



HYPOGLYCAEMIA

PREVENT, RECOGNIZE AND TREAT HYPOGLYCAEMIA

Living as normal as possible

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WHAT IS HYPOGLYCAEMIA?

Not only high blood sugar is problematic in diabetics. Blood sugar levels may also drop so far, due to various causes, that the affected person's blood sugar level is insufficient. The technical term for this state is hypoglycaemia.

Hypoglycaemia is defined as the state in which the blood sugar (more precisely blood glucose) level has fallen to below 70 mg/dl (3.9 mmol/l).

WHAT ARE THE SIGNS OF HYPOGLYCAEMIA?

In a hypoglycaemic state, the level of blood glucose, the most important energy source for the cells of the body, is too low. The various symptoms of such a state may occur relatively suddenly. The symptoms of a hypoglycaemia vary considerably among individuals and may change over time. The first signs, which may occur singly or together, are usually:

- Rapid pulse / palpitations
- Cold sweat
- Pale complexion
- Trembling
- Wobbly knees
- Restlessness, nervousness or anxiety
- Problems concentrating
- Weakness, tiredness
- Headaches
- Food cravings
- Dizziness

Hypoglycaemias sometimes occur during the night and then often go unnoticed. They do, however, affect the quality of sleep, leaving one feeling tired and exhausted in the morning.

The following types are differentiated:

Mild and moderate hypoglycaemias

In this situation, self-help is usually possible by eating rapidly digestible carbohydrates, e.g. dextrose (glucose).



Severe hypoglycaemias

If the blood glucose level continues to fall, one may lose consciousness or fall into a coma. In rare, extreme cases, this may even become life-threatening. In such cases, family members or an emergency physician will have to intervene and help. Recognition of the signs by persons who have lived with diabetes for a very long time or who suffer frequent hypoglycaemias may be late or lacking altogether. These persons are at greater risk for a severe hypoglycaemia.



Whether mild or severe, a hypoglycaemia is always a complication requiring an immediate reaction. Speak with your doctor about dealing with a hypoglycaemia properly.

WHO IS AT RISK?

Persons with type 1 or 2 diabetes who inject insulin and/or take tablets that stimulate insulin production (e.g. sulphonyl urea) are at increased risk for hypoglycaemia.

Thankfully, severe hypoglycaemias are not very frequent. Some patients never experience severe hypoglycaemias, whereas others have them several times a year.



Do not attempt to drive a motor vehicle if you notice signs of a hypoglycaemia. If this occurs while driving, stop the vehicle, quickly eat or drink rapidly digestible carbohydrates and check your blood glucose level. Do not continue driving until everything is back to normal.

Also eat gradually digestible carbohydrates. Always keep rapidly digestible carbohydrates within reach in the vehicle, e.g. grape sugar.



WHAT ARE THE CAUSES?

A hypoglycaemia can have many different causes. Frequent causes:



Errors in medication dosage

Either insulin or tablets, both of which involve a risk of hypoglycaemia, were overdosed. This sharply reduces the blood glucose level.



Insufficient food intake

Either too little was eaten in relation to the medication dosage or food intake did not follow administration of insulin quickly enough. In such cases, the medications lower the blood glucose level when it is not high enough to begin with. The result is then a sharp drop in blood glucose.



Unexpected physical exertion / overexertion

Sporting activity was not planned or lasted longer than expected. Physical activity consumes blood glucose. This thus reduces the requirement for medications that lower blood glucose. The blood glucose content then drops too far unless a snack is eaten or the medication dosage is adjusted accordingly.



Alcohol consumption

Alcohol reduces glucose production in the liver. Since the liver is then unable to release sufficient glucose, the blood glucose level falls.



WHAT CAN BE DONE IN CASE OF A HYPOGLYCAEMIA?

It is important to respond immediately to a threatening hypoglycaemia. You must ingest rapid-acting carbohydrates without delay. For example:

- ✓ 4 pieces of grape sugar (glucose)
- ✓ A glass of fruit juice or a sugared soft drink
- ✓ 12 gummy bears
- ✓ 2 tablespoons of sugar or honey

These measures will alleviate the symptoms by normalizing the blood glucose level. Then measure blood glucose.



Low-calorie beverages are not suitable for hypoglycaemias, chocolate is also not reliable in such cases. The sugar in these items is insufficient or does not enter the bloodstream quickly enough.

To keep the blood glucose level from decreasing again, it then makes sense to eat additional carbohydrates that are digested more slowly. Suitable foods include whole grain products, fruit or muesli bars. Measure blood glucose after 30 minutes to make sure it is then higher than 120 mg/dl (6.7 mmol/l). Since hypoglycaemias may occur anytime, anywhere, always carry grape sugar with you. Special glucose gels that take up little space are also available for this purpose.

AND WHAT ABOUT SEVERE HYPOGLYCAEMIAS?

In severe cases, the blood glucose level can fall to dangerous levels, resulting in states of disturbed consciousness. This can eventually lead to loss of consciousness or to seizures and coma. In such cases, affected persons depend on immediate help from others. Helpers should call emergency medical services (112) and remain with the patient until the doctor arrives. The doctor can then administer a glucose infusion to restore blood glucose to normal levels quickly. Glucagon syringe kits are also available with which trained laypersons, e.g. family members, teachers or colleagues at work can administer an emergency injection.

Glucagon powder is mixed with liquid, drawn up into a syringe and injected into muscle tissue. Glucagon stimulates the liver to release glucose into the blood. This raises the blood glucose level rapidly, improving your condition. Any person who has already suffered multiple severe hypoglycaemias should keep emergency glucagon sets available at all important everyday venues (at home, at work, at school/ kindergarten) and inform reliable persons about how to use them in an emergency.



It makes sense to carry a diabetic ID on one's person at all times so that other persons will know right away what is going on and can help accordingly. You will find an Emergency ID on the last page of this brochure as well as under the topic header Service at www.lilly-diabetes.de.

