HEALTH BASICS

Diabetes in children: dealing with low blood sugar

This guide explains how to recognize and respond safely to low blood sugar in a child with diabetes.

WHAT IT IS
A glucose level below your child's safe target

WHERE IT COMES UP
Glucose checks, insulin treatment, exercise, illness, and missed meals

WHY IT MATTERS
The brain needs enough glucose to work safely

WHAT IT IS NOT
Not a separate disease or new diabetes diagnosis

WHO TO ASK
Your child's diabetes team or school diabetes nurse

HOW IT IS CHECKED
Continuous glucose monitor or finger-prick glucose meter

Overview

Low blood sugar, also called hypoglycemia , can happen when a child with diabetes has more insulin in their body than they need at that moment. Glucose is the main sugar in the blood and an important source of energy for the brain.

For many children with diabetes, a reading below 70 mg/dL, or 3.9 mmol/L, is treated as low. Your child's diabetes plan may set a different action point based on their age, treatment and ability to notice falling glucose.

Low blood sugar is not a separate disease. It is an event that can occur during diabetes treatment, especially with insulin. Most episodes can be managed quickly with fast-acting carbohydrate. A child who cannot swallow safely needs emergency treatment instead.

Each child should have a written plan explaining when and how to treat a low reading. Copies may be needed at home, school, childcare and activities.

How it works

Insulin moves glucose from the blood into the body's cells. A child's blood glucose can fall if the amount of insulin is greater than the glucose available from food or released by the liver.

This balance can change after:

A continuous glucose monitor, or CGM, measures glucose in fluid just under the skin. It can show the direction glucose is moving and may give an alert before or during a low. Because sensor readings can lag behind blood glucose, your child's plan may call for a finger-prick meter check when the reading does not match how they feel.

A child with low glucose may become hungry, shaky, sweaty, pale, irritable or unusually quiet. They may report weakness, dizziness, a headache, blurred vision or difficulty concentrating. Younger children may not be able to explain what is wrong. Behaviour that seems sudden or out of character can be an early clue.

Signs can differ between episodes. Some children have few warning signs, especially if lows happen often.

- Eating less carbohydrate than expected or delaying a meal
- Taking more insulin than needed
- Exercise, including activity earlier in the day
- Vomiting or another illness that reduces food intake
- Changes in routine, growth, insulin needs or injection sites

Why it matters for your health

The brain needs a steady glucose supply. Treating a low promptly can help prevent confusion, loss of coordination and progression to a severe episode.

Repeated lows can make it harder for a child to notice the usual warning signs. They may also affect confidence around sleep, school, sport or time away from caregivers. These concerns are worth discussing during routine diabetes follow-up. The diabetes team can review glucose records and look for patterns without blaming the child or family.

Fear of low blood sugar can sometimes lead families to keep glucose above the agreed target or to give extra food routinely. That may make diabetes management harder. A personalized plan can help balance safety with the child's usual glucose goals.

What can go wrong

Severe hypoglycemia means the child needs another person's help because they are confused, having a seizure, unconscious or unable to swallow safely. This is an emergency.

Give the prescribed glucagon if it is available and you have been shown how to use it. Glucagon is a medicine that tells the liver to release stored glucose. Products may be injected or given into the nose, so follow the instructions for the specific product.

Call emergency services. Place an unconscious child on their side because glucagon can cause vomiting. Do not put food, drink or glucose gel in the mouth of anyone who is unconscious, having a seizure or unable to swallow safely.

Hypoglycemia unawareness means the usual early warnings are reduced or absent. A child may not recognize the low until thinking or coordination is affected. Contact the diabetes team promptly if this is happening. Treatment targets and alert settings may need review.

Night-time hypoglycemia can occur during sleep, sometimes after daytime exercise. CGM alerts may help, but no device prevents every episode. Ask the diabetes team what overnight checks or alert settings are appropriate for your child.

Recurrent hypoglycemia means lows are happening repeatedly or in a pattern, such as after sport or before lunch. This calls for routine but timely review. Insulin, meals, activity and device data may need to be examined together.

What you can do

If your child is awake, responsive and able to swallow, follow their written plan. Give the planned amount of fast-acting carbohydrate. Examples may include glucose tablets, glucose gel that can be swallowed safely, juice or a regular sugar-containing drink.

Use the amount listed for your child. Younger or smaller children may need less carbohydrate than older children, and too much can cause a high reading later.

Recheck glucose at the interval stated in the plan. Many plans use about 15 minutes. Repeat treatment if the reading remains low, following the same instructions. Once glucose has recovered, the plan may call for a meal or snack if the next meal is not soon or if activity will continue.

Also:

Stop exercise when glucose is low. The child should not restart until the low has been treated and their plan says it is safe. Glucose can also fall several hours after prolonged or intense activity.

Arrange routine contact with the diabetes team if lows are becoming more frequent, happening overnight, following a pattern or occurring without warning. Seek earlier advice after a severe low, even if the child seems fully recovered.

Call emergency services for a seizure, unconsciousness, serious confusion, abnormal responsiveness or inability to swallow safely.

- Keep fast-acting carbohydrate where the child lives, learns and exercises
- Check glucagon expiry dates and replace used or expired products
- Make sure caregivers know where supplies are and how to use them
- Record the time, glucose reading, treatment and possible cause
- Review plans before camps, travel, sports or changes in routine

Common questions

Should I treat a low CGM alert without a finger-prick check?

Follow your child's plan. A meter check may be useful if the sensor reading does not match how the child feels or if glucose is changing quickly. Do not delay emergency treatment to confirm a reading when the child cannot respond or swallow safely.

Can chocolate treat low blood sugar?

Chocolate contains sugar, but its fat can slow sugar absorption. Fast-acting glucose or another option named in the child's plan is usually more suitable.

Can my child go back to sleep after a night-time low?

First confirm that glucose has recovered as directed by the plan. Follow any instructions about repeat checks or food. Contact the diabetes team if night-time lows recur.

Should glucagon be kept at school?

Ask the diabetes team and school how glucagon fits into the child's care plan. Staff who may need to give it should know where it is stored and receive appropriate training.

Does a low mean insulin should be stopped?

Do not make lasting insulin changes based on one episode unless the diabetes team has provided instructions for that situation. Insulin changes may be needed when lows form a pattern, but stopping insulin without a plan can lead to high glucose and ketone production.

Sources

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