World Population Forecast

Billions of People

Constant fertility [*]

20

15

High Projection

Medium Projection

10

Low Projection

5

1950   1980   2010   2040   2070   2100
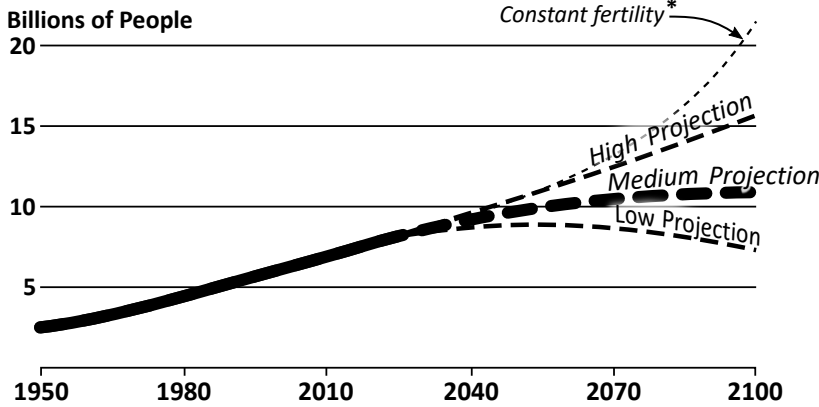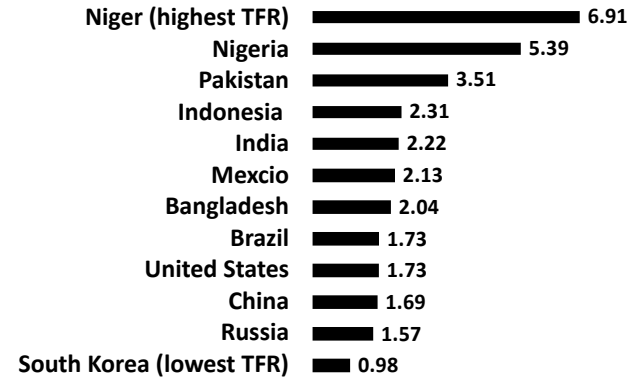
United Nations, Department of Economic and Social Affairs, Population Division (2019).
World Population Prospects: The 2019 Revision, DVD Edition Retrieved 17 June 2022

[*] The **Constant Fertility Scenario** is an illustrative scenario that plays out how the world population would change if fertility rates remained constant. It is obviously not intended to be a realistic scenario.

Total Fertility Trend - World
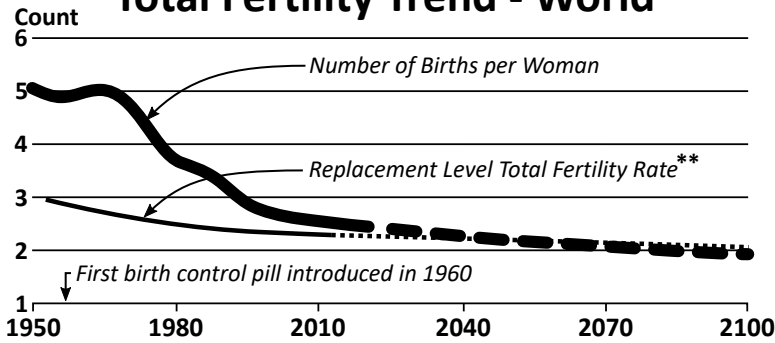
Count

6

5

Number of Births per Woman

4

3

Replacement Level Total Fertility Rate[**]

