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# Diabetes in Children



## What is child diabetes?

Pediatric diabetes is type 1 diabetes that affects children or young people, due to the exposure of the pancreatic cells to damage, which leads to their inability to produce the insulin that the body needs to enter glucose "sugar" into the cells of the body and then convert food into energy so that the cells can perform their functions optimally.



# Are there risk factors that help in developing diabetes in childhood stage?

Yes, there are many factors, including:

## 1. Genetic factors:

The risk of infection increases slightly if one of the parents has diabetes.



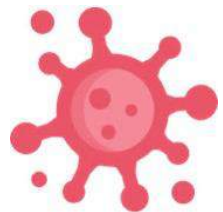
## 2. Immune factors:

This is due to an immune defect leads to production of beta cell antibodies.



## 3. Other factors:

- **Infections:** The germs that cause infections are mostly viruses that enter orally to the pancreas, and directly destroys the beta cells.



# What are the symptoms of diabetes in children?



Frequent urination

Drinking much of water



Weight Loss

Extreme Fatigue



Formation of Ketones

## What are ketones?

Ketones are substances produced by the body when it burns stored fats to produce the energy it needs. When large amounts of fats are burned quickly, the level of ketones in the blood rises, and the blood becomes more acidic, which affects the chemical balance of the body, causing ketoacidosis.

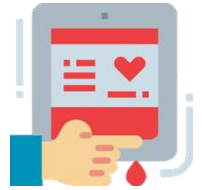
## What are ketones symptoms?

- Stomach pain
- Lethargy and poor concentration
- Nausea or vomiting
- Dry and itchy skin



## How to diagnose diabetes in children?

By using modern accredited devices of diabetes detection.



## What are the complications?

- High blood sugar
- Low blood sugar



# First: Hyperglycemia

What are the symptoms?



Blurred vision

Drinking a lot of water



Lethargy

Dry and itchy skin



Frequent urination

Dizziness and headache



Nausea

# What are the causes of high blood sugar?

- Forgetting insulin dose



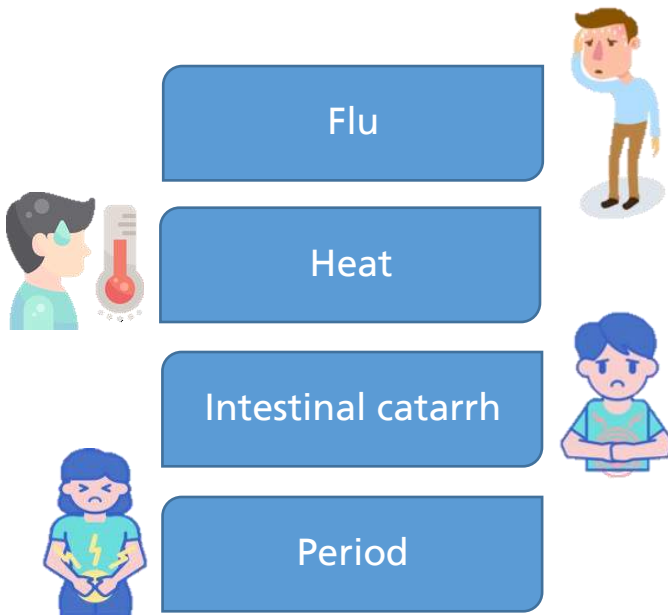
- Intaking much food



- Emotional pressure



- Exposure to infection, disease as:



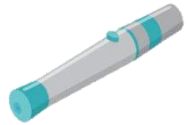


## What is the therapy of high blood sugar?

- Drink much water



- Take correction dose



- Check glucose level and ketones



## Second: Hypoglycemia

Low blood sugar is the most common among children, and the risk of a hypoglycemic coma is greater than the risk of a hyperglycemic coma and as it continues, it damages the nervous system, especially the brain.



# What are Symptoms of low blood sugar (Hypoglycemia)?



Blurred vision

Anxiety and tension



Headache

Feeling hungry



Increased heart rate

Feeling dizzy



Cold sweats



Shivering



Fatigue



# What are the causes of low blood sugar (Hypoglycemia)?

- Irregularity and delay in eating meals or taking an insulin dose without eating a meal



- Taking more than the recommended dose for treatment



- Exercising for long periods without eating snacks before and after sports



- Lack of interest in snacks between main meals

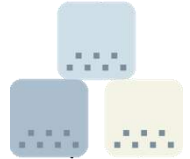


## What is the treatment of low blood sugar?

- Have a half cup of sweetened juice or three dates



- Or three sugar cubes or 5-6 sweets



- Repeat the test after 15 or 20 minutes



- Take a snack that contains carbohydrates and proteins



- If symptoms persist, repeat the treatment.



- If these symptoms do not disappear, go to the nearest hospital



# How to control children blood sugar level?

Physicians confirm that controlling blood sugar levels in children is divided into three parts:

## 1. Dietary plan:

When developing a dietary plan, the following factors should be taken into consideration:

age, gender, weight, efficacy, cultural

background, and attention to the child's favorite food.

There are some general points that can be applied carefully:

- It is preferable to obtain the required quantities of sugars through starches and be careful to avoid cane sugar. Artificial sweeteners such as saccharin can be used as a substitute for sugar.



# How to control children blood sugar level?

## 1. Dietary Plan:

- Food containing fiber helps to control the level of sugar in the blood.



- Replace animal fats and fatty meats with vegetable oils, red meat steaks, chicken breasts and fish.



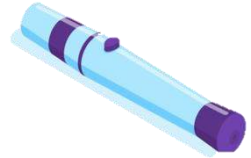
- The intake of sugars and foods can be adjusted in the dietary plan, be careful of the regularity of food quantities and the stability of sugar intake. Excess can sometimes be allowed on some occasions, as well as with fried cakes and sweetened pieces of sugar such as chocolate and caramel.



# How to control children blood sugar level?

## 2. Pharmacotherapy:

Giving insulin injection under the skin as instructed by the treatment physician and make sure that the plan is reviewed on a regular basis.



## 3. Self-monitoring

Self-monitoring is one of the parents' responsibilities by measuring blood sugar in the beginning of urine several times a day at the beginning of treatment, but when the situation stabilizes and the child gets used to insulin doses, it is recommended to do the test twice or more daily, and then reduce it to once a week.





## Notice:

The results must be recorded in special tables so that the treating medical team can review them during regular visits.



## Final Advices:

- You should treat your child with diabetes normally. Avoid excess fear and excessive pampering. Your interaction, as well as the interaction of the medical team with the child is one of the basics to control and coexistence safely with diabetes.
- Avoid using the word "diet" with your child because it means prevention and restriction. This may make the child feel anxious or disobedient.

### Sources and References:

American Diabetes Association, ADA

### Review and Audit:

The content of this booklet is reviewed by  
Diabetes Unit Consultants at King Fahd University Hospital.

## Health Awareness Unit

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