

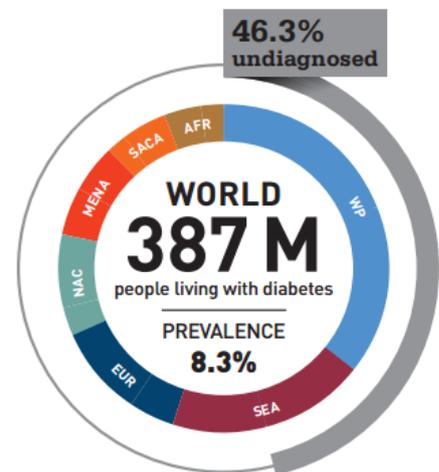
# Type 2 Diabetes Media Fact Sheet

1. Type 2 diabetes: Facts & figures
2. What is type 2 diabetes?
3. Risk factors for type 2 diabetes
4. Complications associated with type 2 diabetes
5. The socio-economic impact of diabetes
6. Effective management of type 2 diabetes

## 1. Type 2 diabetes: Facts & figures

- Diabetes affects more than 387 million people worldwide.<sup>1</sup> In less than 25 years, the number of people is expected to increase by 55 percent, reaching close to 592 million (the equivalent of one adult in 10)<sup>1</sup>
- Type 2 diabetes (T2D) is the most common form of diabetes, responsible for at least 90 percent of diabetes cases<sup>1</sup>
- Diabetes contributes to approximately five million deaths per year worldwide. It is a leading cause of death in most developed countries<sup>1</sup>
- Diabetes is a major risk factor for cardiovascular disease. Approximately 50 percent of deaths in people with T2D worldwide are caused by cardiovascular disease.<sup>2</sup>
- Close to half of all people with diabetes are unaware of their condition and as such are undiagnosed<sup>1</sup>
- Approximately 40 percent of people with T2D already present with some form of organ damage at diagnosis<sup>3</sup>

Prevalence of diabetes<sup>1</sup>



## 2. What is type 2 diabetes?

T2D is a chronic progressive disease characterised by increased insulin resistance and impaired  $\beta$ -cell function resulting in inadequate insulin secretion. Glucose derived from dietary carbohydrate or hepatic glucose production is tightly regulated by the hormone insulin. T2D results from an imbalance between insulin sensitivity and insulin secretion. Glucose production fails to be regulated adequately by insulin, leading to hepatic glucose overproduction, diminished glucose uptake by muscle tissue and increased glucose circulating in the blood (hyperglycaemia).<sup>4</sup>



Over time, the impaired glucose metabolism leads to a loss of  $\beta$ -cell function and the remaining  $\beta$ -cell activity fail to maintain the adequate rate of insulin secretion, and this together with the increased insulin resistance leads to glucose intolerance and T2D.<sup>4</sup>

### 3. Risk factors for type 2 diabetes

Risk factors that contribute to T2D include:

- **Family history:** Studies have revealed that immediate relatives of individuals with T2D are about three times more likely to develop the disease than people without a family history of the disease<sup>6</sup>
- **Obesity, diet and inactivity:** Obesity is a major risk factor for developing T2D and is estimated to be responsible for 90 percent of all newly diagnosed cases.<sup>7</sup> In fact, a key contributing factor to the alarming increase in T2D is a global change in traditional lifestyles and dietary patterns<sup>1,6</sup>
- **Ethnicity:** Studies in the US have shown people of Hispanic, Native American, African American, Asian American, or Pacific Islander descent are more likely to develop T2D<sup>1</sup>
- **Gestational diabetes:** Approximately 2 – 5 percent of women develop gestational diabetes during pregnancy. This usually disappears once the pregnancy is over; however, women that give birth to large babies are at greater risk of developing T2D later in life<sup>1</sup>

### 4. Complications associated with type 2 diabetes

If high blood glucose (hyperglycaemia) is left uncontrolled or is not controlled long-term, it can lead to serious medical complications in all parts of the body, especially where nerves and blood vessels play a vital role.<sup>1,2</sup>

Diabetes-related complications include:<sup>1,8-11</sup>

## Macrovascular Complications



The risk of stroke in newly treated type 2 diabetes patients is more than double that of the general population



People with diabetes are two to four times more likely to have cardiovascular disease than someone without diabetes

## Microvascular Complications



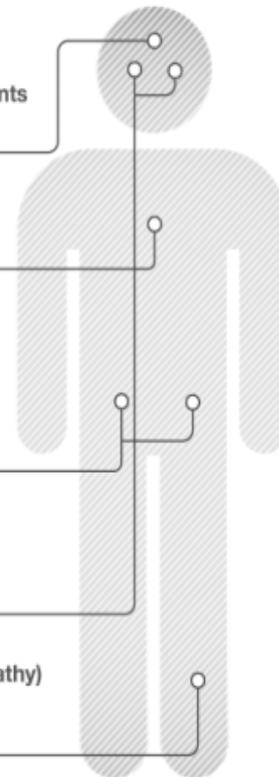
Damage to the kidney filtering systems from diabetes (diabetic nephropathy) is a leading cause of kidney failure



