

## THE PREMIER AWARENESS CAMPAIGN OF THE DIABETES WORLD

### *When does World Diabetes Day take place?*

World Diabetes Day takes place on 14 November every year. The date was chosen because it marks the birthday of Frederick Banting, who, along with Charles Best, is credited with the discovery of insulin. While many events take place on or around the day itself, a themed campaign runs throughout the year.

**WORLD DIABETES DAY**  
**14 November**

### *How did it all begin?*

World Diabetes Day was introduced by the International Diabetes Federation (IDF) and the World Health Organization (WHO) in 1991, in response to concern over the escalating incidence of diabetes around the world. Since then, the event has grown in popularity every year.

### *Why the Blue Circle?*

The blue circle signifies the unity of the global diabetes community in response to the diabetes pandemic.

### *What is diabetes?*

Diabetes is a chronic condition that arises when the pancreas does not produce enough insulin, or when the body cannot effectively use the insulin it produces. Insulin is a hormone made by the pancreas that enables cells to take in glucose from the blood and use it for energy. Failure of insulin production, insulin action or both leads to raised glucose levels in the blood (hyperglycemia). This is associated with long-term damage and the failure of various organs and tissues.

### **THERE ARE TWO MAIN TYPES OF DIABETES:**

#### **Type 1 diabetes**

Type 1 diabetes is an autoimmune disease characterized by the destruction of the insulin-producing cells in the pancreas. Consequently, people with type 1 diabetes produce very little or no insulin and must take insulin by injection or insulin pump to survive. Type 1 diabetes, which used to be called juvenile-onset diabetes, is most commonly diagnosed in children and young adults.

#### **Type 2 diabetes**

The development of type 2 diabetes is marked by insulin resistance. People with type 2 diabetes cannot use the insulin that they produce effectively. They can often manage their condition through exercise and diet. However, in many cases oral drugs are needed and often insulin is required. Type 2 diabetes accounts for over 90% of the 246 million cases of diabetes worldwide. Both type 1 and type 2 diabetes are serious and both can affect children. It is important to know the warning signs of diabetes.

### *Other types of diabetes*

A third type of diabetes, gestational diabetes develops pregnancy. This may lead to T2D in women later in life. Other rarer types of diabetes also exist. Some children diagnosed with diabetes may have elements of both type 1 and type 2 diabetes. This phenomenon is often referred to as 'hybrid', 'mixed' or 'double' diabetes. It is linked to the rise of overweight and obesity in children and adolescents.

### *The complications of diabetes*

Diabetes is a chronic, life-long condition that requires careful monitoring and control. Without proper management it can lead to very high blood sugar levels. These are associated with long-term damage to and the failure of various organs and tissues.

### *Complications include:*

- Cardiovascular disease, which affects the heart and blood vessels and may cause fatal complications such as coronary heart disease (leading to a heart attack) and stroke.
- Kidney disease (diabetic nephropathy), which may result in total kidney failure and in the need for dialysis or kidney transplant.
- Nerve disease (diabetic neuropathy), which can ultimately lead to ulceration and amputation of the feet and lower limbs.
- Eye disease (diabetic retinopathy), characterized by damage to the retina of the eye which can lead to vision loss.

### *Diabetes in children and adolescents*

Diabetes is one of the most common chronic diseases of childhood. It can strike children of any age, including infants and toddlers. Yet diabetes in children is often diagnosed late, when the child has very high, potentially life threatening, blood glucose levels. Sometimes it can be mistaken for something else, such as the flu. In many parts of the world, insulin, which children with type 1 diabetes need to survive, is not available because of cost. As a result, many children die of diabetes, particularly in low and middle-income countries.

In 2007 and 2008, World Diabetes Day aims to raise awareness to the rising prevalence of both type 1 and type 2 diabetes in children, and emphasize the importance of early diagnosis and education to reduce complications and save lives.

### **IS YOUR CHILD AT RISK?**

#### *Know the diabetes warning signs\**

- Frequent urination
- Excessive thirst
- Increased hunger
- Weight loss
- Tiredness
- Lack of interest and concentration
- Blurred vision
- Vomiting and stomach pain (often mistaken as the flu)

*\*In children with type 2 diabetes these symptoms can be mild or absent*



### *Challenges for infants and toddlers and their caregivers include:*

- Dependence on parents and care providers for managing diabetes
- Irregular eating and activity levels
- Difficulties for care givers to distinguish normal behaviour from diabetes-related mood swings
- Pain caused by injections and glucose monitoring
- Hypoglycaemia (low blood sugar) is more common

