

# Global Burden of Non-Communicable Diseases

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## Abstract

- Non Communicable diseases (NCDs) kill more than 36 million people each year.
- Nearly 80% of NCD deaths - 29 million - occur in low- and middle-income countries.
- More than nine million of all deaths attributed to NCDs occur before the age of 60; 90% of these “premature” deaths occurred in low- and middle-income countries.
- Cardiovascular diseases account for most NCD deaths, or 17.3 million people annually, followed by cancers (7.6 million), respiratory diseases (4.2 million), and diabetes (1.3 million).
- These four groups of diseases account for around 80% of all NCD deaths.
- They share four risk factors: tobacco use, physical inactivity, the harmful use of alcohol and unhealthy diets.[1]

**Keywords:** Non-communicable diseases, Chronic respiratory diseases and Cardiovascular disease.

## Introduction

Non-communicable diseases (NCDs), also known as chronic diseases, are not passed from person to person. They are of long duration and generally slow progression.

The four main types of Non-communicable diseases are cardiovascular diseases (like heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructed pulmonary disease and asthma) and diabetes.

NCDs already disproportionately affect low- and middle-income countries where nearly 80% of NCD deaths – 29 million – occur. They are the leading causes of death in all regions except Africa, but current projections indicate that by 2020 the largest increases in NCD deaths will occur in Africa. In African nations deaths from NCDs are projected to exceed the combined deaths of communicable and nutritional diseases and maternal and perinatal deaths

as the most common causes of death by 2030.

### *Who is at risk of such diseases?*

All age groups and all regions are affected by NCDs. NCDs are often associated with older age groups, but evidence shows that more than 9 million of all deaths attributed to Non-communicable diseases (NCDs) occur before the age of 60. Of these “premature” deaths, 90% occurred in low- and middle-income countries. Children, adults and the elderly are all vulnerable to the risk factors that contribute to Non-communicable diseases, whether from unhealthy diets, physical inactivity, exposure to tobacco smoke or the effects of the harmful use of alcohol.

These diseases are driven by forces that include ageing, rapid unplanned urbanization, and the globalization of unhealthy lifestyles. For example, globalization of unhealthy lifestyles like unhealthy diets may show up in individuals as raised blood pressure, increased blood glucose, elevated blood lipids, overweight and obesity. These are called ‘intermediate risk factors’ which can lead to cardiovascular disease, a NCD.

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### *Risk factors*

#### *Modifiable behavioural risk factors*

Tobacco use, physical inactivity, unhealthy diet and the harmful use of alcohol increase the risk of or cause most NCDs.

- Tobacco accounts for almost 6 million deaths every year (including over 600 000 deaths from exposure to second-hand smoke), and is projected to increase to 8 million by 2030.
- About 3.2 million deaths annually can be attributed to insufficient physical activity.
- Approximately 1.7 million deaths are attributable to low fruit and vegetable consumption.
- Half of the 2.3 million annual deaths from harmful drinking are from NCDs.

#### *Metabolic/physiological risk factors*

These behaviours lead to four key metabolic/physiological changes that increase the risk of NCDs: raised blood pressure, overweight/obesity, hyperglycemia (high blood glucose levels) and hyperlipidemia (high levels of fat in the blood).

In terms of attributable deaths, the leading NCD risk factor globally is elevated blood pressure (to which 16.5% of global deaths are attributed) (1) followed by tobacco use (9%), raised blood glucose (6%), physical inactivity (6%) and overweight and obesity (5%). Low- and middle-income countries are

witnessing the fastest rise in overweight young children.

#### *What are the socioeconomic impacts of NCDs?*

Poverty is closely linked with NCDs. The rapid rise in NCDs is predicted to impede poverty reduction initiatives in low-income countries, particularly by forcing up household costs associated with health care. Vulnerable and socially disadvantaged people get sicker and die sooner than people of higher social positions, especially because they are at greater risk of being exposed to harmful products, such as tobacco or unhealthy food, and have limited access to health services.

In low-resource settings, health-care costs for cardiovascular diseases, cancers, diabetes or chronic lung diseases can quickly drain household resources, driving families into poverty. The exorbitant costs of NCDs, including often lengthy and expensive treatment and loss of breadwinners, are forcing millions of people into poverty annually, stifling development.

In many countries, harmful drinking and unhealthy diet and lifestyles occur both in higher and lower income groups. However, high-income groups can access services and products that protect them from the greatest risks while lower-income groups can often not afford such products and services.

### *Prevention and control of NCDs*

To lessen the impact of NCDs on individuals and society, a comprehensive approach is needed that requires all sectors, including health, finance, foreign affairs, education, agriculture, planning and others, to work together to reduce the risks associated with NCDs, as well as promote the interventions to prevent and control them.

An important way to reduce NCDs is to focus on lessening the risk factors associated with these diseases. Low-cost solutions exist to reduce the common modifiable risk factors (mainly tobacco use, unhealthy diet and physical inactivity, and the harmful use of alcohol) and map the epidemic of NCDs and their risk factors.

Other ways to reduce NCDs are high impact essential NCD interventions that can be delivered through a primary health-care approach to strengthen early detection and timely treatment. Evidence shows that such interventions are excellent economic investments because, if applied to patients early, can reduce the need for more expensive treatment. These measures can be implemented in various resource levels. The greatest impact can be achieved by creating healthy public policies that promote NCD prevention and control and reorienting health systems to address the needs of people with such diseases.

Lower-income countries generally have lower capacity for the prevention and control of Non-communicable diseases.

High-income countries are nearly four times more likely to have NCD services covered by health insurance than low-income countries. Countries with inadequate health insurance coverage are unlikely to provide universal access to essential NCD interventions.

### *WHO response*

The 2008-2013 *Action plan of the global strategy for the prevention and control of non-communicable diseases* provides Member States, WHO and international partners with steps on how to address NCDs in countries.

WHO is also responding with measures that lessen the risk factors that are associated with NCDs.

- Implementation by countries of the anti-tobacco measures laid out in the WHO Framework Convention on Tobacco Control can greatly reduce public exposure to tobacco.
- The WHO Global strategy on diet, physical activity and health aims to promote and protect health by enabling communities to reduce disease and death rates related to unhealthy diet and physical inactivity.
- The WHO Global strategy to reduce the harmful use of alcohol offers measures and identifies priority areas of action to protect people from harmful alcohol use.
- As requested by the UN Political Declaration on NCDs, WHO is developing a comprehensive global monitoring framework for the prevention and control of NCDs, including a set of indicators and a set of voluntary global targets.
- In response to a resolution (WHA 64.11) of the World Health Assembly, WHO is developing the Global NCD Action Plan 2013-20 to provide a roadmap for the implementation of the political commitments of the UN High-level Meeting. The draft action plan will be up for adoption by the World Health Assembly in May 2013.

### *Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases 2008-2013 (NCD Action Plan)*

1. To raise the priority accorded to non-communicable disease in development work at global and national levels, and to integrate prevention and control of such diseases into policies across all government departments.
2. To establish and strengthen national policies and plans for the prevention and control of non-communicable diseases.
3. To promote interventions to reduce the main shared modifiable risk factors for non-communicable diseases: tobacco use, unhealthy diets, physical inactivity and harmful use of alcohol.
4. To promote research for the prevention and control of non-communicable diseases.

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|---|---|
| 5. To promote partnerships for the prevention and control of non-communicable diseases.   | Adair-Rohani H <i>et al.</i> A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990-2010: A systematic analysis for the Global Burden of Disease Study 2010. <i>Lancet.</i> 2012; 380(9859): 2224-2260. |
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