

GBD PROFILE: EGYPT

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.

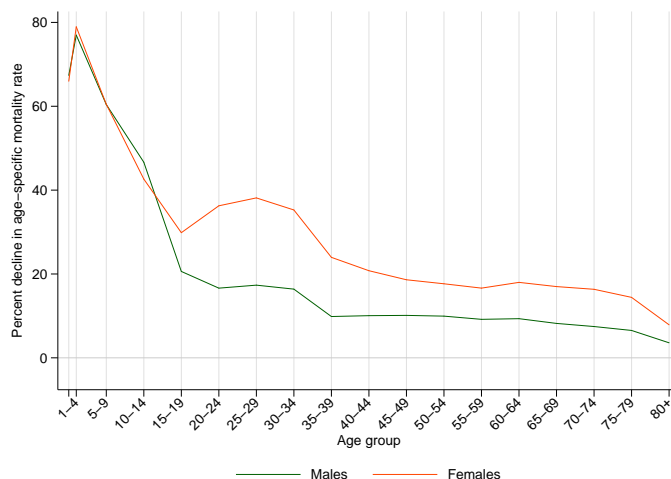
PROFILE OVERVIEW

- In terms of the number of years of life lost (YLLs) due to premature death in Egypt, ischemic heart disease, cerebrovascular disease, and cirrhosis of the liver were the highest ranking causes in 2010.
- Of the 25 most important causes of burden, as measured by disability-adjusted life years (DALYs), diarrheal diseases showed the largest decrease, falling by 85% from 1990 to 2010.
- The leading risk factor in Egypt 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 (79%). Males aged 80+ years saw the smallest decrease in mortality rate (4%).

