

Type 2 Diabetes

– Media Backgrounder –

Described as one of the most serious health problems of modern times, type 2 diabetes is a metabolic disease marked by high levels of glucose in the bloodstream.^{1,2} Type 2 diabetes is the most common form of diabetes and accounts for 90-95% of all cases of the disease.² Also known as non-insulin dependent diabetes or adult-onset diabetes, type 2 diabetes is a chronic, life-long and potentially debilitating condition.²

A global epidemic

Type 2 diabetes has been likened to a global epidemic because of the vast numbers of people affected and the ever-rising prevalence of the disease – another 7 million people develop diabetes every year.² Worldwide, there are approximately 246 million diabetics, the vast majority suffering from the type 2 form of the disease.² By 2025, this number is expected to reach 380 million, representing 7.1% of the world's adult population.² The highest numbers of diabetics are found in the Western Pacific regions of the world – with 67 million sufferers – and Europe, where 53 million people are affected.² However, in terms of prevalence, it is the Eastern Mediterranean and Middle East which has the highest diabetes rate at 9.2%.²

Figures released by the International Diabetes Federation (IDF) for 2007 show India and China at positions one and two in the list of countries with the highest number of diabetes cases.² Currently, there are 40 million people with diabetes in India – estimated to rise to almost 70 million by 2025.² Similarly, the 39.8 million cases of diabetes seen in China today are expected to increase by almost a third by 2025, reaching 59.3 million.² Across Europe, prevalence figures are also high. There are 7.4 million diabetics in Germany and over 2 million in the UK.^{2,3} In Australia, the number of people with diabetes is estimated at 1.5 million and expected to grow to 1.8 million by 2010.⁴ In the US, it is projected that the number of individuals with diabetes will rise from 11 million in 2000 to 29 million in 2050.

In children also, the incidence of type 2 diabetes (previously viewed as a disease of the over-40s) is rising fast.² Cases of type 2 diabetes have now been reported in children as young as 8 years old.²

Recognising the risk factors

The steep rise in type 2 diabetes cases is a direct reflection of today's global trend towards increasing obesity and inactivity.⁵ About 90% of patients who develop the disease are obese – defined as weight > 120% of ideal.⁵ Age is also an important influence. The 40-59 year-old age bracket currently has the largest number of people, some 113 million worldwide, living with diabetes.² Other key risk factors for development of type 2 diabetes include:⁵

- Family history of type 2 diabetes in a first-degree relative
- Certain ethnic groups
- History of impaired glucose tolerance (IGT) or impaired fasting glucose (IFG)

Although genetics are known to play a role in the onset of type 2 diabetes, key risk factors – particularly physical inactivity, unhealthy diet and excess weight – significantly increase the likelihood of the disease developing.^{1,2}

Signs and symptoms

It is often the case that people with type 2 diabetes display no symptoms at all.¹ As such, many millions of people worldwide are thought to be undiagnosed sufferers.² Characteristic signs and symptoms of the disease, if they do occur, include excessive thirst, increased urination, fatigue, increased appetite, blurred vision, frequent or slow-healing infections and erectile dysfunction.¹ Definitive diagnosis of type 2 diabetes is achieved by testing fasting blood glucose levels and carrying out an oral glucose tolerance test.¹ If fasting blood glucose is found to be higher than 126 mg/dL (7.0 mmol/L) on two occasions, diabetes is diagnosed. Similarly, a glucose level higher than 200 mg/dL (11.1 mmol/L) two hours after the glucose tolerance test suggests diabetes.¹

Complications

Cardiovascular consequences

Cardiovascular disease (CVD) is the major complication of type 2 diabetes.² Overall, CVD ranks as the major cause of death in diabetes, accounting for between 50% and 80% of all diabetes fatalities.^{2,8} For people with type 2 diabetes, the risk of experiencing a heart attack or stroke is over twice as high as for non-diabetics.² This association between type 2 diabetes and cardiovascular disease carries a considerable burden of excess mortality and people with type 2 diabetes will die, on average, 5 to 10 years before their healthy counterparts.²

Type 2 diabetes is also associated with other serious complications affecting the kidneys, eyes, peripheral nerves, including:⁷

- *Retinopathy*. Diabetes is the leading cause of vision loss in adults of working age in industrialized countries²
- *Peripheral vascular disease and diabetic foot ulceration*. Diabetics are 15 to 40 times more likely to require a lower-limb amputation compared to the general population²
- *Nephropathy*. Type 2 diabetes has become the most frequent condition in people with kidney failure in countries of the Western world. Up to 20% of people with diabetes die of renal failure²
- *Neuropathy*⁷. The most common manifestation of diabetic neuropathy is sensory loss in the feet. Although neuropathy can sometimes lead to severe pain, it is often silent. However, even in the absence of symptoms, it puts the individual at high risk of foot ulceration and amputation.

Treatment approaches⁶

Multiple risk factor management appears to offer the greatest potential to reduce the risks of both macro- and microvascular disease. Fortunately, many diabetes-related cardiovascular deaths are preventable if action is taken to systematically address known and modifiable risk factors such as non-optimal blood pressure, lipid abnormalities, obesity and smoking.⁸ Blood pressure is thought to be a particularly important determinant of cardiovascular complications of diabetes. Many people with diabetes have hypertension, and this increases their risks of heart attack, stroke and other complications even more. However, lowering blood pressure may be important and worthwhile even among people with diabetes and blood pressure levels that do not meet the current definition of hypertension.

Keeping tight control of blood glucose levels is also key. Particularly in its early stages, type 2 diabetes can often be managed by diet and exercise alone and such lifestyle interventions are usually recommended as the first treatment approach. However, the disease inevitably progresses in most patients, leading to the need for oral glucose-lowering therapy. Ultimately, many patients will eventually need insulin in order to maintain satisfactory glucose levels.

Future trends

According to the IDF, the outlook for cardiovascular disease in the context of the current type 2 diabetes epidemic is “alarming”.⁸ Cardiovascular death rates are either high, or appear to be climbing, in countries where diabetes is prevalent.⁸ Recent achievements in Australasia and Europe, where cardiovascular disease is on the decline, may be compromised significantly by the upsurge in type 2 diabetes.⁸ Similarly, in other parts of the world where CVD has been proliferating in recent years, the additional impact of diabetes threatens to have devastating cardiovascular consequences.⁸ Such trends have led to widespread calls for urgent and global action to help prevent diabetes and to reduce the impact of complications of this condition.

– Ends –

References

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