

# Products for Treating Low Blood Glucose

LOW BLOOD GLUCOSE

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You work hard to avoid low blood glucose episodes, but they can't always be prevented. Luckily, there are products that can assist you when you go low—and others that may help you stay on track in future.

**LOW BLOOD GLUCOSE** (hypoglycemia) occurs when one's blood glucose level drops below so-called "normal" levels. Blood glucose is usually considered to be approaching low levels when it drops below 70 milligrams per deciliter (mg/dl).

A drop can occur when you take too much insulin or oral medications; eat too little food or inadequate nutrients to cover your insulin or oral medications; don't eat at the appropriate time; or get more physical activity than you're prepared for. And sometimes, hypoglycemia occurs for no apparent reason. People with diabetes frequently recognize their own unique symptoms. Common symptoms of low blood glucose include shakiness, sweats, tingling lips, sudden mood swings, irritability, hunger, fatigue, weakness, poor coordination, paleness, or loss of concentration. Some people have a condition called hypoglycemia unawareness, which means they don't develop or recognize symptoms of low blood glucose. They can lose consciousness before they even know they have a problem.

Experts recommend that you check your blood glucose before treating a low—just to confirm that your symptoms are indeed being caused by a drop in blood glucose and not something else. However, always treat for low blood glucose when you can't check or when you're in doubt. People who struggle with hypoglycemia unawareness should check their blood glucose often, just to be safe.

Treating low blood glucose means eating 15 grams of a fast-acting carbohydrate. Wait 15 minutes, then check your blood glucose again. If it's still below 70 mg/dl, take

another 15 grams of carbohydrate. If this doesn't bring your blood glucose above 70 mg/dl, you may need help. Either call your doctor or go to the emergency room.

Your doctor, diabetes educator, or dietitian may have recommended that you keep a supply of a fast-acting carbohydrate at home, in your office, and in your glove compartment if you drive or even in your pocket or purse. Some common sources are fruit juices, raisins, fruit, or a couple of pieces of hard candy.

If you are wondering if you should spend money on commercial glucose tablets or gels, consider these three points:

**How Fast They Work.** Manufacturers of these products claim their products work faster than food in treating low blood glucose. A little basic information will help you understand their argument.

Most candy, including candy you're likely to carry for low blood glucose, is made from a variety of sugars, with sucrose (table sugar) being the most common ingredient. Glucose is the sugar that affects blood glucose the most. Sucrose, or table sugar, is half glucose and half fructose. Fructose has a lesser and slower effect on blood glucose. Therefore, the glucose tablets may be more effective.

Since many sucrose-containing foods also have a fair amount of fat, you may be getting four times as many calories from a candy bar as from glucose tabs or gel. Also, fat slows digestion, and this slows down the effects of the sugar.

(Note: Because the type 2 medications Precose [acarbose] and Glyset [miglitol] slow the digestion of complex sugars, people who take these drugs should

## Over-the-Counter Products

For meal replacement, blood glucose stabilization, and preventing low blood glucose.

### Products to Prevent Low Blood Glucose

**ExtendBar** (Clinical Products, Ltd.) Provides a continuous glucose supply for up to 9 hours to help stabilize blood glucose. For overnight, during/after exercise, or when going too long between meals. Various flavors, plus sugar-free and gluten-free varieties.

### Products to Lessen the Risk of Low Blood Glucose

**Glucerna Shakes and Weight-Loss Shakes** (Abbott Laboratories, Ross Products Division) Glucerna shakes are for snacks or to be used in conjunction with a prescribed diet. Weight-loss shakes are for meal replacement. Improved recipe; re-closable bottle; various flavors.

**GlucoBurst Diabetic Drink** (PBM Products, LLC) Designed to help maintain blood glucose levels. Does not contain fructose. Lactose and gluten free. Flavors: vanilla, chocolate, and strawberry. Sold in 8-oz., ready-to-drink containers.