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



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, Egypt

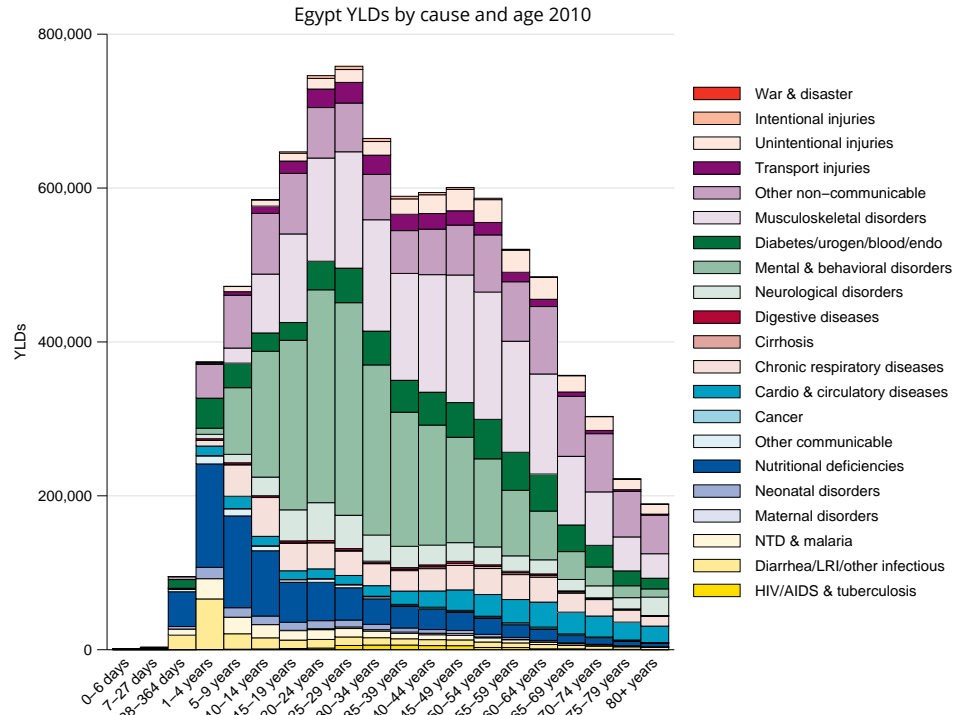
| # YLLs in thousands (% of total) | Rank and disorder 1990 | Rank and disorder 2010 | # YLLs in thousands (% of total) | % change |
|-------------------------------------|--------------------------------|--------------------------------|-------------------------------------|----------|
| 3,951 (18.5%) | 1 Diarrheal diseases | 1 Ischemic heart disease | 2,167 (13.7%) | 112 |
| 3,879 (18.2%) | 2 Lower respiratory infections | 2 Stroke | 1,662 (10.5%) | 105 |
| 1,128 (5.3%) | 3 Preterm birth complications | 3 Cirrhosis | 1,127 (7.1%) | 40 |
| 1,144 (5.3%) | 4 Congenital anomalies | 4 Lower respiratory infections | 1,093 (6.9%) | -72 |
| 1,050 (4.9%) | 5 Ischemic heart disease | 5 Congenital anomalies | 776 (4.9%) | -24 |
| 1,001 (4.7%) | 6 Stroke | 6 Preterm birth complications | 679 (4.3%) | -41 |
| 832 (3.9%) | 7 Cirrhosis | 7 Cardiomyopathy | 638 (4.0%) | 21 |
| 570 (2.7%) | 8 COPD | 8 Road injury | 608 (3.9%) | 62 |
| 555 (2.6%) | 9 Other cardio & circulatory | 9 Diarrheal diseases | 477 (3.0%) | -88 |
| 534 (2.5%) | 10 Cardiomyopathy | 10 Other cardio & circulatory | 442 (2.8%) | -20 |
| 424 (2.0%) | 11 Chronic kidney disease | 11 Hypertensive heart disease | 427 (2.7%) | 85 |
| 414 (1.9%) | 12 Road injury | 12 Chronic kidney disease | 419 (2.7%) | -8 |
| 395 (1.9%) | 13 Rheumatic heart disease | 13 COPD | 320 (2.0%) | -44 |
| 356 (1.7%) | 14 Protein-energy malnutrition | 14 Rheumatic heart disease | 282 (1.8%) | -28 |
| 238 (1.1%) | 15 Hypertensive heart disease | 15 Liver cancer | 260 (1.6%) | 361 |
| 232 (1.1%) | 16 Leishmaniasis | 16 Drowning | 169 (1.1%) | 22 |
| 209 (1.0%) | 17 Maternal disorders | 17 Protein-energy malnutrition | 160 (1.0%) | -50 |
| 203 (1.0%) | 18 Neonatal encephalopathy | 18 Leukemia | 154 (1.0%) | 59 |
| 197 (0.9%) | 19 Pneumoconiosis | 19 Diabetes | 147 (0.9%) | -19 |
| 171 (0.8%) | 20 Diabetes | 20 Brain cancer | 137 (0.9%) | 182 |
| 172 (0.8%) | 21 Meningitis | 21 Breast cancer | 129 (0.8%) | 164 |
| 161 (0.7%) | 22 Drowning | 22 Acute hepatitis A | 125 (0.8%) | 1,743 |
| 152 (0.7%) | 23 Neonatal sepsis | 23 Leishmaniasis | 124 (0.8%) | -47 |
| 129 (0.6%) | 24 Intestinal obstructions | 24 Lung cancer | 119 (0.8%) | 159 |
| 96 (0.4%) | 25 Leukemia | 25 Acute hepatitis B | 106 (0.7%) | 3,930 |
| | 34 Liver cancer | 26 Neonatal sepsis | | |
| | 35 Brain cancer | 28 Neonatal encephalopathy | | |
| | 36 Lung cancer | 31 Pneumoconiosis | | |
| | 37 Breast cancer | 33 Meningitis | | |
| | 68 Acute hepatitis A | 34 Maternal disorders | | |
| | 93 Acute hepatitis B | 49 Intestinal obstructions | | |

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 Egypt are low back pain, major depressive disorder, 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.

