

Diabetes Article – World Diabetes Day 2007:

The First UN World Diabetes Day

On 20 December 2006, the United Nations General Assembly passed a landmark Resolution on diabetes. The Resolution recognizes the severity of diabetes and calls on all nations to develop national policies to tackle the diabetes pandemic. At the same time, the Resolution designates "14 November, the current World Diabetes Day, as a United Nations Day, to be observed every year beginning in 2007" and "invites all Member States, relevant organizations of the United Nations system and other international organizations as well as civil society including non-governmental organizations and the private sector, to observe World Diabetes Day in an appropriate manner, in order to raise public awareness on diabetes and related complications as well as on its prevention and care, including through education and the mass media."

For the global diabetes community, this recent development offers a tremendous opportunity for raising diabetes awareness on a scale not seen before. The theme chosen for the first ever UN World Diabetes Day is diabetes in children and adolescents.

Campaign goals 2007

The World Diabetes Day 2007 campaign sets out to:

- Reduce the global incidence of diabetic ketoacidosis in children at the time of diagnosis;
- Double the number of children supported by the IDF Life for a Child Program;
- Increase the number of national diabetes programmes aimed specifically at the prevention of diabetes in children;
- Reach leading decision-makers in healthcare, education and government agencies responsible for town planning and the promotion of physical activity

The campaign is led by the IDF Consultative Section on Diabetes in Children and Adolescents and the International Society for Paediatric and Adolescent Diabetes, with the collaboration and support of a wide coalition of stakeholders.

Diabetes affects children of all ages

The choice of theme for 2007 is timely. Diabetes is one of the most common chronic diseases of childhood. It can strike children at any age, including pre-school children and even toddlers. Yet diabetes in children is often diagnosed late, when the child has diabetic Ketoacidosis (DKA), or it is misdiagnosed completely. For example, the weight loss that comes with type 1 diabetes is at times misdiagnosed as malnutrition in places where malnutrition is common.

In many parts of the world, insulin – the life-saving medication that all people with type 1 diabetes need to survive – is not available, or is in short supply. Where it is available, family circumstances can mean that it remains inaccessible for reasons of economy,

geography or constraints upon supply. As a consequence, diabetes kills many children each year, particularly in low and middle-income countries. Those closest to the child and thus best placed to detect diabetes – the family, school peers and staff, the family physician – may not know the warning signs. World Diabetes Day 2007 sets out to challenge this lack of awareness and establish firmly the message that 'no child should die of diabetes'.

As a response to the dire circumstances facing children with type 1 diabetes in low- and middle-income countries, the International Diabetes Federation established a Child Sponsorship Program to provide supplies and care to places where it is most needed. Currently, this program supports just over 500 children.

On the rise in children

More than 200 children a day now develop diabetes. For many children from the developing world, the outlook is bleak.

Both main types of diabetes: type 1, which requires treatment with insulin for survival, and type 2 diabetes, are on the rise in children and adolescents. Recently released figures from the Diabetes Atlas show that over 70,000 children develop type 1 diabetes each year and indicate that 440,000 children worldwide under the age of 14 now live with type 1 diabetes. At the same time, type 2 diabetes, previously rarely seen in children, is rising quickly, especially among ethnic minority youth.

Today, type 2 diabetes is growing at alarming rates in children and adolescents. In some places it is catching or even surpassing type 1 as the predominant form of diabetes in the young. In the USA, for example, it is estimated that type 2 diabetes represents between 8 and 45% of new-onset diabetes cases in children, depending on geographic location. Over a 20-year period, type 2 diabetes has doubled in children in Japan, so that it is now more common than type 1. In native and aboriginal children in North America and Australia, the prevalent rate of type 2 diabetes ranges from 1.3 to 5.3%. We need to draw the attention of governments everywhere to assure that healthily food is available, accessible and affordable for children and to create opportunities for children to be physically active.

