

Risk factors driving the global burden of disease

Highlights

High blood pressure, smoking, high blood sugar, and ambient particulate matter air pollution are among the leading risk factors globally and at each level of the Socio-demographic Index.*

Policy interventions to date have been insufficient to address rising exposure to risk factors including high body mass index, high blood sugar, ambient air pollution, drug use, and high temperatures.

Countries have made rapid progress in reducing exposure to childhood and maternal malnutrition, household air pollution, and unsafe water, sanitation, and handwashing.

*The Socio-demographic Index is a measure of income, fertility, and education.

What's new in this study?

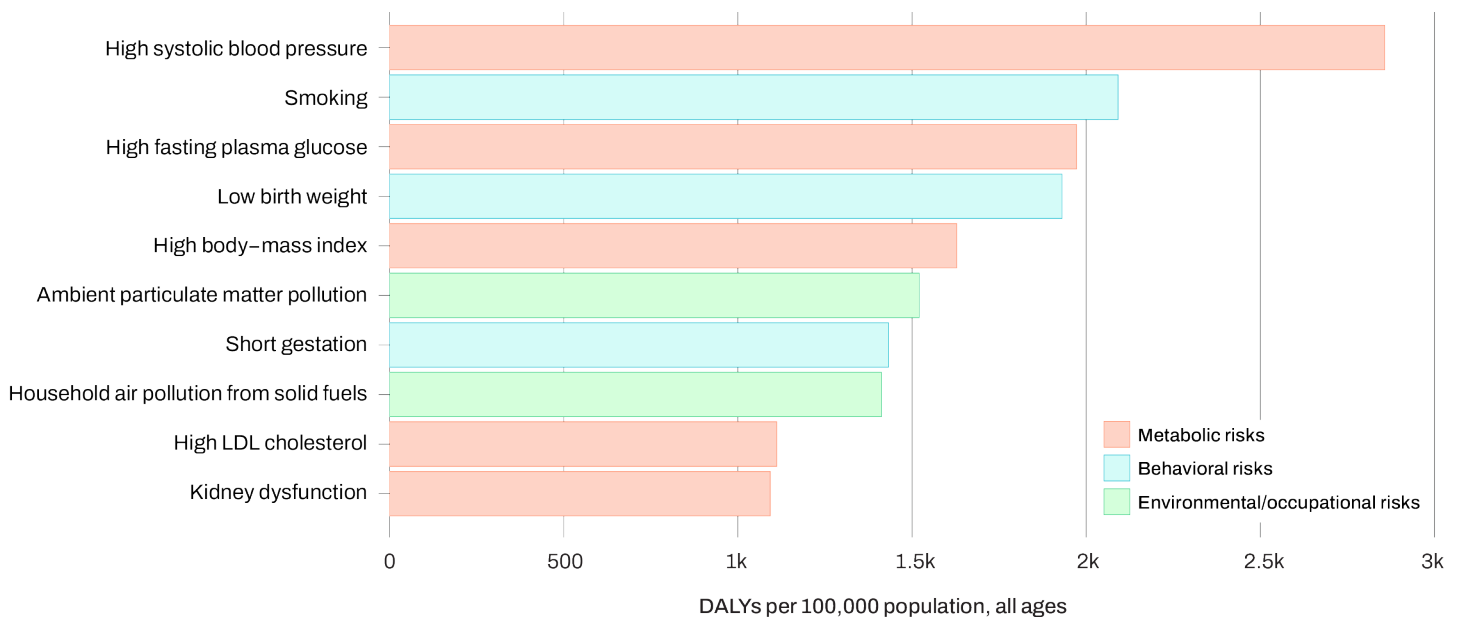
More than 50,000 new data sources.

Updated analysis using IHME's groundbreaking burden of proof methodology, which measures the strength of evidence linking risk factors to diseases and injuries: <https://vizhub.healthdata.org/burden-of-proof>.

New risk factor: nitrogen dioxide air pollution, which is linked to childhood asthma.

High blood pressure, smoking, and high blood sugar (high fasting plasma glucose) were the three leading risk factors for early death and poor health worldwide in 2021.

Leading risk factors for disease burden, 2021



While low birthweight, short gestation, and child underweight were top risk factors for children under age 5 in 2021, risk factors including high blood pressure, high blood sugar, and smoking were leading risk factors among older people.

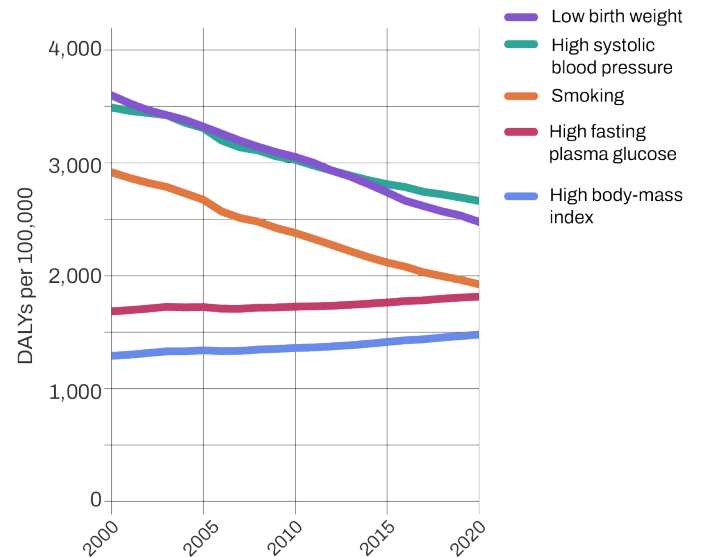
Top 10 risk factors for disease burden among children vs. older adults globally, 2021

Rank*	Children under 5	People aged 70+
1	Low birth weight	High blood pressure
2	Short gestation	High fasting plasma glucose (high blood sugar)
3	Child underweight	Smoking
4	Household air pollution from solid fuels	Ambient particulate matter pollution
5	Child wasting	High body mass index (adult)
6	Child stunting	Kidney dysfunction
7	Unsafe water source	High LDL cholesterol
8	Ambient particulate matter pollution	Household air pollution from solid fuels
9	Unsafe sanitation and handwashing	Diet high in sodium
10	No access to handwashing facility	Lead exposure in bone

*Attributable DALYs per 100,000

Since 2000, disease burden linked to high body mass index and high blood sugar rose by 16% and 8%, respectively, as exposure to these risk factors has grown.

Rates of disease burden attributable to high body mass index, high fasting plasma glucose, high blood pressure, smoking, and low birth weight, age-standardized, 2000–2021



The burden of disease related to child and maternal malnutrition has dropped rapidly, especially in locations ranking lower on the Socio-demographic Index.

Percentage change in disease burden attributable to child and maternal malnutrition by country, age-standardized, 2000–2021