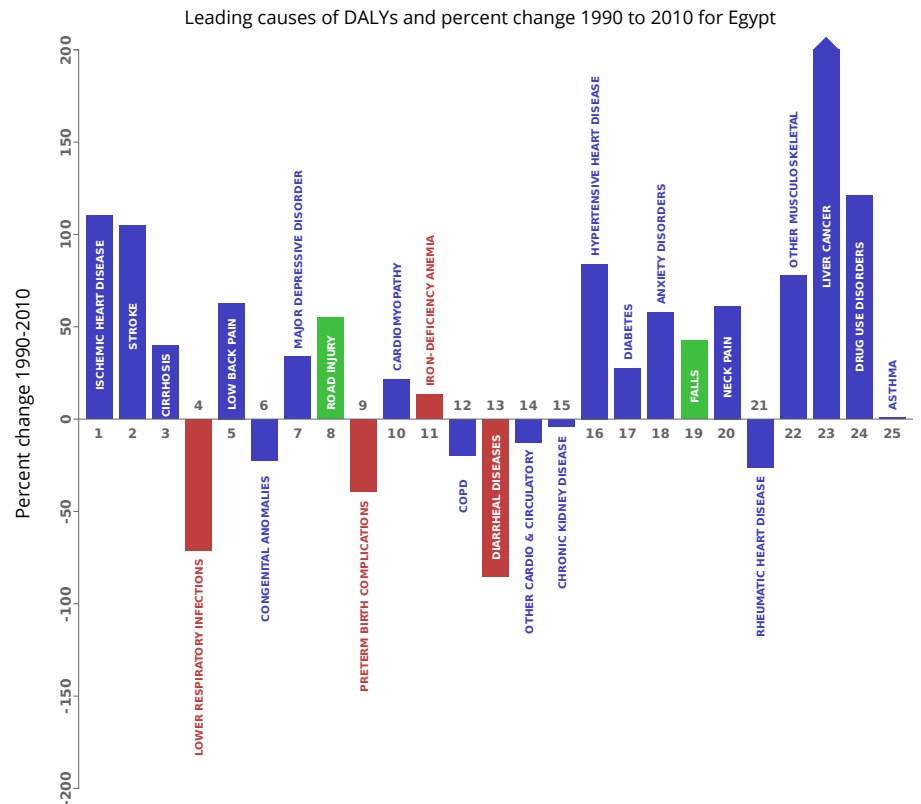


DISABILITY-ADJUSTED LIFE YEARS (DALYs)

Disability-adjusted life years (DALYs) quantify both premature mortality (YLLs) and disability (YLDs) within a population. In Egypt, the top three causes of DALYs in 2010 were ischemic heart disease, cerebrovascular disease, and cirrhosis of the liver. The causes that were in the 10 leading causes of DALYs in 2010 and not 1990 were low back pain, road injury, and cardiomyopathy and myocarditis.

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.

