

GBD PROFILE: SYRIA

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.

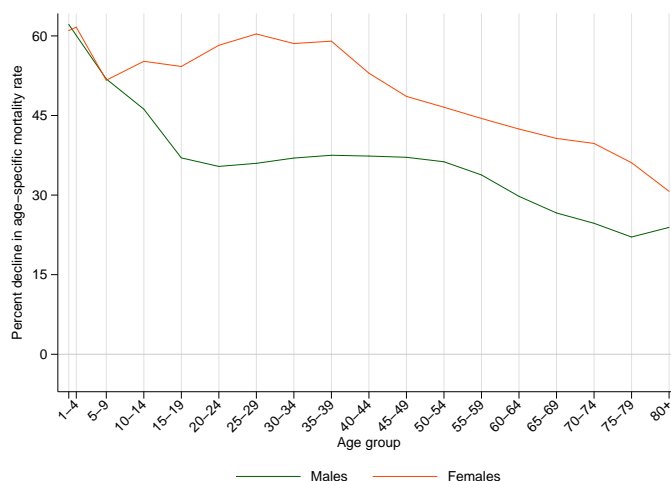
PROFILE OVERVIEW

- In terms of the number of years of life lost (YLLs) due to premature death in Syria, ischemic heart disease, cerebrovascular disease, and congenital anomalies 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 64% from 1990 to 2010.
- The leading risk factor in Syria 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 males aged <1 year (62%). Males aged 75-79 years saw the smallest decrease in mortality rate (22%).

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



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, Syria

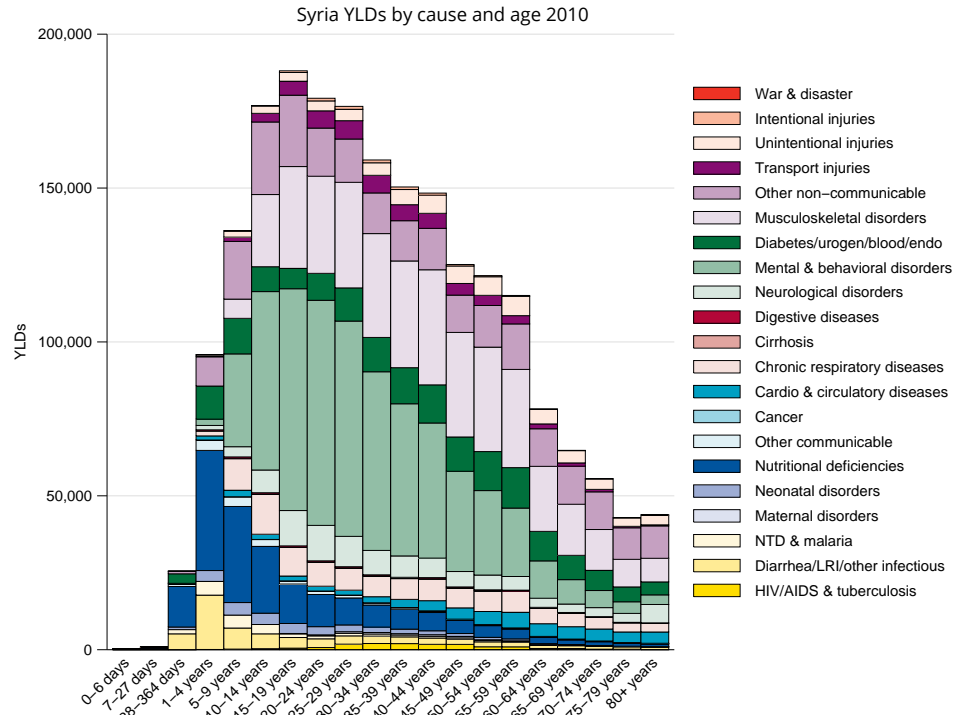
# YLLs in thousands (% of total)	Rank and disorder 1990	Rank and disorder 2010	# YLLs in thousands (% of total)	% change
392 (15.6%)	1 Ischemic heart disease	1 Ischemic heart disease	478 (25.0%)	22
347 (13.8%)	2 Congenital anomalies	2 Stroke	207 (10.8%)	23
185 (7.4%)	3 Lower respiratory infections	3 Congenital anomalies	152 (7.9%)	-57
170 (6.8%)	4 Stroke	4 Preterm birth complications	101 (5.3%)	-41
166 (6.6%)	5 Preterm birth complications	5 Lower respiratory infections	63 (3.3%)	-66
103 (4.1%)	6 Neonatal encephalopathy	6 Neonatal encephalopathy	66 (3.5%)	-38
56 (2.2%)	7 Diarrheal diseases	7 Other cardio & circulatory	59 (3.1%)	13
52 (2.1%)	8 Other cardio & circulatory	8 Road injury	57 (3.0%)	19
46 (1.8%)	9 Road injury	9 Chronic kidney disease	37 (1.9%)	65
43 (1.7%)	10 Protein-energy malnutrition	10 COPD	28 (1.4%)	-33
41 (1.6%)	11 COPD	11 Cardiomyopathy	28 (1.5%)	12
34 (1.4%)	12 Meningitis	12 Hypertensive heart disease	24 (1.3%)	41
34 (1.4%)	13 Asthma	13 Neonatal sepsis	26 (1.4%)	-15
31 (1.2%)	14 Neonatal sepsis	14 Diabetes	22 (1.1%)	49
26 (1.0%)	15 Rheumatic heart disease	15 Asthma	21 (1.1%)	-40
25 (1.0%)	16 Cardiomyopathy	16 Cirrhosis	17 (0.9%)	-19
25 (1.0%)	17 Syphilis	17 Rheumatic heart disease	15 (0.8%)	-43
22 (0.9%)	18 Chronic kidney disease	18 Typhoid fevers	19 (1.0%)	27
21 (0.8%)	19 Cirrhosis	19 Leishmaniasis	16 (0.8%)	6
20 (0.8%)	20 Falls	20 Meningitis	14 (0.7%)	-58
18 (0.7%)	21 Maternal disorders	21 Brain cancer	14 (0.8%)	44
17 (0.7%)	22 Hypertensive heart disease	22 Protein-energy malnutrition	14 (0.7%)	-68
19 (0.8%)	23 Measles	23 Interpersonal violence	14 (0.7%)	46
17 (0.7%)	24 Fire	24 Falls	14 (0.7%)	-34
15 (0.6%)	25 Mechanical forces	25 Drowning	12 (0.6%)	-18
	26 Diabetes	26 Fire		
	27 Drowning	31 Diarrheal diseases		
	29 Leishmaniasis	34 Syphilis		
	30 Typhoid fevers	41 Mechanical forces		
	32 Brain cancer	62 Maternal disorders		
	35 Interpersonal violence	77 Measles		