2

First birth control pill introduced in 1960
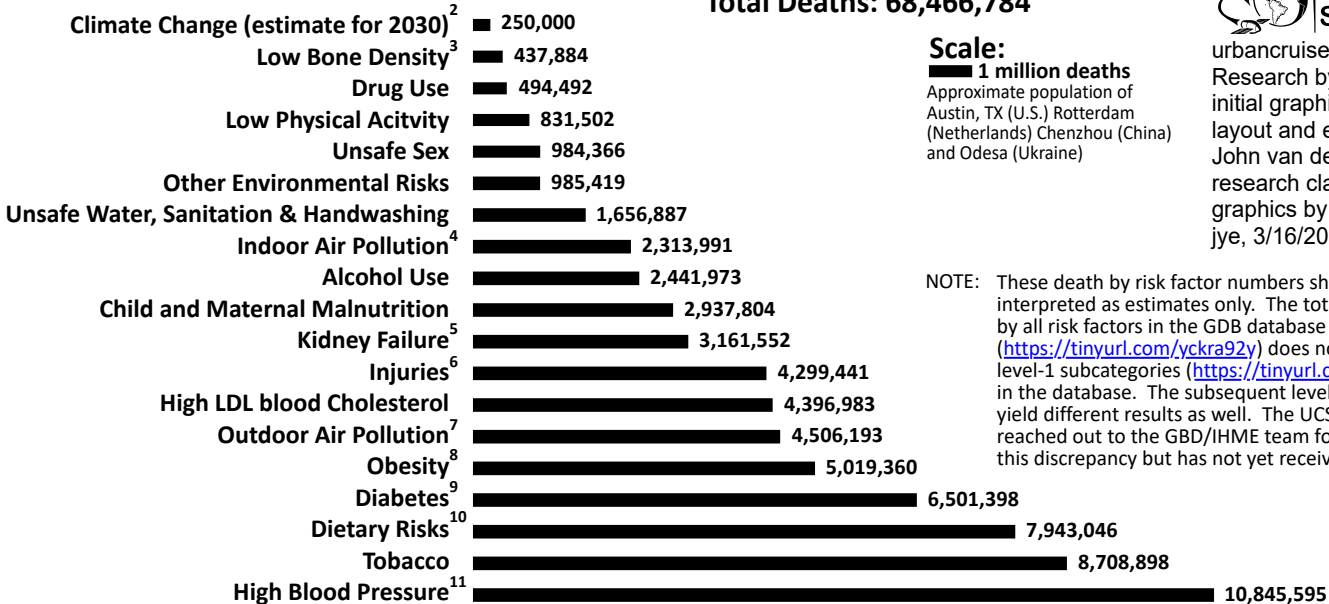
1

1950   1980   2010   2040   2070   2100

United Nations, Department of Economic and Social Affairs, Population Division (2019).
World Population Prospects: The 2019 Revision, DVD Edition Retrieved 29 September 2020

[**] This is the average number of children that are born per woman, at which point a population exactly replaces itself from one generation to the next, without migration. Estimated projection is based off of plots by Espenshade, T., Guzman, J., Westoff, C. as well as Gietel-Basten, S., Scherbov, S.

Total Fertility Rate (2018)
Number of Births per Woman

By Country

Niger (highest TFR)	6.91
Nigeria	5.39
Pakistan	3.51
Indonesia	2.31
India	2.22
Mexcio	2.13
Bangladesh	2.04
Brazil	1.73
United States	1.73
China	1.69
Russia	1.57
South Korea (lowest TFR)	0.98

By Region

Sub-Saharan Africa	4.69
Middle East and North Africa	2.81
South Asia	2.39
Latin America and Caribbean	2.03
East Asia and Pacific	1.82
Europe and Central Asia	1.71
North America	1.71

By Income Bracket

Low Income	4.51
Lower Middle Income	2.71
Middle Income	2.32
Upper Middle Income	1.87
High Income	1.60

The World Bank. "Fertility rate, total (births per woman)". Accessed June 27 2020.

Deaths by Risk Factor - 2019[1]
Total Deaths: 68,466,784

Climate Change (estimate for 2030)[2]	250,000
Low Bone Density[3]	437,884
Drug Use	494,492
Low Physical Acitvity	831,502
Unsafe Sex	984,366
Other Environmental Risks	985,419
Unsafe Water, Sanitation & Handwashing	1,656,887
Indoor Air Pollution[4]	2,313,991
Alcohol Use	2,441,973
Child and Maternal Malnutrition	2,937,804
Kidney Failure[5]	3,161,552
Injuries[6]	4,299,441
High LDL blood Cholesterol	4,396,983
Outdoor Air Pollution[7]	4,506,193
Obesity[8]	5,019,360
Diabetes[9]	6,501,398
Dietary Risks[10]	7,943,046
Tobacco	8,708,898
High Blood Pressure[11]	10,845,595

Scale:

■ **1 million deaths**
Approximate population of Austin, TX (U.S.) Rotterdam (Netherlands) Chenzhou (China) and Odesa (Ukraine)

URBAN CRUISE SHIP ANALYSIS SOLUTIONS

urbancruiseship.org
Research by Michael Goff, initial graphics by Lee Nelson, layout and editing by John van der Harst, research clarification and final graphics by Richard Burd and jye, 3/16/2023

NOTE: These death by risk factor numbers should be interpreted as estimates only. The total death count by all risk factors in the GDB database (https://tinyurl.com/yckra92y) does not match the level-1 subcategories (https://tinyurl.com/2p9ccnf4) in the database. The subsequent levels (2, 3, & 4) yield different results as well. The UCS team has reached out to the GBD/IHME team for clarification on this discrepancy but has not yet received an answer.