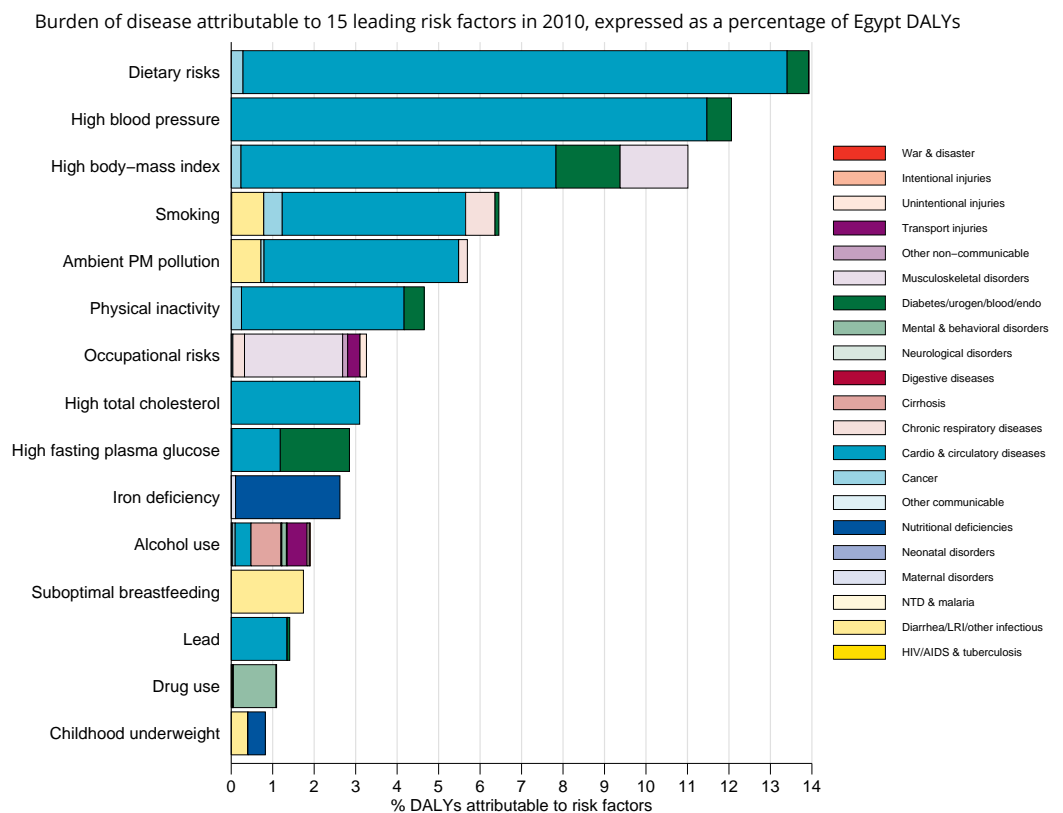
- Communicable, maternal, neonatal, and nutritional
- Non-communicable
- Injuries



RISK FACTORS

Overall, the three risk factors that account for the most disease burden in Egypt 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 suboptimal breastfeeding and occupational risks, respectively, in 2010.