Diabetes – different for children

Diabetes has a unique impact on children and their families. The daily life of children is disrupted by the need to monitor blood glucose levels, take medication, and balance the effect of activity and food. Diabetes can interfere with the normal developmental tasks of childhood and adolescence, which include succeeding in school and the transition to adulthood. In young children, frequent episodes of very low blood sugar (hypoglycaemia) may result in brain abnormalities and impaired cognitive function. In order to help the child and family cope, and to ensure the best possible physical and emotional health of the child, care should be delivered by a multidisciplinary team with good knowledge of paediatric issues. Support must also be given to caregivers and to school personnel. In this way, children with type 1 or type 2 diabetes can reach adulthood with as little

adverse impact as possible on their well-being. For children with diabetes in developing countries the situation at present is bleak.

Proper education in diabetes management is key to reducing complications and saving lives. While it remains demanding, early diagnosis followed by appropriate care and support can help children and their families to succeed in controlling diabetes so that any child with diabetes can grow up to be healthy and happy.

Many of our children will grow up to face a future with diabetes if nothing is done. The Centre for Disease Control in Atlanta, USA, predicted that of all the children born in the USA in the year 2000, a third of them would go on to develop diabetes during their lifetimes. The figure escalated to a shocking 50% for African American children. New data from the IDF Atlas show that over 240 million people now live with diabetes. The same data predict a 65% increase to a staggering 380 million within a generation if nothing is done. Despite the facts, the governmental agencies that should take responsibility for turning the tide of this global epidemic remain, or choose to remain, ignorant of its magnitude and severity. Regretfully, to a large extent, the same remains true of the general public. We must change this now, or it will be our children and grandchildren that bear the future brunt of the diabetes epidemic.

No Child Should Die of diabetes

With the rising prevalence of diabetes in children comes the increased risk of children dying from diabetes. Many deaths are due to diabetic ketoacidosis (DKA) - also known as diabetic coma. Children with DKA have a very high level of sugar and acid in their blood which requires emergency treatment. Without insulin, children can lapse into a coma and die. In national population studies, the mortality rate from DKA in children is 0.15% to 0.30%. Cerebral oedema, or swelling of the brain, is a complication unique to children. It accounts for 60-90% of all DKA deaths. Other deaths in children are due to a lack of access to care and medication. This is especially true for children in low- and middle-income countries.

Children are more sensitive to a lack of insulin than adults, and are at higher risk of a rapid and dramatic development of diabetic ketoacidosis. It has been shown that in developed countries there are still children with type 1 diabetes dying from ketoacidosis. From a global perspective, child deaths from undiagnosed diabetes is likely a large but hidden problem. The life expectancy for someone who requires insulin to survive in Zambia is 11 years. In Mali, it is 30 months. In Mozambique, a person with type 1 diabetes will die within a year of diagnosis.

When diabetes is diagnosed under age 40, life expectancy is shortened by 1 to 2 decades and quality of life is negatively impacted. This is particularly true for children with type 2 diabetes, who often have multiple conditions such as dyslipidemia, hypertension, non-alcoholic fatty liver, sleep apnea and depression. Children with diabetes are at high risk of developing complications at a younger age.

Raise awareness, improve education and save lives

Despite modern treatment, 12 years after diagnosis more than 50% of children living with diabetes go on to develop complications. In children with poor blood sugar control, complications occur sooner. Intensive diabetes therapy can control diabetes and allow children to live a healthy and full life. However, intensive diabetes therapy can lead to an increased incidence of very low blood sugar (hypoglycaemia). In young children, frequent hypoglycaemia may impede brain development and function. Insulin is not a cure. With no cure for diabetes in sight, systems of diabetes management that improve blood sugar control must be well defined, with age-specific targets, and must be carefully taught to patients and families.

For children with diabetes who are born in developing countries, we have a pressing responsibility. We must work to raise awareness of the often dire situation that children and their families face. We must advocate for improved access to diabetes medication and care everywhere so that diabetes is not a death sentence as a consequence of geography.