1.) Data is based on the Global Burden of Disease (GBD) 2019 Study with rearrangements in the classifications & naming. Permalink to GBD 2019 dataset: https://tinyurl.com/wnx2hv6s

2.) World Health Organization. (2014). Quantitative risk assessment of the effects of climate change on selected causes of death, 2030s and 2050s. https://apps.who.int/iris/handle/10665/134014 These 250,000 deaths are for comparrison and not included in the 68,466,784 death total.

3.) This is what the GBD calls: *Low bone mineral density*

4.) GBD labels this as *Household air pollution from solid fuels*

5.) This is what the GBD calls: *Kidney dysfunction*

6.) GDB *Cause of Death* (2019) dataset: https://tinyurl.com/fucde3nk - includes the *Accidents, Transport injuries, Suicide, & Homicide* categories at the bottom of the opposite page

7.) This is a combination of what the GBD calls: *Ambient particulate matter pollution + Ambient Ozone Pollution*

8.) This is what the GBD calls: *High body-mass index*

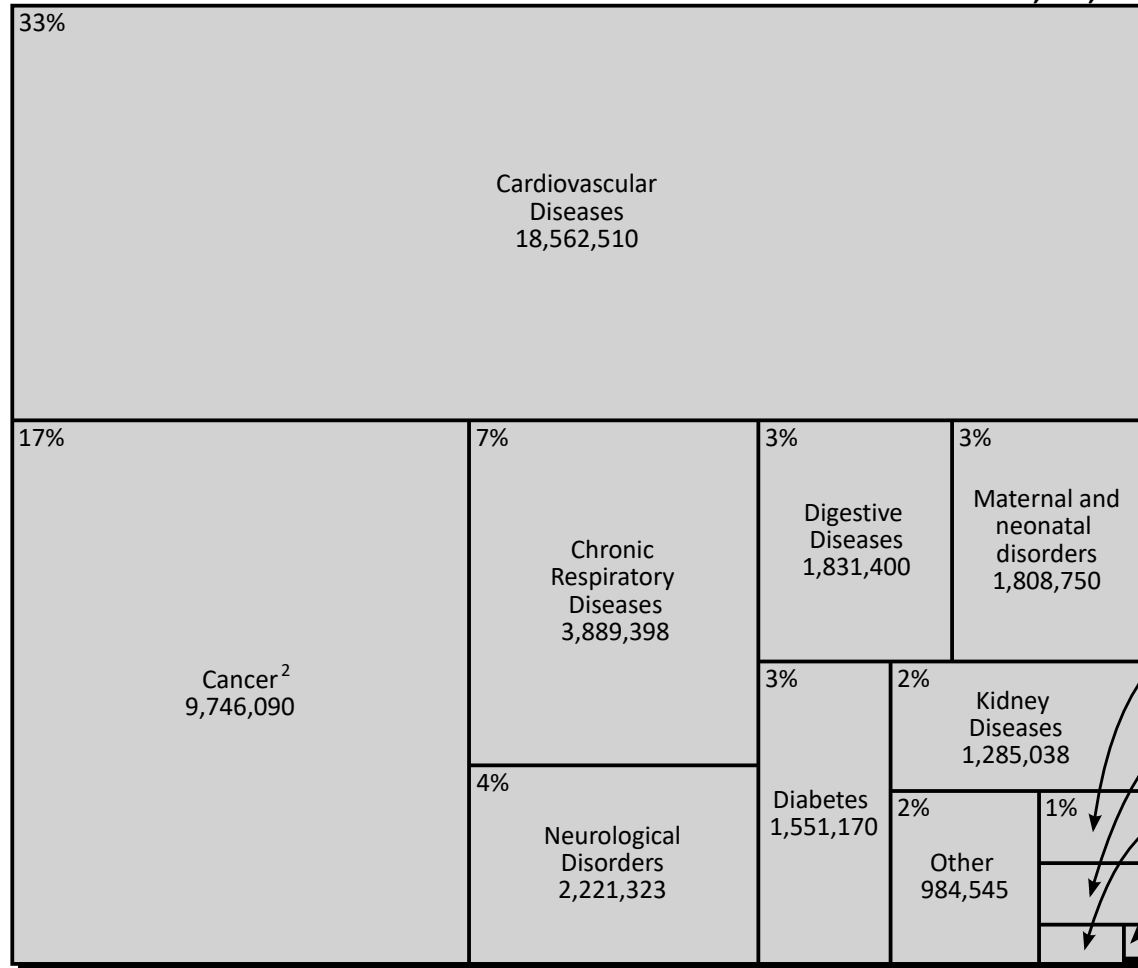9.) This is what the GBD calls: *High fasting plasma glucose*