The graph shows the top 15 risk factors for Egypt. 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 Egypt against other comparator countries provides key insight into public health successes and areas where Egypt might be falling behind. The table identifies Egypt'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, Egypt ranked 6th for life expectancy and 10th for health-adjusted 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 |
| Ukraine | 913 | 4 | 917 | 9 | 22,976 | 3 | 23,559 | 8 | 11,316 | 2 | 11,159 | 2 | 70 | 4 | 69.7 | 9 | 60.9 | 3 | 60.8 | 8 |
| Marshall Islands | 1,270 | 13 | 1,309 | 14 | 36,253 | 10 | 36,337 | 12 | 14,368 | 14 | 13,968 | 14 | 63.9 | 10 | 63.9 | 12 | 54 | 10 | 54.4 | 12 |
| Tonga | 914 | 5 | 882 | 8 | 22,822 | 2 | 22,195 | 7 | 12,546 | 7 | 11,940 | 8 | 70 | 3 | 70.4 | 8 | 60.1 | 5 | 61 | 7 |
| Turkmenistan | 1,144 | 10 | 919 | 10 | 39,780 | 12 | 24,522 | 10 | 11,911 | 4 | 11,933 | 7 | 62.8 | 11 | 69.3 | 10 | 54.4 | 9 | 60 | 9 |
| China | 896 | 3 | 607 | 2 | 24,989 | 5 | 14,024 | 2 | 9,639 | 1 | 8,782 | 1 | 69.3 | 5 | 75.7 | 2 | 61.7 | 1 | 67.8 | 2 |
| Namibia | 1,259 | 12 | 1,298 | 13 | 39,681 | 11 | 42,112 | 13 | 13,774 | 12 | 13,809 | 13 | 62.4 | 12 | 61.6 | 13 | 53.2 | 12 | 52.5 | 13 |
| Samoa | 1,088 | 9 | 863 | 7 | 28,245 | 6 | 21,441 | 5 | 12,397 | 5 | 11,587 | 4 | 67.2 | 6 | 70.8 | 5 | 58 | 6 | 61.5 | 5 |
| Egypt | 1,065 | 8 | 844 | 6 | 35,058 | 8 | 22,148 | 6 | 12,868 | 9 | 11,979 | 9 | 64.6 | 8 | 70.6 | 6 | 53.6 | 11 | 59.1 | 10 |
| Guatemala | 1,061 | 7 | 787 | 5 | 36,242 | 9 | 24,337 | 9 | 12,800 | 8 | 11,705 | 6 | 64.5 | 9 | 70.5 | 7 | 55.3 | 8 | 61 | 6 |
| Armenia | 809 | 2 | 674 | 4 | 24,125 | 4 | 17,197 | 4 | 11,778 | 3 | 11,588 | 5 | 70.3 | 2 | 73.9 | 4 | 60.6 | 4 | 63.7 | 4 |
| Jordan | 792 | 1 | 619 | 3 | 21,127 | 1 | 14,448 | 3 | 12,452 | 6 | 12,527 | 10 | 71.5 | 1 | 75.4 | 3 | 60.9 | 2 | 64 | 3 |
| Vanuatu | 1,507 | 14 | 1,291 | 12 | 41,590 | 14 | 34,595 | 11 | 13,346 | 11 | 12,657 | 11 | 61.6 | 14 | 64.3 | 11 | 53 | 14 | 55.7 | 11 |
| Maldives | 997 | 6 | 440 | 1 | 34,466 | 7 | 11,060 | 1 | 13,138 | 10 | 11,281 | 3 | 65.1 | 7 | 78.8 | 1 | 55.7 | 7 | 68 | 1 |
| Angola | 1,995 | 15 | 1,257 | 11 | 82,686 | 15 | 44,380 | 14 | 15,039 | 15 | 13,712 | 12 | 47.4 | 15 | 60.7 | 14 | 40.2 | 15 | 51.7 | 14 |
| Swaziland | 1,239 | 11 | 2,186 | 15 | 39,973 | 13 | 80,065 | 15 | 13,819 | 13 | 15,781 | 15 | 62.3 | 13 | 49.4 | 15 | 53 | 13 | 41.8 | 15 |