It has been 85 years since the first successful injection of insulin. In many countries, there are now examples of people who have lived for 50, 60 or even 70 years with diabetes. Scientific and medical advancement mean that the opportunities for good diabetes management have increased. Insulin remains an imperfect treatment and not a cure, yet without it children with diabetes cannot survive. The medication, appropriate support and care should be available and affordable to all those who need it. Appropriate healthcare should be the right of every child with diabetes.

Francine Kaufman and Phil Riley

Diabetes Article- World Diabetes Day 2008:

World Diabetes Day was established by the International Diabetes Federation (IDF) and the World Health Organization (WHO) in 1991. Celebrated every year on November 14, World Diabetes Day is now an official United Nation's World Day as a consequence of the successful Unite for Diabetes campaign.

World Diabetes Day is represented by a blue circle logo. The blue circle is the global symbol of diabetes and signifies the unity of the global diabetes community in response to the burgeoning diabetes pandemic.

The World Diabetes Day campaign is led by the International Diabetes Federation and its member associations. It is a multi-stakeholder partnership that includes diabetes representative organizations and their members around the world and Official World Diabetes Day Partners. Each year the campaign is centred on a theme that is established by the IDF Executive Board and approved by the World Health Organization.

This year sees the second year of a two-year campaign. The theme for the 2008 World Diabetes Day Campaign is diabetes in children and adolescents. The decision to take World Diabetes Day themes over more than one year gives us all the opportunity for better planning over the longer term, ensures that materials remain relevant for longer and helps us all to make better use of the limited resources we have at our disposal. The main campaign slogan is 'Know the warning signs'. The key campaign messages are: '*No child should die of diabetes*', '*Diabetes is different for children*' and '*Diabetes affects children of all ages*'.

The main aims for the 2008 campaign are to:

- Raise awareness of the warning signs of diabetes
- Encourage initiatives to reduce diabetic ketoacidosis and distribute materials to support these initiatives
- Attract sufficient resources to the International Diabetes Federation's Life for Child Program to support a further 500 children by the end of 2009
- Promote healthy lifestyles to help prevent type 2 diabetes in children
- Reach more than 1 billion people through the media with diabetes-related awareness messages
- Drive a global lighting campaign in which iconic landmarks, public and private buildings, and individuals can all participate

The importance of the theme

Both type 1 and type 2 diabetes are increasing in the young. Type 1 is increasing at a rate of 3% per year in children. The figure increases to 5% among children of pre-school age. Worldwide, more than two hundred children a day develop diabetes. For most of them, it is the accident of geography and the socio-economic surroundings into which they are born that, to a large extent, determines their future health. Type 2 diabetes, once thought to only affect adults, is now increasing in children and adolescents. Limited

lifestyle options and poor nutrition mean that the current generation of children is growing up with an ever-increasing risk of diabetes. In some countries, type 2 diabetes has overtaken type 1 as the predominant type of diabetes in children and adolescents.

Insulin was discovered over 85 years ago and has been giving life to many people with diabetes ever since. Despite this, children with type 1 diabetes in many parts of the world lack access to life-saving medication and, as a result, die or face the terrible complications of diabetes at a young age. Insulin remains notably absent from the World Health Organization's list of essential medicines, including its list specifically for children.

No child should die of diabetes

As a response to the dire circumstances facing children with type 1 diabetes in low- and middle-income countries, the International Diabetes Federation established an aid program (Life for a Child) in partnership with Diabetes Australia-NSW and HOPE worldwide to provide supplies and care to places of greatest need. Currently, this program supports close to 1000 children. As an aim of the campaign for World Diabetes Day, IDF is looking to expand the program.

All children have the right to participate fully in all the experiences of childhood and adolescence, whether they have a chronic disease such as diabetes or not, and wherever they live in the world. This year we want to establish the right of all children with diabetes to at least a minimum standard of care that that can help quarantine survival.

