

# Type 1 diabetes in children



Diabetes mellitus type 1, also known as juvenile-onset diabetes, is a chronic condition that occurs when a child's pancreas no longer produces insulin at the rate which is needed (Robertson, 2016, p. 472). This occurs when the body's immune system damages the cells that are responsible for producing insulin ( *Type 1 Diabetes Mellitus in Children* , 2019). Insulin is a hormone that uses glucose for energy and when it is not being produced, it is necessary that it be replaced. If insulin is not replaced in the body, glucose will not have the ability to leave the bloodstream to enter the cells, which will result in high blood sugar levels (hyperglycemia) and other numerous health problems (Bialo, 2018).

The signs and symptoms of type 1 diabetes in children are not always apparent and can take time to develop (Bialo, 2018). The signs and/or symptoms that may develop are as followed but not limited to; high levels of glucose when tested, frequent urination, constant thirst, dehydration, blurred vision, and fatigue ( *Type 1 Diabetes Mellitus in Children* , 2019). Type 1 Diabetes is diagnosed by symptoms and health history from the child and the family as well as blood tests: fasting plasma glucose and random plasma glucose ( *Type 1 Diabetes Mellitus in Children* , 2019). If and when diabetes is suspected or confirmed in a child, a pediatric endocrinologist, specialist in diagnosis and treatment for children with chronic conditions of the endocrine system, may be referred ( *Type 1 Diabetes Mellitus in Children* , 2019).

Type 1 diabetes treatment for children is crucial for control to reduce signs/symptoms, prevent other health problems, and help maintain normal growth and development within the developmental domains (Bialo, 2018). Treatment involves prescribed insulin that is checked twice or more daily, a

healthy diet and physical activity that is controlled, and checking blood sugar levels regularly throughout the day (Robertson, 2016, p. 473). Type 1 Diabetes has no known cure, which requires individuals with the disease to continue treatment throughout their life and when properly done, can result in long, productive lives (Bialo, 2018).

Complications and/or other health problems can occur from a child having type 1 diabetes. If and when signs/symptoms are missed and treatment does not occur, ketones chemicals can build up in the bloodstream causing serious symptoms, which are often mistaken for common viruses or infections (Bialo, 2018). This condition is known as diabetic ketoacidosis or DKA (Bialo, 2018). DKA can be checked and/or monitored by regular urine testing. Hypoglycemia, dropping of the blood sugar, can also occur when type 1 diabetes is present. Long-term complication or problems that can result from type 1 diabetes as well as improper care of type 1 diabetes include but are not limited to kidney damage, heart disease, stroke, nerves problems, and blood vessels problems (Bialo, 2018). Although these complications or problems typically do not affect children, individuals diagnosed with type 1 diabetes are at risk for their development (Bialo, 2018).

As stated above, hypoglycemia is a condition in which insulin levels increases resulting in the blood sugar decreasing. This condition is also known as a diabetic insulin reaction ( *Patient Education* , 2018). This can occur from too much insulin being prescribed and/or given, being ill, being overly active, or not eating enough ( *Patient Education* , 2018). A diabetic insulin reaction can happen suddenly, and the child can experience a range

of physical symptoms such as but not limited to; hunger, nausea, stomach pain, weak/tired, shakiness, sweaty, and becoming pale (Robertson, 2016, p. 473). Emotional/mental symptoms can also occur: anxiety, confusion, unsteady, and even changes in mood ( *Patient Education* , 2018). Diabetic insulin reaction can also result in seizures and coma (Robertson, 2016, p. 473). If and when hypoglycemia occurs, there are things that can be done to stop the reaction: testing and retesting blood sugar, eating or drinking fast-acting sugars, small meal/snack, and glucagon injections, if necessary ( *Patient Education*, 2018.) Preventive care against diabetic insulin reactions can include helping the child recognize early signs/symptoms of a reaction, recording the information regarding the reaction (signs/symptoms, insulin given, food/drink, and activity level), and having the child wear a medical ID that helps identify their condition ( *Patient Education* , 2018).

For a child type 1 diabetes can be a stressful and confusing diagnosis. Along with this diagnosis, the child can begin to experience a sense of different emotions/feelings: punishment, guilt, fear, anxiousness, and anger ( *Type 1 Diabetes Mellitus in Children* , 2019). Type 1 diabetes requires lifelong treatment that also requires responsibility on the child, family and any other individual the diagnosed child is in care of. The child, regardless of age, may not understand the importance of the regular blood tests, administering insulin, monitoring diet and physical activity, or having to be consciously aware of the signs/symptoms of a diabetic insulin reaction. They can often become scare and uncooperative with their treatment (Bialo, 2018). Finding, organizing, and offering support for the child is beneficial because it will help them establish a routine of doing their treatment(s), help subside any

negative emotions/feelings they may experience, and give them a sense of confidence in their ability of controlling their chronic condition. Diabetes camps, physical and online support groups, and advocacy groups are available for both the child and their family members to help learn more regarding management skills as well as type 1 diabetes as a whole ( *10 Tips for Families New to Type 1 Diabetes* , 2014).

Another form of support that is equally beneficial as well as crucial would be that of educational professionals and other individuals the child is in regular care of. These educational professionals and other individuals the child is in regular care of are required to be educated and trained in the signs/symptoms of type 1 diabetes and a diabetic insulin reaction, and the procedures to take if an emergency were to occur (Robertson, 2016, p. 473). Younger children are often not involved in their own treatment, so providing a Diabetic Medical Management Plan prepared by the physician(s) of the child is suggested (Robertson, 2016, p. 473). These individuals should also be trained in checking blood sugar, blood and urine for ketones, recording the results, and professionally responding to them (Robertson, 2016, p. 473). Parents and/or family of the child in care should provide the documentation, supplies, and equipment that necessary for treatment and reactions (Robertson, 2016, p. 473).

#### Work Cited (Bibliography)

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