2	1	3	2	8	3	3	5	11	2	3	1	1	6	1	5	1	4	4	10	3	2	2	7
Guyana	11	14	5	9	4	9	4	14	3	15	12	13	14	4	9	6	11	7	14	9	9	10	9	6	6
Bolivia	5	6	13	10	14	7	6	12	10	13	9	9	12	8	10	9	14	9	7	12	8	7	15	7	12
Morocco	7	7	8	11	6	14	14	8	4	8	14	4	13	13	2	4	9	8	15	2	3	8	10	11	10
Ranking of leading age-standardized rates of disability-adjusted life years (DALYs) relative to comparator countries in 2010																									
Country	Ischemic heart disease	Stroke	COPD	Major depressive disorder	Other cardio & circulatory	Neonatal encephalopathy	Low back pain	Road injury	Diabetes	Cirrhosis	Rheumatic heart disease	Lower respiratory infections	Hypertensive heart disease	Iron-deficiency anemia	Falls	Neck pain	Other musculoskeletal	Lung cancer	Anxiety disorders	Osteoarthritis	Migraine	Other hearing loss	Breast cancer	Tuberculosis	Preterm birth complications
Armenia	12	6	9	8	1	8	7	9	8	8	7	4	6	2	6	13	12	15	11	10	14	10	14	4	2
Jordan	8	5	5	15	6	1	13	8	10	3	1	3	13	4	10	1	5	10	13	11	1	5	13	1	6
Vanuatu	10	15	12	4	10	6	11	10	14	13	14	12	5	3	12	7	15	9	3	14	7	2	12	13	8
Maldives	1	1	7	9	9	9	5	1	1	1	3	2	1	12	3	6	6	2	1	1	11	6	1	3	4
Angola	7	10	13	7	8	7	8	15	4	12	11	14	10	13	13	15	10	7	14	6	4	1	5	14	10
Swaziland	5	13	14	10	15	10	2	12	11	15	12	15	15	8	1	14	13	12	2	4	5	13	8	15	9
Fiji	15	11	8	1	7	5	10	3	15	5	13	10	2	1	8	8	14	6	5	15	6	3	15	6	11
Georgia	14	12	10	6	14	15	1	6	2	9	15	6	11	9	9	12	8	13	10	8	12	12	9	8	5
Syria	13	7	4	14	12	3	12	2	3	2	4	1	4	6	5	3	3	1	8	12	3	7	2	2	3
Bhutan	2	2	15	2	2	14	15	7	5	10	10	11	8	7	14	4	1	5	4	3	15	11	4	12	15
Paraguay	6	9	3	12	3	4	9	11	9	4	2	7	9	5	2	11	11	11	7	7	13	15	10	7	7
Sri Lanka	9	3	11	5	4	2	3	4	7	7	5	5	3	11	11	5	2	3	6	2	10	8	3	5	1
Guyana	11	14	1	11	11	4	13	13	14	6	9	9	14	15	15	9	7	4	12	5	9	4	7	9	13
Bolivia	3	4	6	3	5	13	6	14	6	11	8	13	7	14	4	10	9	8	9	9	8	14	6	11	12
Morocco	4	8	2	13	13	12	14	5	12	6	9	8	12	10	7	2	4	14	15	13	2	9	11	10	14
Ranking Legend	1 - 3			4 - 7				8 - 11				12 - 15													