THE GLOBAL CAMPAIGN

The Time Bomb of IGT

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Let’s talk numbers: the 8th edition of the Diabetes Atlas 2017 reports that over 350 million people between 20 to 79 years worldwide are estimated to have developed impaired glucose tolerance (IGT). Translated, this estimate equates to more than every 14th person worldwide with impaired glucose regulation after testing for an oral glucose tolerance test (OGTT), routinely used for diagnosing type 2 diabetes. IGT occurs when results are above the normal range (7.8 mmol/L (140.4 mg/dL) to 11.1 mmol/L (199.8 mg/dL)), but not high enough to be classified as having diabetes. IGT, also called prediabetes, carries a high risk for developing type 2 diabetes. Prediabetes is a term that covers varying degrees of altered glucose metabolism.

IGT is a time-bomb and it requires action. By 2045, it is projected that 587 million people will be diagnosed with IGT or every 12th person between 20 and 79 years will have IGT. In general, women and men are equally affected, but differences do exist by lifespan. While the prevalence of IGT in younger age (<45 years) is slightly higher in women, the prevalence in older age (>50 years) is higher in men. Notable is that almost half of all adults with IGT are under the age of 50 years, and nearly one-third of them are between 20 to 39 years. If the condition is left untreated, people are not only at high risk of developing type 2 diabetes, but because of development of IGT at a young age, people in this category are very likely to spend many years at a higher risk for type 2 diabetes.

The majority of people with IGT live in low- and middle-income countries (72.3%). However, the IDF North America and Caribbean region has the highest prevalence of IGT (14.1%) among all IDF regions, equalling to every seventh person. South East Asia has the lowest prevalence for IGT (3.5%). Noteworthy is that the three countries with the highest prediabetes prevalence are China (48.6 million), United States (36.8 million) and Indonesia (27.7 million), and in total make up nearly one-third of the worldwide IGT prevalence. Despite these alarming figures, National Diabetes Prevention plans still don’t exist in many countries.

These numbers are alarmingly high and reflect a large distinct global population at risk for type 2 diabetes. Currently, IGT does not get much attention from healthcare providers, because many people experience no symptoms at first. People who have developed prediabetes are likely to stay undiagnosed and under the surface until the condition develops into type 2 diabetes. Nonetheless, IGT does not only increase the risk for developing diabetes, but it also increases the risk of experiencing Cardiovascular Diseases (CVDs) and other major health complications for eyes, kidneys or the nervous system. In earlier research, it was estimated that up to 70% of people with IGT develop type 2 diabetes.

Ignoring IGT may have a primary role in early mortality. Worldwide, over 4 million people (20-79 years) are dying because of diabetes. This number is higher than the combined number of deaths from infectious diseases (HIV/AIDS: 1.1 million, Tuberculosis: 1.8 million, Malaria: 0.4 million). In the IDF South-East Asia region over 0.58 million people die due to diabetes before the age of 60 years. In the Africa Region, approximately 77% of all deaths that happen before the age of 60 years are attributable to diabetes.

Prediabetes also has a significant economic role in terms of lost productivity and increased health systems cost. People with IGT are more susceptible to overuse healthcare services and are thus subject to higher healthcare expenditure. In the US, for example, it was estimated that USD 44 billion was spent on healthcare only due to IGT.

While IGT and other forms of impaired glucose tolerance put individuals at high risk for developing type 2 diabetes, in many cases these conditions are preventable and reversible. Meda Pavkov, a physician scientist from the Centers for Disease Control (CDC), weighs in on what is commonly known, but seldom acted upon. “Impaired Glucose Tolerance is a serious but preventable and reversible health condition. Both persons who are affected and their physicians need to recognise this condition and take action. Losing weight, a healthy lifestyle and getting
regular physical activity can prevent its progression to type 2 diabetes as well as reverse it back to a normal state.”

The risk factors of prediabetes are the same as for type 2 diabetes: overweight, poor diet or poor nutrition, lack of physical activity, smoking, advanced age, and family history.6,7 There are a number of high quality studies which support the effectiveness of lifestyle interventions and changes in behaviour to preventing the progression of prediabetes to type 2 diabetes.8-10 Lifestyle modifications include diet, more physical activity, or weight loss. Studies suggest that even a moderate reduction in weight and only half an hour of walking each day reduces the incidence of type 2 diabetes by more than one-half.

So, what should we do? The problem of IGT must be acknowledged, because we have measures to turn the trend around! As simple as it sounds, a healthy (ier) diet and more physical activity (e.g. walk/bike to work) can do the trick.

**Key points from the IDF Diabetes Atlas 2017 related to IGT and their interpretations:**

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<th>ATLAS KEY MESSAGES</th>
<th>WHAT DO THEY REALLY MEAN?</th>
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<td>GLOBAL PREVALENCE OF IGT IS 7.3% IN 2017</td>
<td>IGT is known to be interlinked with other chronic conditions, obesity and diabetes complications causing serious public health threat to our generation. Especially some parts of the world carry higher burden on this condition, such as the North America and Caribbean region, which has the highest prevalence of IGT (14.1%). Furthermore, China has 60 million people with IGT, which is 17% of the global total.</td>
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<td>THE NUMBER OF PEOPLE WITH IGT IS 352.1 MILLION</td>
<td>People with IGT are often unaware of their condition and therefore do not know it is important to take care of their health. One to three out of every four people with IGT will develop diabetes within a decade. It is important to note that nearly one-third (28.8%) of all those who currently have IGT are in the 20-39 age group and are therefore likely to spend many years at high risk and often not knowing.</td>
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<td>34 MILLION MORE PEOPLE WITH IGT SINCE 7TH EDITION. BY 2045, THE NUMBER OF PEOPLE 20-79 YEARS WITH IGT IS PROJECTED TO INCREASE TO 532 MILLION</td>
<td>IDF draws its estimates on reliable data sources and can observe a rising trend, but IGT is also preventable and reversible and these huge prevalence figures can be avoided. Prevention through healthy lifestyle such as physical activity and healthy diet will help prevent IGT. Government investments are needed to provide health education and healthy environments to live.</td>
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Managing my risk for type 2 diabetes
Sila Thmor Chy, 42 years, Cambodia.

Four years ago, my doctor concluded that I had prediabetes, after following my blood glucose levels for some time, which were around 102-105 mg/dL (5.6-5.8 mmol/L). The highest blood-glucose level was about 112 mg/dL (6.2 mmol/L). My doctor recommended that I try to work on exercising more, eating less simple carbohydrates (such as rice, breads and sweets) and changing my sleeping behaviour. I took my doctor’s advice.

For the past four years, I am managing my condition through a healthier lifestyle without any medication. I ride 30 km by bike every morning and I eat a healthy diet. Moreover, I further enhanced my lifestyle by changing from staying up late at night, to going to bed earlier, having enough sleep and waking up early.

I check my blood glucose levels regularly to monitor my condition and to avoid any complications. With these changes, I lost 12 kilograms and maintain a stable body weight. I continue to manage my prediabetes.

References