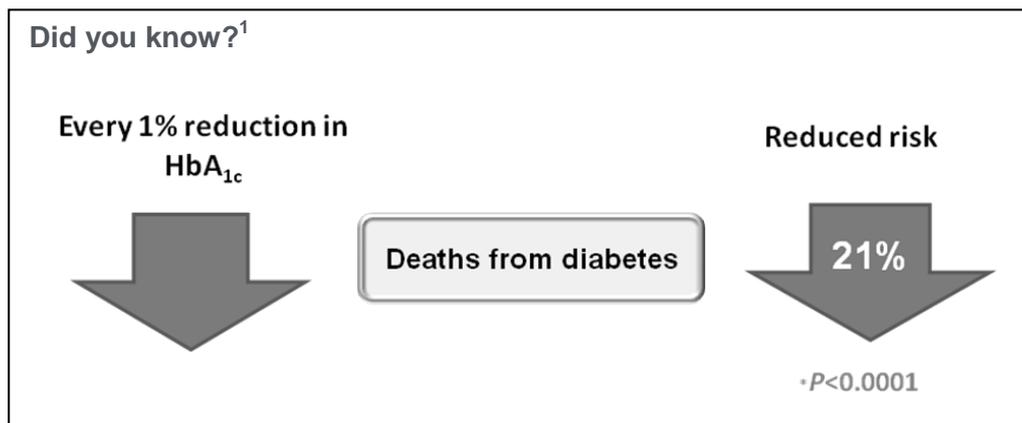
Microvascular damage to the retina from diabetes (diabetic retinopathy) is a leading cause of blindness



Damage to the nerves from diabetes (diabetic neuropathy) is a leading cause of foot wounds and ulcers, which frequently leads to foot and leg amputation



- **Cardiovascular disease:** People with diabetes are up to four times more likely to have a heart attack or stroke as people who do not have diabetes.<sup>12</sup> Approximately 50 percent of deaths in people with T2D worldwide are caused by cardiovascular disease.<sup>2</sup>
- **Kidney disease:** Approximately 65 percent of T2D people are at risk of, or have, some degree of decline in renal function.<sup>13-15</sup> T2D is the most frequent cause of kidney failure in countries of the Western world.<sup>1</sup> Declining renal function also increases the risk of developing cardiovascular disease by up to three times.<sup>16</sup>
- **Eye complications:** People with diabetes often develop diabetic retinopathy (changes in the retina of the eye) and have a higher risk of blindness. It is estimated that more than 2.5 million people worldwide are affected by diabetic retinopathy, the leading cause of vision loss in adults of working age (20 - 65 years) in industrialised countries.<sup>1</sup>
- **Foot complications:** People with diabetes can develop different forms of foot problems. Foot problems commonly occur when there is nerve damage or poor circulation in the feet.<sup>2</sup>



HbA<sub>1c</sub>: a form of haemoglobin, is measured to identify the average plasma glucose concentration.

## 5. The socio-economic impact of diabetes

Diabetes is considered one of the most challenging health problems of the 21<sup>st</sup> century, imposing a considerable economic burden on patients, national healthcare systems and the economy due to reduced earnings as a result of lost work days, restricted activity days, lower productivity at work, mortality and permanent disability caused by diabetes.<sup>1</sup> Diabetes complications have the greatest overall impact on the cost of T2D management.<sup>17</sup>

The International Diabetes Federation (IDF) estimated that global spending on healthcare to treat and prevent diabetes exceeded 548 billion USD in 2013. In the future, this figure is expected to increase further, potentially reaching 627 billion USD in 2035.<sup>1</sup>

## 6. Effective management of type 2 diabetes

Good diabetes control means not only reducing but also keeping blood glucose levels as close to normal as possible.<sup>18</sup> Sometimes, this can be achieved through a combination of diet and exercise. However, more often than not, people with diabetes will require medication to achieve glucose control in the long term. 50 percent of people who cannot control T2D by diet alone will require one or more glucose-lowering drugs three years after diagnosis. This rises to 75 percent nine years after diagnosis.<sup>19</sup>

Despite significant advances in scientific understanding and treatment, the prevalence of T2D continues to rise across the globe<sup>1</sup> suggesting that new therapeutic options are still needed. Many traditional treatments are not successful in helping people with T2D achieve and maintain blood glucose targets within recommended parameters<sup>19</sup> or may be associated with unacceptable adverse effects such as increased risk of hypoglycaemia, weight gain, increased cardiovascular risk and gastrointestinal side effects such as nausea, vomiting and abdominal pain.<sup>20-21</sup>

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