

## Type 2 Diabetes Media Fact Sheet

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### 1. Facts & figures

- Diabetes is the fourth leading cause of global death by disease<sup>1</sup>
- Every ten seconds two people develop diabetes<sup>1</sup>
- Each year, nearly four million deaths are attributable to diabetes.<sup>1</sup> An even greater number die from cardiovascular disease made worse by diabetes-related lipid disorders and hypertension<sup>1</sup>
- Projected prevalence of diabetes is expected to rise from 285 million to 438 million by 2030<sup>1</sup>
- The largest increase in prevalence will take place in developing countries<sup>1</sup>

Diabetes is a serious global problem affecting approximately 285 million people worldwide.<sup>1</sup> Each year, diabetes kills nearly four million people<sup>1</sup> with the total number of diabetes-related deaths estimated to increase by more than 50 percent over the next 20 years.<sup>1</sup> At least 50 percent of all people with diabetes are unaware of their condition and in some countries this figure may reach 80 percent.<sup>1</sup> By the time they are diagnosed, a great many have already started to develop diabetes associated complications, such as visual impairment, kidney impairment, heart disease, stroke and nerve damage.<sup>1</sup> Cardiovascular disease is the major cause of death in diabetes, accounting for some 50 percent of all diabetes fatalities, as well as a major cause of many cases of disability.<sup>1</sup>

A key contributing factor to the increase of type 2 diabetes is a global change in traditional lifestyles and dietary patterns.<sup>1</sup>

### 2. What is type 2 diabetes?

Type 2 diabetes is a chronic progressive disease and the most common form of diabetes, accounting for 85 to 95 percent of the total number of diabetes cases in developed countries and an even higher percentage in developing countries.<sup>1</sup>

Characteristic symptoms can include: frequent urination, excessive thirst, constant hunger, unexplained weight loss, blurred vision, breathing difficulties, extreme fatigue and irritability. However, many people with type 2 diabetes show no symptoms at the early stages of the disease and may only be diagnosed when complications occur.<sup>1,2</sup>

In most instances, type 2 diabetes is a dual-defect disease characterised by insulin resistance and impaired  $\beta$ -cell function. Glucose derived from dietary carbohydrate or hepatic glucose production is tightly regulated by

the hormone insulin. Type 2 diabetes results from an imbalance between insulin sensitivity and insulin secretion. Glucose production fails to be regulated adequately by insulin, leading to hepatic glucose overproduction and diminished glucose uptake by muscle tissue.<sup>3</sup>

Over time, the impaired glucose metabolism leads to a loss of  $\beta$ -cells and the remaining  $\beta$ -cells eventually fail to maintain their high rate of insulin secretion, leading to glucose intolerance, insulin resistance, and overt type 2 diabetes. In addition, accelerated gastric emptying and excessive lipolysis in adipose tissue also contribute to the development of type 2 diabetes. High blood glucose levels can lead to disease-related long-term complications.<sup>3</sup>

### 3. Risk factors and complications of type 2 diabetes

Obesity is one of the most important risk factors in the development of type 2 diabetes as it can cause increased insulin resistance that, in people with a certain genetic susceptibility, may develop into diabetes.<sup>1</sup> Insulin resistance accounts for more than 90 percent of all type 2 diabetes cases.<sup>3</sup> Until recently, type 2 diabetes mainly occurred in adults, however, the increase in type 2 diabetes among children and adolescents has emerged in parallel with an alarming rise in the number of young people who are overweight or obese.<sup>4</sup>

Risk factors that contribute to type 2 diabetes include:<sup>1</sup>

- Ethnicity
- Obesity, diet and inactivity
- Insulin resistance
- Family history
- Gestational diabetes

Up to 80 percent of type 2 diabetes cases could be prevented by adopting a healthy diet and increasing physical activity, yet every 10 seconds a person dies from diabetes-related causes.<sup>1</sup> 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>2</sup> On average, people with type 2 diabetes may die 5-10 years earlier than people without diabetes, mostly due to cardiovascular disease.<sup>1</sup>

As with all diabetes patients, those with type 2 are at risk of serious complications including:

