

# DIABETES

## The Problem

Diabetes is a chronic disease that occurs when the pancreas does not produce enough insulin (a hormone that regulates blood sugar) or alternatively, when the body cannot effectively use the insulin it produces. The overall risk of dying among people with diabetes is at least double the risk of their peers without diabetes.<sup>1</sup>

**Type 1 diabetes** is characterized by a lack of insulin production. Without daily administration of insulin, type 1 diabetes is rapidly fatal.<sup>1</sup>

**Type 2 diabetes** results from the body's ineffective use of insulin. About 90% of people with diabetes around the world have type 2. It is largely the result of excess body weight and physical inactivity.<sup>1</sup>

### How significant is the problem?

- More than 220 million people worldwide diabetes had in 2004.
- WHO projects that diabetes deaths will double between 2005 and 2030.
- Almost half of diabetes deaths occur in people under the age of 70 years.
- Almost 80% of diabetes deaths occur in low and middle-income countries.

### Health implications

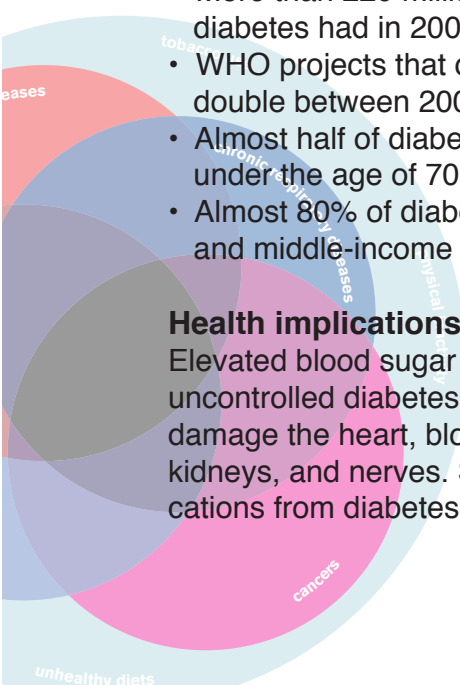
Elevated blood sugar is a common effect of uncontrolled diabetes, and over time can damage the heart, blood vessels, eyes, kidneys, and nerves. Some health complications from diabetes include:

- Diabetic retinopathy is a significant cause of blindness, and occurs as a result of long-term accumulated damage to the small blood vessels in the retina. After 15 years of diabetes about 10% of patients develop severe visual impairment.
- Diabetic neuropathy is damage to the nerves as a result of diabetes, and affects up to 50% of people with diabetes. Common symptoms are tingling, pain, numbness, or weakness in the feet and hands.
- Combined with reduced blood flow, neuropathy in the feet increases the chance of foot ulcers and eventual limb amputation.
- Diabetes is among the leading causes of kidney failure; 10-20% of people with diabetes die of kidney failure.
- Diabetes increases the risk of heart disease and stroke; 50% of people with diabetes die of cardiovascular disease (primarily heart disease and stroke).<sup>1</sup>

### The Economic Implications

Diabetes and its complications impose significant economic consequences on individuals, families, health systems and countries.

- People living with diabetes and their families feel the impact of diabetes most directly, often through the expenses of diabetes treatment and loss of family income when diabetes interferes with work.<sup>2</sup>



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## The Solution

### Prevention

Without urgent action, diabetes-related deaths will increase by more than 50% in the next 10 years. To help prevent type 2 diabetes and its complications, people should:

- Achieve and maintain healthy body weight.
- Be physically active - at least 30 minutes of regular, moderate-intensity activity on most days.
- Early diagnosis can be accomplished through relatively inexpensive blood testing.
- Treatment of diabetes involves lowering blood sugar and the levels of other known risk factors that damage blood vessels.
- Tobacco cessation is also important to avoid complications.<sup>1</sup>

### Control of diabetes

- People with type 1 diabetes require insulin; people with type 2 diabetes can be treated with oral medication, but may also require insulin.
- Blood pressure control
- Foot care

Other cost saving interventions include:

- Screening and treatment for retinopathy (which causes blindness);
- Blood lipid control (to regulate cholesterol levels);
- Screening for early signs of diabetes-related kidney disease and treatment.

These measures should be supported by a healthy diet, regular physical activity, maintaining a normal body weight and avoiding tobacco use.<sup>1</sup>

**WHO aims to stimulate and support the adoption of effective measures for the surveillance, prevention and control of diabetes and its complications, through a primary health care approach, particularly in low-and middle-income countries.**

The WHO Global Strategy on Diet, Physical Activity and Health complements WHO's diabetes work by focusing on population-wide approaches to promote healthy diet and regular physical activity, thereby reducing the growing global problem of overweight and obesity.

*WHO Member States adopted the WHO Global Strategy on Diet, Physical Activity and Health in May 2004. For more information go to <http://www.who.int/dietphysicalactivity/goals/en/index.html>*



<sup>1</sup> Diabetes Fact Sheet, WHO, November 2008. (<http://www.who.int/mediacentre/factsheets/fs312/en/>)  
<sup>2</sup> Diabetes Atlas, 4<sup>th</sup> edition, International Diabetes Federation, 2009.