### *Challenges for school-age children include:*

- Adjusting to change from home to school environment
- Establishing relationships with other children
- Learning to self-manage their diabetes
- Adapting their diabetes to the school environment

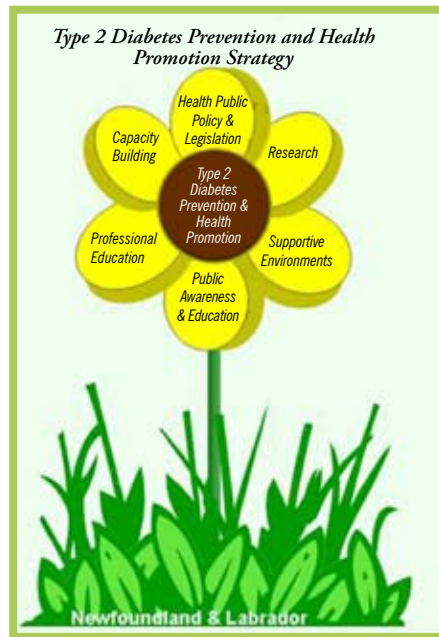
### *Challenges for adolescents include:*

- Higher insulin insensitivity linked to puberty
- Rapid behavioral changes
- Increased risk of depression, anxiety, and low self esteem
- Transition to adult services



## A global epidemic

Today, there are more than 250 million people with diabetes worldwide. Within 20 years, this number is expected to grow to 380 million. Diabetes is a global epidemic with debilitating and life-threatening complications. Children and adolescents are not spared. Type 1 diabetes is growing by 3% per year in children and adolescents, and at an alarming 5% per year among pre-school children. It is estimated that, worldwide, 70,000 children under 15 develop type 1 diabetes each year (almost 200 children a day).



## Prevention

At present, type 1 diabetes cannot be prevented. The environmental triggers that are thought to generate the process that results in the destruction of the body's insulin producing cells are still under investigation. Type 2 diabetes can be prevented in many cases by maintaining a healthy weight and being physically active. Studies in China, Finland and the United States have shown that type 2 diabetes can be prevented through weight loss and exercise.

Many programmes have been implemented around the world by governments, schools, and communities to promote healthy lifestyles and living environments:

- Some schools are providing children with increased access to fruit and vegetables.
- Some schools are reducing the availability of sugary drinks and promoting physical activity.
- Some healthcare providers are monitoring body mass index (BMI) in children and discussing the results with families.
- Some local communities are offering lifestyle programmes for children and families.

## Diabetic Diet

Diabetic diet is simply a balanced healthy diet which is vital for diabetes treatment, however, a lot of people have the misconception that this diet consists only of diabetic foods. The regulation of blood sugar in the non-diabetic persons is automatic, adjusting to whatever foods are eaten. But, for the diabetic individual, extra caution is needed to balance food intake with exercise, insulin injections and any other glucose altering activity.



## Management of diabetes in children:

Children and adolescents with diabetes face a lifetime of living with the condition. Compared to the management of diabetes in adults, diabetes in children and adolescents presents particular challenges. These include:

- Maintaining normal physical and psychological growth and development.
- Involving the whole family. This is particularly true when the child is too young to understand or manage the diabetes.
- Organizing care for the child with diabetes outside of the home environment (when the child is at school, for example). The management of diabetes in children and adolescents poses different challenges at different ages.

It is important that the family, healthcare provider and diabetes care team work together to develop a diabetes management plan for the child with diabetes. The plan should include:

- The current insulin and monitoring routine of the child
- The child's ability to self-manage the diabetes
- The common signs, symptoms and treatment for high and low blood sugar
- Necessary equipment and supplies, for use in cases of emergency
- Meals and snacks
- Physical activity
- Emergency contact information for parents or guardians

Teachers, students and parents should work together to support implementation of a child's diabetes management plan. This will ensure a safe learning environment and equal access to educational opportunities for all children with diabetes.

(Adapted from 'Overview of diabetes in children and adolescents.' Fact Sheet produced by the National Diabetes Education Program Available online at [www.ndep.nih.gov/diabetes](http://www.ndep.nih.gov/diabetes)).



## THE WORLD DIABETES DAY CAMPAIGN IN 2007/2008 AIMS TO:

- Increase the number of children supported by the IDF Life for Child Program
- Raise awareness of the warning signs of diabetes
- Encourage initiatives to reduce diabetic ketoacidosis
- Distribute materials to support these initiatives
- Promote healthy lifestyles to help prevent type 2 diabetes in children

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