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 Syria are major depressive disorder, low back pain, iron-deficiency anemia, anxiety disorders, and neck pain.

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.

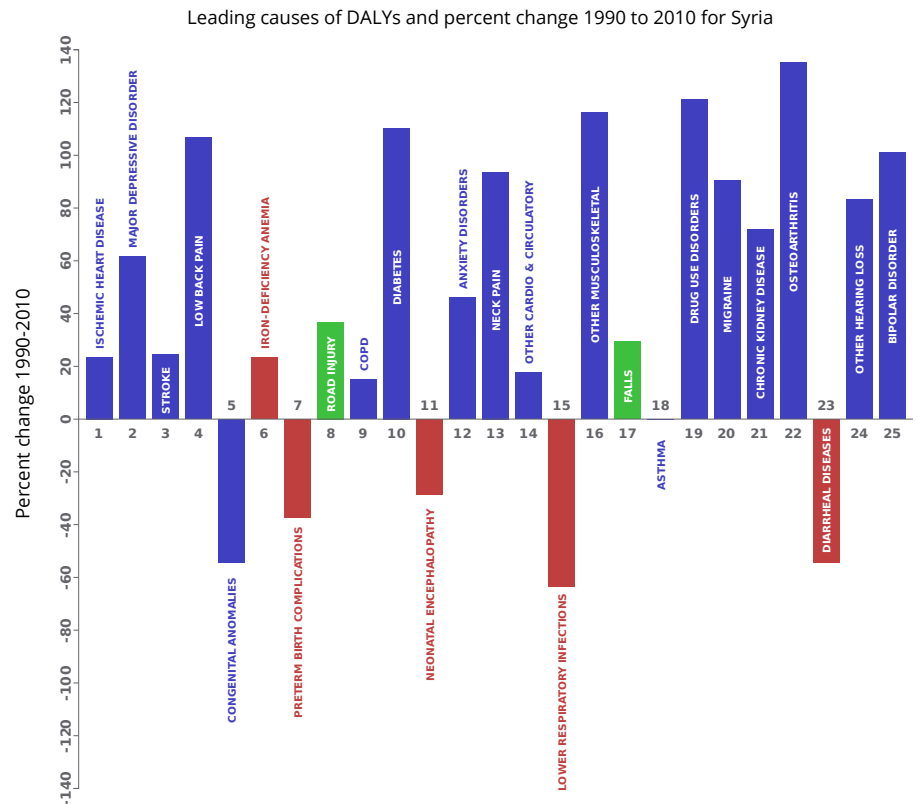


DISABILITY-ADJUSTED LIFE YEARS (DALYs)