In many developing countries, children with diabetes suffer because insulin and other diabetes supplies are not affordable or sometimes not even available. Many children die soon after diagnosis. Many others face the burden of complications while still young.

The International Diabetes Federation's Life for a Child Program supports the care of 1000 children in the following countries: Tanzania, Rwanda, Democratic Republic of Congo, Nigeria, Azerbaijan, Nepal, India, Sri Lanka, Philippines, Papua New Guinea, Fiji, Uzbekistan, Bolivia, Mali, Ecuador, Sudan and Cameroon.

The Program works with diabetes centres in these countries to provide the clinical care and diabetes education that the children in their care need to stay alive. The centres provide comprehensive clinical and financial feedback.

The goals of the Program are to provide:

- Sufficient insulin and syringes
- Blood glucose monitoring facilities
- Appropriate clinical care
- HbA1c testing
- Diabetes education
- Technical support for health professionals (if requested)

The Program aims to raise awareness of the plight of children with diabetes in the countries in which it is present and encourages governments to establish appropriate care to safeguard the future of children with diabetes.

The Program is supported by donations from individuals, diabetes representative organizations, Rotary International and companies working in diabetes. Funds to support the Program are also generated by the International Diabetes Federation through the sale of World Diabetes Day merchandizing. Most individual donors contribute a dollar a day. Support is provided to recognized diabetes centers to purchase insulin and syringes, and provide monitoring and education. Financial trails and the health outcomes of the children are carefully monitored.

"Over 200 children a day get diabetes. Without support, many of them will not have access to the healthcare they will need to survive into adulthood."

Taking on DKA

Globally, children with diabetes are threatened by poor access to healthcare, inadequate diabetes supplies including insulin, and lack of trained healthcare professionals. As a result, the diagnosis of diabetes can often be delayed and children can die. Even in the developed world, the diagnosis of diabetes can often be delayed, particularly in young children. This is because many people do not yet understand or believe that diabetes can occur in infants, toddlers and school-aged children. It is not easy to recognize an increase in thirst and urination in children who are still in diapers, nursing, drinking from bottles or at school all day. Children with diabetic ketoacidosis can be misdiagnosed as having the flu and can slip into a coma or die before their diabetes is treated. In the United States for example, the DKA rates at diagnosis of diabetes are for the most part still between 25-40% of cases. Youth with type 2 diabetes often have a delay in their diagnosis as well. Recent reports in the US have described that a small percentage of youth with type 2 have died from hyperosmolar coma with blood glucose levels in excess of 800 mg/dl associated with severe dehydration at onset.

The International Diabetes Federation in collaboration with the International Society for the Study of Diabetes in Adolescence and Pediatrics (ISPAD) is campaigning to raise awareness of childhood diabetes to reduce the incidence of DKA and hyperosmolar coma at the time of diagnosis. The impetus for this is the successful campaign that was conducted in Parma, Italy from 1991 to 1998. This was an information campaign that was promoted in schools and pediatrician's offices. It focused on bed-wetting, which was reported as the first sign of diabetes by 89% of parents of children with diabetes in Parma. By placing pamphlets and posters throughout schools, child centers, and pediatric offices during the 8-year period, the DKA rate dropped from 78% at diagnosis to 12.5%. With the posters still on display, the DKA remains that low today. A group of international experts have come together to develop a tool box that contains posters and pamphlets about the signs and symptoms of diabetes in infants, children and youth that can be used around the world in schools, the offices of healthcare providers, and with the media.

World Diabetes Day 2007: a brief report

Last year the early passage of the UN Resolution on diabetes resulted in the need to extend key messages beyond the child theme to incorporate messages related to raising awareness of the UN Resolution. The objectives for World Diabetes Day 2007 were broadened to include promotion of the blue diabetes circle and increased awareness of the United Nations 'World Diabetes Day' Resolution.

