**TYPE 1 DIABETES MELLITUS: A RELATIVELY UNKNOWN SIBLING OF TYPE 2 DIABETES MELLITUS**

Every year on 14th November, the world celebrates World Diabetes Day.

This day was historically celebrated since 1991 to create a global awareness campaign focusing on diabetes mellitus.

In conjunction with World Diabetes Day, Tan Sri Dr Noor Hisham Abdullah, the Director of Health, urged Malaysian to pay attention to diabetes.

National Diabetes Registry Report 2020 published by the Ministry of Health stated that [one in five adults in Malaysia aged 18 years and](https://www.theborneopost.com/2021/11/10/malaysians-urged-to-pay-attention-to-diabetes-health-dg/) above has diabetes without their knowledge.

The report mentioned that [99.33% of more than 1.6 million](https://www.moh.gov.my/moh/resources/Penerbitan/Rujukan/NCD/Diabetes/National_Diabetes_Registry_Report_2020.pdf) patients suffer from Type 2 diabetes mellitus, the most common form of diabetes.

Type 2 diabetes mellitus is a metabolic condition that causes the blood sugar level to become too high.

Most of the patients develop this condition often in middle-aged and older people.

Type 2 diabetes is the most common form of diabetes mellitus, and lifestyle choices such as diet, lack of exercise and obesity may influence the risk of developing Type 2 diabetes.

Given the overwhelming majority of the patients are Type 2 diabetes mellitus patients, we tend to ignore a more devastating form of diabetes mellitus, namely Type 1 diabetes mellitus.

In contrast to Type 2, Type 1 diabetes mellitus is often diagnosed in children and adolescents.

Type 1 diabetes mellitus, also known as juvenile diabetes or insulin-dependent, is a chronic condition in which the pancreas produces little or no insulin, an important hormone regulating blood glucose.

Compared to Type 2 diabetes, Type 1 diabetes is strongly influenced by genetic factors, as demonstrated by various studies worldwide.

[Annual Report of the Diabetes in Children and Adolescents Registry](http://www.acrm.org.my/DiCARE/documents/report/20090810_dicareReport.pdf) was established in 2006-2007 to collect information about diabetes mellitus in children and adolescents in Malaysia.

This report mentioned that [71.9% of diabetes](2nd%20report%20of%20diabetes%20in%20children%20and%20adolescents%20registry%20dicare%202006-2008) cases in children and adolescents in Malaysia suffered from Type 1 diabetes.

In addition, children of low socio-economic background, or more commonly known as the [B40 group today, are commonly affected by diabetic ketoacidosis](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7982891/pdf/fendo-12-606018.pdf).

Diabetic ketoacidosis (DKA) is an acute and life-threatening complication of diabetes characterized by high blood glucose, ketoacidosis (metabolic state caused by uncontrolled production of ketone bodies that cause metabolic acidosis) and ketonuria (a medical condition in which ketone bodies are present in the urine).

DKA occurs mainly in patients with Type 1 diabetes compared to Type 2 diabetes.

Given the similarities between Type 1 and Type 2 diabetes, a study led by Associate Professor Dr Azriyanti Anuar Zaini of Universiti Malaya reported that [misdiagnosis of Type 1 diabetes was common among children under the age of 5](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7982891/pdf/fendo-12-606018.pdf), increasing the risk of these children getting DKA.

Furthermore, recent global epidemiological data indicate that more than half of all new cases of Type 1 diabetes occur in adults.

Data from Sweden, a high-risk area for Type 1 diabetes, indicated [a similar incidence rate of Type 1 diabetes](https://www.diabetesresearchclinicalpractice.com/article/S0168-8227(08)00334-3/fulltext) between individuals 0-19 and 40-100 years of age.

Furthermore, a study from China reported that [65.3% of newly diagnosed cases of Type 1 diabetes in China were adults](https://www.bmj.com/content/360/bmj.j5295), implicating that this condition affects children and adults alike.

Often cases of misdiagnosis occur because Type 1 and Type 2 diabetes present similar signs and symptoms.

Type 1 diabetes diagnosis could be confirmed with laboratory investigation of diabetes-associated autoantibodies and C-peptide levels.

The question is, why should we be worried about Type 1 diabetes in Malaysia?

Global data estimates that annual increase between [3-5% of the incidence of Type 1 diabetes](https://onlinelibrary.wiley.com/doi/10.1111/j.1464-5491.2006.01925.x) from the past decade.

Furthermore, [environmental factors have been postulated to cause an increase in the Type 1 diabetes](https://www.nature.com/articles/s41574-019-0254-y) incidence rate worldwide.

Given the global trend of increasing Type 1 diabetes incidence rate, more attention should be given to Type 1 diabetes in Malaysia.

Compared to Type 2 diabetes, the current treatment for Type 1 diabetes is limited to insulin administration.

The Minister of Health, YB Khairy Jamaluddin, will be launching a campaign called the National Agenda for Healthy Malaysia.

More awareness should be created on various non-communicable diseases, mainly genetically influenced diseases, in line with this campaign.

Let us create a better and healthier Malaysia by spreading awareness of all non-communicable diseases, including Type 1 diabetes.