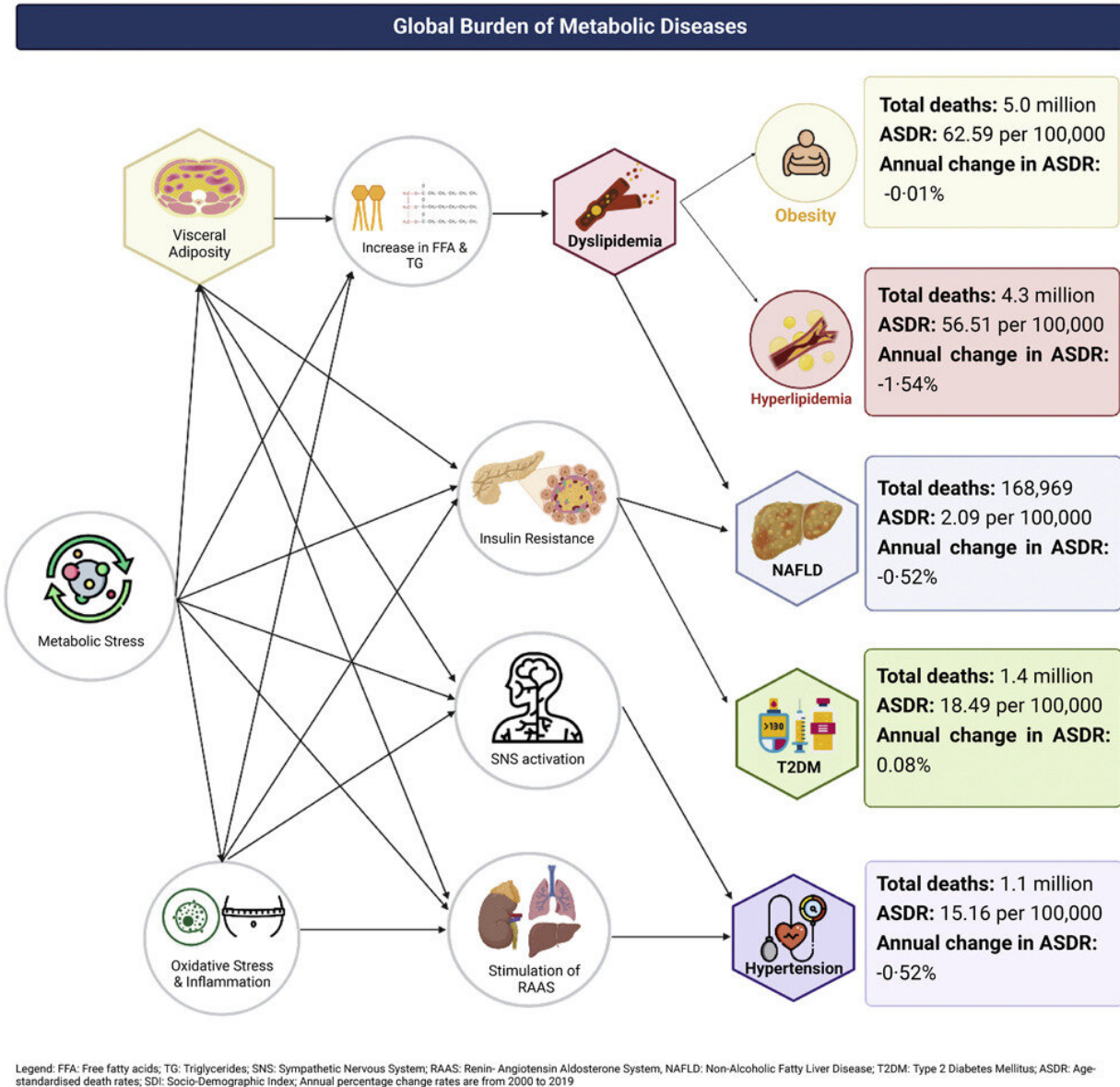


# 160 million years of life lost to obesity in 2019

March 8 2023, by Justin Jackson



Graphical abstract. Credit: *Cell Metabolism* (2023). DOI:

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Researchers at the National University in Singapore and colleagues in the US and China undertook a two-decade metabolic analysis of Global Burden of Disease (GBD) reports. They have published their findings in the journal *Cell Metabolism*.

While previous studies of GBD data have focused on the increasing number of deaths and disability-adjusted life years in individual diseases, researchers in this study wanted to provide insights into the trends and burden of [metabolic diseases](#) as they are so closely interlinked.

Understanding what makes for a long, happy life can be challenging to quantify, though avoiding death must be a significant consideration. Understanding what ends a life, happy or not, is much more straightforward.

The GBD is collected and analyzed by a consortium of more than 9,000 researchers in 162 countries and territories. The data capture premature death and disability from 370 diseases and injuries in 204 countries and territories, by age and sex, from 1990 to the present. In other words, the GBD report comprehensively describes what disables and kills people across countries, time, age, and sex. Armed with this information, individuals, clinicians, and policymakers can make informed health decisions about how best to avoid death.

Comparing GBD reports from 2000 to 2019, the international team of researchers found that rates have increased for all metabolic diseases—hypertension, type 2 diabetes, high cholesterol, obesity, and [non-alcoholic fatty liver disease](#). These diseases cluster around processes

that affect obesity-linked insulin resistance, glucose homeostasis, lipid metabolism, pro-inflammatory immune cells, and cytokines. Metabolic diseases often occur in tandem, sharing common risk factors, and are linked to increased risk of disability, cancer, and [premature death](#).

The most significant increase in disease burden was seen in countries with high averages in income, educational attainment, and [fertility rates](#). However, an [upward trend](#) was observed globally regardless of these factors.

The highest mortality rate from metabolic diseases was found in the Eastern Mediterranean regions of the study, followed by countries with lower income, education, and fertility averages. While the rates of metabolic disease are trending up, mortality rates decreased for [high cholesterol](#), hyperlipidemia, hypertension, and liver disease.

## **Some of the highlights**

The obesity-related death rate from 2000 to 2019 did not change significantly, as it remained the highest of the diseases studied. There was a 0.48% yearly rise in disability-adjusted life years (DALYs), an estimate of years lost due to premature mortality, accounting for 160.2 million years of life lost in 2019 alone.

Type 2 diabetes-related death rates also remained stable yet showed a 1.56% yearly increase in global rates from 2000 to 2019. There were 6.6 million years of life lost (DALYs) in 2019 related to type 2 diabetes, with 0.77% yearly increases from 2000 to 2019.

Non-alcoholic fatty [liver disease](#)-related deaths went down 0.63% yearly, yet rates of the disease increased 0.83% annually, with 4.4 million years of life lost (DALYs) in 2019.

The analysis shows that while [death](#) rates are stagnant or decreasing, disease acquisition is trending higher globally. The researchers conclude in their paper that "Urgent attention is needed to address the unchanging [mortality rates](#) attributed to metabolic disease and the entrenched sex-regional-socioeconomic disparities in mortality."

**More information:** Nicholas W.S. Chew et al, The global burden of metabolic disease: Data from 2000 to 2019, *Cell Metabolism* (2023).  
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