COUNTRY BENCHMARKING OF BURDEN OF DISEASE, CONTINUED

This figure shows the rank of Egypt 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 Egypt 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 | Diarrheal diseases | Lower respiratory infections | Congenital anomalies | Preterm birth complications | Ischemic heart disease | Stroke | Cirrhosis | COPD | Other cardio & circulatory | Major depressive disorder | Low back pain | Iron-deficiency anemia | Road injury | Cardiomyopathy | Chronic kidney disease | Rheumatic heart disease | Protein-energy malnutrition | Diabetes | Neonatal encephalopathy | Hypertensive heart disease | Falls | Anxiety disorders | Maternal disorders | Leishmaniasis | Asthma |
| Ukraine | 1 | 1 | 10 | 1 | 14 | 8 | 5 | 5 | 1 | 5 | 15 | 4 | 13 | 11 | 1 | 7 | 1 | 1 | 5 | 1 | 5 | 2 | 1 | 1 | 4 |
| Marshall Islands | 8 | 8 | 3 | 9 | 9 | 12 | 10 | 9 | 11 | 9 | 6 | 3 | 9 | 10 | 14 | 9 | 11 | 15 | 8 | 6 | 14 | 13 | 7 | 1 | 14 |
| Tonga | 5 | 3 | 4 | 2 | 6 | 2 | 8 | 2 | 6 | 3 | 8 | 6 | 5 | 6 | 11 | 4 | 7 | 12 | 1 | 2 | 12 | 5 | 6 | 1 | 10 |
| Turkmenistan | 10 | 15 | 8 | 13 | 15 | 14 | 13 | 7 | 4 | 6 | 11 | 8 | 14 | 5 | 4 | 11 | 5 | 4 | 15 | 10 | 8 | 10 | 4 | 8 | 5 |
| China | 3 | 4 | 9 | 4 | 1 | 11 | 7 | 15 | 2 | 1 | 3 | 1 | 4 | 2 | 3 | 13 | 4 | 2 | 12 | 8 | 10 | 1 | 3 | 14 | 1 |
| Namibia | 13 | 9 | 7 | 11 | 5 | 10 | 2 | 13 | 13 | 12 | 2 | 12 | 3 | 14 | 6 | 5 | 8 | 10 | 11 | 15 | 2 | 12 | 14 | 11 | 9 |
| Samoa | 4 | 5 | 1 | 3 | 7 | 13 | 9 | 8 | 7 | 2 | 10 | 2 | 7 | 9 | 13 | 3 | 9 | 14 | 4 | 3 | 13 | 6 | 5 | 1 | 13 |
| Egypt | 12 | 12 | 12 | 14 | 11 | 9 | 15 | 10 | 14 | 10 | 14 | 11 | 8 | 15 | 15 | 15 | 10 | 7 | 2 | 13 | 7 | 9 | 9 | 15 | 6 |
| Guatemala | 14 | 13 | 5 | 15 | 3 | 1 | 12 | 1 | 5 | 13 | 12 | 14 | 2 | 3 | 9 | 2 | 14 | 3 | 6 | 4 | 4 | 14 | 10 | 13 | 3 |
| Armenia | 7 | 6 | 11 | 6 | 13 | 4 | 4 | 3 | 3 | 7 | 7 | 5 | 12 | 1 | 2 | 8 | 3 | 8 | 13 | 7 | 9 | 11 | 2 | 9 | 2 |
| Jordan | 2 | 2 | 14 | 10 | 12 | 5 | 3 | 4 | 9 | 14 | 13 | 7 | 11 | 4 | 12 | 1 | 2 | 9 | 3 | 12 | 6 | 8 | 8 | 10 | 7 |
| Vanuatu | 9 | 10 | 2 | 5 | 10 | 15 | 14 | 12 | 10 | 4 | 9 | 9 | 10 | 7 | 8 | 14 | 13 | 13 | 7 | 5 | 15 | 4 | 11 | 1 | 15 |
| Maldives | 6 | 7 | 15 | 7 | 2 | 3 | 1 | 6 | 15 | 15 | 4 | 13 | 6 | 8 | 10 | 12 | 12 | 5 | 14 | 9 | 3 | 7 | 13 | 1 | 8 |
| Angola | 15 | 14 | 13 | 12 | 8 | 7 | 11 | 14 | 8 | 11 | 5 | 15 | 15 | 12 | 5 | 10 | 15 | 6 | 9 | 11 | 11 | 15 | 15 | 12 | 11 |
| Swaziland | 11 | 11 | 6 | 8 | 4 | 6 | 6 | 11 | 12 | 8 | 1 | 10 | 1 | 13 | 7 | 6 | 6 | 11 | 10 | 14 | 1 | 3 | 12 | 1 | 12 |