- **Cardiovascular disease:** People with type 2 diabetes are up to four times more likely to have a heart attack or stroke as people who do not have diabetes.<sup>5</sup> Indeed, people with type 2 diabetes are as likely to suffer a heart attack as people without diabetes who have already had a heart attack, whilst 45 percent of those hospitalised for a heart attack have known or previously diagnosed diabetes.<sup>1,5</sup>
- **Kidney disease:** Type 2 diabetes is now the most frequent cause of kidney failure in countries of the Western world. The reported incidence varies between 30 percent and 40 percent in countries such as Germany and the USA.<sup>1</sup>
- **Renal failure and cardiovascular risk:** The risk of developing cardiovascular disease is up to three times greater in patients with impaired renal function.<sup>6</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. These problems are especially severe when nerve damage and poor circulation coincide.<sup>2,7</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 to 65 years) in industrialised countries.<sup>1</sup>

#### 4. The major diabetes complications

##### MACROVASCULAR COMPLICATIONS<sup>8,9</sup>



The risk of stroke in newly treated type 2 diabetes 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<sup>1</sup>

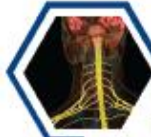
##### MICROVASCULAR COMPLICATIONS<sup>10-12</sup>



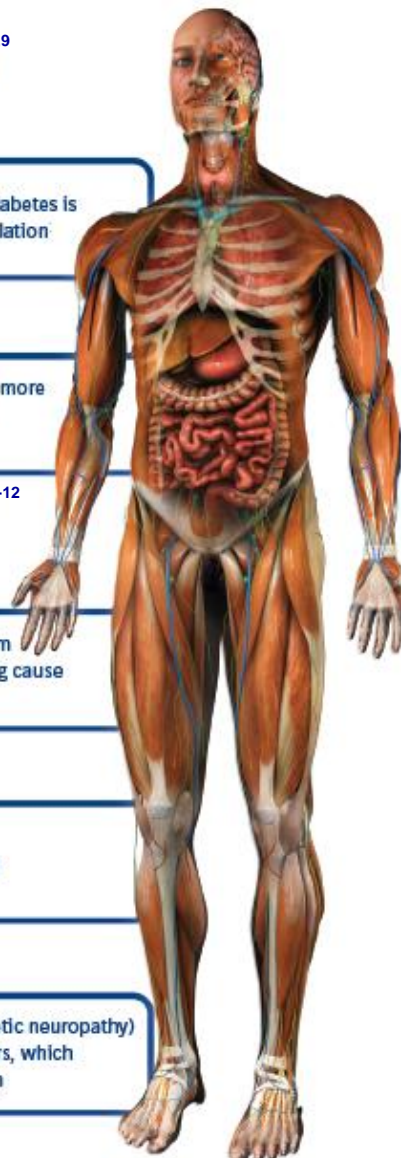
Damage to the kidney filtering systems from diabetes (diabetic nephropathy) is a leading cause of kidney failure



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



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## 4. Management of type 2 diabetes

Good diabetes control means not only reducing but also keeping blood glucose levels as close to normal as possible. Sometimes, this can be achieved through a combination of diet and exercise. However, more often than not, people with diabetes will require medication.

Despite significant advances in treatments for type 2 diabetes, its prevalence continues to rise across the globe,<sup>1</sup> suggesting that new therapeutic options are still needed. Effective control of the disease can help to prevent and delay the progression of serious complications associated with type 2 diabetes and reduce mortality.<sup>13</sup> However, many traditional treatments are not successful in helping patients with type 2 diabetes maintain their blood glucose targets and glycaemic control often deteriorates over time, resulting in the necessity to start insulin therapy.<sup>13</sup>

Moving forward, in addition to being efficacious, type 2 diabetes treatments need to be safer, more tolerable, and appropriate for a wider range of diabetes patients. In recent years, newer drug classes have become available, including thiazolidinediones (TZDs), glucagon-like peptide (GLP)-1 mimetics and, more recently, a newer generation of anti-diabetic treatment known as dipeptidyl peptidase (DPP)-4 inhibitors. Studies to date show that DPP-4 inhibitors are not only efficacious, but also among those best tolerated, with a low risk of hypoglycaemia and without causing weight gain.<sup>14</sup>

More information about type 2 diabetes and associated complications can also be found at [www.diabeteshealthlounge.com](http://www.diabeteshealthlounge.com).

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