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

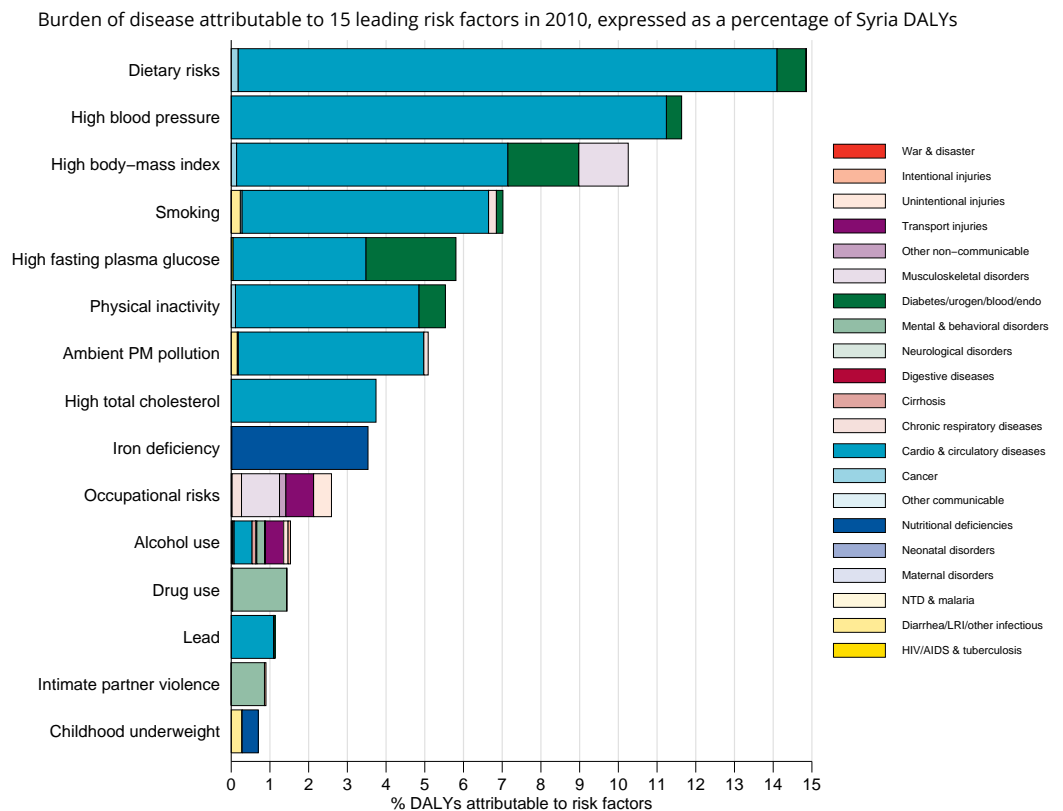
- Communicable, maternal, neonatal, and nutritional
- Non-communicable
- Injuries



RISK FACTORS

Overall, the three risk factors that account for the most disease burden in Syria are dietary risks, high blood pressure, and high body-mass index. 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 Syria. 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 Syria against other comparator countries provides key insight into public health successes and areas where Syria might be falling behind. The table identifies Syria'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, Syria ranked 2nd for life expectancy and 7th 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
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	7	440	1	34,466	8	11,060	1	13,138	7	11,281	3	65.1	8	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	7	28,494	11	13,180	9	12,351	9	65.4	7	67.2	11	56	8	58	11
Georgia	825	5	716	6	24,291	5	19,529	6	11,437	1	11,256	2	70.1	5	72.6	7	60.8	4	63	5
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	5	66	2
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	7	18,868	1	18,059	5	12,337	4	12,006	5	73.2	1	73.2	5	62.4	1	62.8	6
Sri Lanka	712	2	620	4	20,846	2	14,898	4	12,231	3	11,452	4	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	8	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	6	696	5	29,826	6	19,672	7	14,217	14	13,384	12	67.4	6	72.7	6	56.3	6	61.1	7
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	7	60.9	8

COUNTRY BENCHMARKING OF BURDEN OF DISEASE, CONTINUED

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