For the first time we used sold merchandize to support the campaign goals. Since launching the diabetes Circle lapel pins in May 2006, we have produced and distributed more than 500,000. As of January 2007 a percentage of any income from sales has been donated to the Life for a Child Program. The first significant attempt to expand WDD merchandizing beyond the pin was the production of Crayons. The item was chosen because of its link to the World Diabetes Day theme and the crayon was used to provide the campaign image. To date, more than 52,000 boxes have been sold.

A highly successful element of the 2007 World Diabetes Day campaign was the development of three main calls to action. We sought to encourage political action through the signing of proclamations and declarations.

We sought to engage community action at the grass roots level by encouraging such activities as walks and cycle rides. Our third call to action sought to drive media exposure of diabetes by asking people to light iconic landmarks in blue.

Thanks to the work of diabetes representative organizations and committed individuals the calls to action were highly successful: a total of 159 proclamations were confirmed; IDF membership associations mobilized a total of 31,598 registered participants in last year's walks, and an incredible total of 279 iconic monuments were confirmed. The campaign expanded beyond iconic monuments to include office buildings and people's homes.

World Diabetes Day was an unprecedented success with the global media. Coverage of the day penetrated all media – print, radio, broadcast, online. This success can be attributed largely to the calls to action, which provided a number of angles for journalists, including photo and broadcast opportunities. An estimated more than 1.2 billion people were reached through the media.

Online tools were used to share information and keep a record of events. The World Diabetes Day website (www.worlddiabetesday.org) received over 100,000 visitors in the period around World Diabetes Day. Over 900 photos were posted to the site and a total of 18 videos were submitted through YouTube. We ran a highly successful banner campaign. World Diabetes Day banners were distributed widely through the internet with well over a million banner views recorded.

World Diabetes Day 2008: the campaign at a glance

Calls to action

For the World diabetes Day 2008 campaign we are once again calling on the global diabetes community to light iconic buildings and sites to mark World Diabetes Day around the world. We want to encourage more than 500 iconic buildings and monuments to light up for 2008. This year we hope to encourage schools to participate and for individuals to light their own houses or in some other way participate with personal acts

of lighting. We hope that with the greater advance warning this year it will give sufficient time to organize an event around the lighting to add context to the event. Online, we are working on a virtual light concept to support World Diabetes Day.

The first landmark to join the 2008 Monument Challenge was the Banting House National Historic Site in Canada. The building, located in London, Ontario, Canada and known as 'The birthplace of insulin', will light up in blue for the whole month of November to mark Diabetes Awareness Month and World Diabetes Day. The Banting House National Historic Site occupies the house in which Dr Frederick Banting lived and practised medicine from 1920-21. This is highly appropriate as World Diabetes Day is celebrated every 14 November to mark the birthday of Frederick Banting, who, along with Charles Best, is credited with the discovery of insulin in 1921.

A further call to action will be to promote the signing of declarations to support the rights of the child with diabetes.

We will also promote community action to mark the day. As in previous years we will promote activities such as walks, fun runs or cycle rides that can engage the diabetes community at the grass roots level. The goal is to once again reach more than 1 billion people through the media.

Share the experience online

World Diabetes Day engages people with diabetes and people at risk of diabetes throughout the world. It targets those in a position to bring about improvements in diabetes healthcare and prevention, as well as those in a position to fund diabetes care. It provides a unique opportunity for people with diabetes, healthcare providers and healthcare decision-makers to work together to raise global awareness of diabetes and advocate for change. The worlddiabetesday.org website is the place to share your World Diabetes Day experiences online. This year we are working to make the site available in Spanish, French and English. Please visit the site and share information about your activities.

This year marks the conclusion of a 2-year effort to highlight the unique aspects of diabetes in children. It underscores that a child who has access to medical care and supplies, and who is supported by his or her family and community, can grow up to participate fully in all aspects of society.

Francine Kaufman and Phil Riley