

How to Care for Your Child with Diabetes: Hypoglycemia

This leaflet will provide you with information about hypoglycemia causes, symptoms, diagnosis, treatment and home care advice.

What is a Hypoglycemia?

Hypoglycemia is when the level of sugar (glucose) in the blood is below 70 mg/dL (4 mmol/L).

The normal range of blood glucose is about 70 to 140 mg/dL (4-7.8 mmol/L)

What are the symptoms of Hypoglycemia?

Each child's reaction to low blood glucose is different.

Learn your child signs and symptoms of when his/her blood glucose is low.

Symptoms and signs of low blood glucose include:



What are the causes of Hypoglycemia?

Low blood glucose is common for children with Type 1 Diabetes Mellitus because of the following:

- Insulin
 - Taking too much insulin
 - Accidentally injecting the wrong insulin type or dose
 - Injecting insulin directly into the muscle (instead of just under the skin)

- Food

- Not eating enough carbohydrate
- Eating foods with less carbohydrate than usual without calculating the correct insulin dose
- Composition of the meal; how much fat, protein and fibers can affect the absorption of the carbohydrate

- Physical activity

- Exercise can reduce blood glucose early or later in the day
- The intensity, duration and timing of exercise can all affect blood glucose levels

How is Hypoglycemia diagnosed?

By checking blood glucose using glucometer and /or sensor.

If your child is experiencing symptoms and is unable to check his/her blood glucose for any reason, treat the Hypoglycemia.

How is Hypoglycemia treated?

- The 15-15 Rule

- **Step 1:** Check the blood glucose level first. If you cannot check the blood glucose; treat as hypo immediately
- **Step 2:** Give your child fast acting carbohydrate based on your child age and weight

Age	Approx. body weight	Amount of Fast Acting Carbohydrate
Under 5 years	Less than 20kg	5g
5 - 10 years	20 - 32kg	10g
10 - 15 years	33 - 50kg	15g
Over 15 years	More than 50kg	20g

Examples of fast acting carbohydrates

5 grams	10 grams
<ul style="list-style-type: none"> <input type="checkbox"/> ½ tube glucogel <input type="checkbox"/> 50 ml coke or 7-up (not diet) <input type="checkbox"/> 2 jelly beans <input type="checkbox"/> 1 teaspoon Honey or Jam or sugar <input type="checkbox"/> 50 ml fresh fruit juice 	<ul style="list-style-type: none"> <input type="checkbox"/> 1 tube glucogel <input type="checkbox"/> 100 ml coke or 7-up (not diet) <input type="checkbox"/> 4 jelly beans <input type="checkbox"/> 2 teaspoon Honey or Jam or sugar <input type="checkbox"/> 100 ml fresh fruit juice
15 grams	20 grams
<ul style="list-style-type: none"> <input type="checkbox"/> 1½ tube glucogel <input type="checkbox"/> 150 ml coke or 7-up (not diet) <input type="checkbox"/> 6 jelly beans <input type="checkbox"/> 3 teaspoon Honey or Jam or sugar <input type="checkbox"/> 150 ml fresh fruit juice 	<ul style="list-style-type: none"> <input type="checkbox"/> 2 full tube glucogel <input type="checkbox"/> 200 ml coke or 7-up (not diet) <input type="checkbox"/> 8 jelly beans <input type="checkbox"/> 4 teaspoon Honey or Jam or sugar <input type="checkbox"/> 200 ml fresh fruit juice

- **Step 3:** Check the blood glucose after 15 minutes. If it is still below 70 mg/dL, repeat step 2
- **Step 4:** Check the blood glucose again 20-30 minutes later to confirm blood glucose above 70 mg/dL (4.0 mmol/L) is maintained.

Treatment of hypoglycemia should increase blood glucose by 54-72 mg/dL (3-4mmols/L)

Home care advice

- Do not leave your child alone when he/she is having a hypoglycemia episode
- When treating hypoglycemia, the choice of carbohydrate source is essential.
- Do not give chocolate, milk and other high fat foods to treat hypos as they raise the blood glucose too slowly
- If hypoglycemia episode is just before a mealtime (when insulin is usually given), treat the hypoglycemia first and once blood glucose is above 70 mg/dL, then give the insulin as usual with a meal
- Carry a source of fast-acting carbohydrate with you all times even when you go out with your child-such as juice, glucose tablet
- Inform your diabetes team when your child has attended emergency department with Hypoglycemia or has illness-causing Hypoglycemia

When should I seek medical advice?

If your child is experiencing low blood glucose levels and you are not sure why, Arrange for an appointment with your diabetes team to review and figure out the cause of the lows. Remember to take with you a record of blood glucose (glucometer), insulin, exercise and food data

Go to the Emergency Department:

If your child Blood glucose is below 70mg/dL and experiences the following symptoms:

- Loss of consciousness
- Fainting
- Not responded to the above treatment.

Please take these actions at home:

- Give your child Glucagon injection immediately. Check the expiry date and preparation instructions
- Place your child in the recovery position if possible (on one side) to keep the airway open and allow them to breath
- Do not give anything by mouth.
- Call emergency services – 999
- Stay with your child