| Ranking of leading age-standardized rates of disability-adjusted life years (DALYs) relative to comparator countries in 2010 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Country | Ischemic heart disease | Stroke | Cirrhosis | Lower respiratory infections | Low back pain | Congenital anomalies | Major depressive disorder | Road injury | Preterm birth complications | Cardiomyopathy | Iron-deficiency anemia | COPD | Diarrheal diseases | Other cardio & circulatory | Chronic kidney disease | Hypertensive heart disease | Diabetes | Anxiety disorders | Falls | Neck pain | Rheumatic heart disease | Other musculoskeletal | Liver cancer | Drug use disorders | Asthma |
| Ukraine | 14 | 9 | 11 | 4 | 15 | 12 | 2 | 10 | 2 | 11 | 4 | 3 | 3 | 1 | 1 | 4 | 2 | 3 | 13 | 11 | 6 | 8 | 1 | 10 | 4 |
| Marshall Islands | 10 | 11 | 8 | 10 | 8 | 8 | 13 | 6 | 12 | 12 | 3 | 8 | 10 | 12 | 15 | 9 | 15 | 13 | 11 | 4 | 11 | 15 | 14 | 13 | 13 |
| Tonga | 6 | 3 | 7 | 6 | 11 | 6 | 5 | 5 | 6 | 6 | 6 | 5 | 7 | 5 | 13 | 2 | 12 | 7 | 6 | 6 | 8 | 13 | 13 | 15 | 12 |
| Turkmenistan | 15 | 13 | 13 | 9 | 6 | 2 | 14 | 9 | 8 | 7 | 9 | 10 | 9 | 4 | 3 | 10 | 5 | 14 | 7 | 10 | 12 | 5 | 4 | 7 | 5 |
| China | 3 | 8 | 2 | 2 | 4 | 5 | 1 | 13 | 1 | 3 | 1 | 12 | 1 | 3 | 2 | 6 | 3 | 1 | 12 | 8 | 4 | 2 | 15 | 1 | 1 |
| Namibia | 4 | 10 | 4 | 11 | 2 | 9 | 6 | 4 | 14 | 13 | 15 | 14 | 13 | 13 | 7 | 14 | 9 | 9 | 2 | 15 | 9 | 6 | 5 | 3 | 10 |
| Samoa | 2 | 4 | 5 | 8 | 9 | 1 | 3 | 3 | 3 | 3 | 2 | 7 | 6 | 7 | 11 | 3 | 13 | 6 | 10 | 7 | 7 | 14 | 3 | 14 | 11 |
| Egypt | 13 | 12 | 15 | 7 | 13 | 14 | 10 | 11 | 9 | 15 | 11 | 9 | 8 | 15 | 14 | 13 | 4 | 8 | 8 | 2 | 15 | 1 | 11 | 9 | 6 |
| Guatemala | 5 | 1 | 14 | 14 | 12 | 3 | 11 | 1 | 11 | 4 | 14 | 1 | 12 | 6 | 8 | 5 | 8 | 11 | 1 | 9 | 2 | 10 | 10 | 6 | 3 |
| Armenia | 12 | 6 | 6 | 5 | 5 | 10 | 8 | 8 | 4 | 5 | 5 | 6 | 5 | 2 | 4 | 8 | 7 | 10 | 5 | 12 | 5 | 9 | 6 | 8 | 2 |
| Jordan | 9 | 5 | 3 | 3 | 14 | 15 | 15 | 7 | 7 | 1 | 8 | 2 | 4 | 8 | 10 | 12 | 10 | 12 | 9 | 1 | 1 | 3 | 2 | 5 | 8 |
| Vanuatu | 11 | 15 | 10 | 12 | 10 | 7 | 4 | 12 | 10 | 10 | 7 | 11 | 11 | 11 | 9 | 7 | 14 | 5 | 14 | 5 | 14 | 12 | 12 | 12 | 15 |
| Maldives | 1 | 2 | 1 | 1 | 3 | 4 | 9 | 2 | 5 | 2 | 12 | 4 | 2 | 10 | 5 | 1 | 1 | 2 | 4 | 3 | 3 | 4 | 9 | 4 | 7 |
| Angola | 8 | 7 | 9 | 13 | 7 | 13 | 7 | 15 | 15 | 9 | 13 | 13 | 14 | 9 | 6 | 11 | 6 | 15 | 15 | 14 | 10 | 7 | 7 | 2 | 9 |
| Swaziland | 7 | 14 | 12 | 15 | 1 | 11 | 12 | 14 | 13 | 14 | 10 | 15 | 15 | 14 | 12 | 15 | 11 | 4 | 3 | 13 | 13 | 11 | 8 | 11 | 14 |
| Ranking Legend | 1 - 3 | | | 4 - 7 | | | 8 - 11 | | | 12 - 15 | | | | | | | | | | | | | | | |