10.) Includes both malnutrition and overeating in diets

11.) This is what the GBD calls: *High systolic blood pressure*

Non Infectious Causes
76% of Total Deaths   **Number of Deaths: 42,571,951**

33%
Cardiovascular
Diseases
18,562,510

17%
Cancer[2]
9,746,090

7%
Chronic
Respiratory
Diseases
3,889,398

4%
Neurological
Disorders
2,221,323

3%
Digestive
Diseases
1,831,400

3%
Maternal and
neonatal
disorders
1,808,750

3%
Diabetes
1,551,170

2%
Kidney
Diseases
1,285,038

2%
Other
984,545

1%

Scale:
100,000 deaths
(Capacity of the football stadium at the University of Texas, Austin, U.S. or the Melbourne Cricket Ground in Victoria, Australia)
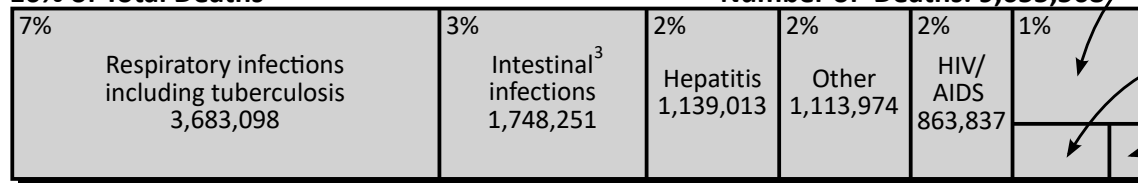
URBAN CRUISE SHIP — ANALYSIS SOLUTIONS

urbancruiseship.org
Research by Michael Goff, initial graphics by Lee Nelson, layout and editing by John van der Harst, and research clarification and final graphics by Richard Burd, 2/24/2023

Substance use disorders 296,097

Nutritional deficiencies 251,577

Musculoskeletal Disorders 117,543

Skin Diseases 26,192

Mental Disorders 318

Infections
16% of Total Deaths   **Number of Deaths: 9,655,568**

7%
Respiratory infections including tuberculosis
3,683,098

3%
Intestinal[3] infections
1,748,251

2%
Hepatitis
1,139,013

2%
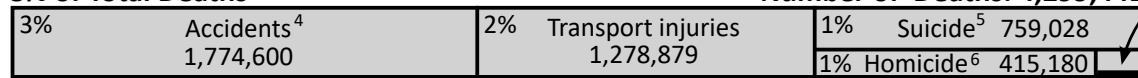Other
1,113,974

2%
HIV/ AIDS
863,837

1%

Neglected tropical diseases & malaria 747,344

Maternal and neonatal infections 270,159

Sexually transmitted infections 89,891

Injuries
8% of Total Deaths   **Number of Deaths: 4,299,441**

3% Accidents[4] 1,774,600

2% Transport injuries 1,278,879

1% Suicide[5] 759,028

1% Homicide[6] 415,180

Conflict and terrorism 62,985

Executions and police conflict 8,769

NOTE: There is a 1% (474,417) difference between this death count and the Death by Risk Factor - 2019 on the opposite page; this is due to statistical rounding estimates in the data collected by the Global Burden of Disease

1.) Data is based on the Global Burden of Disease (GBD) 2019 Study with rearrangements in the classifications & naming of diseases; whereas the GBD classification hierarchy is tailored to medical logistics and identifying biological systems effected by disease, the breakdown above is arranged to specifically separate infections from non-infections. In example, the GBD groups together infections and non-infectious conditions into a single Maternal and neonatal disorders category whereas above those same (maternal and neonatal) conditions are broken down into infections and disorders.
   Permalink to Global Burden of Disease (GBD) 2019 Dataset: https://tinyurl.com/ud232svf

2.) GBD labels this as Neoplasms and those which result in death are almost always cancerous (malignant) in nature.
3.) GBD labels this as Enteric infections
4.) GBD labels this as Unintentional Injuries which are not related to transportation infrastructure or modes; car accidents are included in Transport injuries
5.) GBD labels this as Self-harm because it is also used in disability-adjusted life year (DALY) calculations in addition to death calculations.
6.) GBD labels this as Interpersonal violence - since these are causes of death and not DALY's, these are effectively homicides.