**Enterex Diabetic Drink** (Victus, Inc.) Does not contain fructose, saccharin, or aspartame. Contains sucralose (Splenda), a noncaloric sweetener that does not require insulin for its metabolism. Contains 3.4 grams of fiber and 0.5 grams of saturated fat per 8-oz. serving. Lactose- and gluten free. Flavors: vanilla, chocolate, and strawberry. Sold in 8-oz., ready-to-drink containers.

always treat low blood glucose with pure glucose or milk.)

**Form.** Another possible advantage of manufacturers' products is the form they come in. Because tablets or gels seem more like drugs or medications than candy, you're not tempted to snack on them. The sugary foods you might keep around to treat low blood glucose can be a constant temptation because such foods seem like treats.

Another advantage to the commercial product is that you know how much to take. The most common mistake people make when

dealing with low blood glucose is overtreating it. By doing this, they risk pushing their blood glucose levels too high.

It's hard to figure how much fruit juice to drink, or how many pieces of candy to eat, especially if low blood glucose has impaired your judgment. But the commercial tablet or gel has the dosage clearly written on the package. (Note that a tablet from one manufacturer may not provide the same dose as one from another manufacturer.)

**Cost.** In most cases, commercial

## OVER-THE-COUNTER PRODUCTS FOR TREATING LOW BLOOD GLUCOSE

Product Name (Manufacturer/Distributor)	Carbohydrate/Dose	Calories	Form
<b>BD Glucose Tablets</b> (BD)	5 g/tablet, serving size: 3 tabs	20 per tab, 60 per serving	Orange-flavored tablets.
<b>Dex4 Glucose Gel</b> (Can-Am Care, LLC)	15 g/tube	70 (entire tube)	Three resealable tubes per packet. Gel level indicator with 5-, 10-, and 15-g increments. Fruit punch flavor.
<b>Dex4 Glucose Tablets</b> (Can-Am Care, LLC)	4 g/tablet	15 per tab	Ten-count tube and 50-count bottle. Assorted fruit, tropical blast, and strawberry cream quick-dissolve tablets.
<b>Dex4 GlucoShot</b> (Can-Am Care, LLC)	15 g/bottle	70 (entire bottle)	Glucose liquid in a 2-oz. resealable bottle. Available in lemon-lime and mixed berry flavors.
<b>GlucoBurst Glucose Gel</b> (PBM Products, LLC)	15 g/dose (1 dose per packet)	70	Natural arctic cherry-flavored gel.
<b>GlucoBurst Glucose Tablets</b> (PBM Products, LLC)	5 g/tablet	20 per tab	Tablets: 9-count flip-tube; 24-count screw-top bottle. Flavors: sour apple, sour cherry.
<b>Glucose 45 [three-dose]</b> (Paddock Laboratories)	15 g/dose (3-dose resealable tube)	60 per dose	Lemon-flavored gel.
<b>Glucose 15 [unit dose]</b> (Paddock Laboratories)	15 g/tube	60 (entire tube)	Grape- or lemon-flavored gel.
<b>Various store brand glucose tablets, gel, and liquid</b> (Can-Am Care, LLC)	4 g/tablet, 15 g/tube (resealable)	15 per tablet; 70 per 15-g gel; 70 per 2 oz. liquid	Tablets: 10-count tubes and 50-count bottles. Gel: 3 resealable tubes per carton. Liquid: glucose liquid in a 2-oz. resealable bottle. Flavors: assorted fruit, strawberry cream quick-dissolve, lemon-lime, mixed berry, fruit punch. Available at Wal-Mart (ReliOn), Kroger, Good Neighbor, Kmart (Value Plus), CVS, Walgreens and other various stores.

products cost more than sugar, honey, or fruit juice. Exact cost will depend on what you pay for a box and how much of the product you need to handle low blood glucose.

Whether you decide to use a food or a commercial product, be sure to have some form of carbohydrate containing glucose handy wherever you are. Many starches, such as crackers or bread, raise blood glucose quickly, but during an attack of acute hypoglycemia it will likely be faster and easier to pop open a tube of glucose gel or drink a glass of juice to quickly raise blood glucose.

Never give a person who has lost

consciousness anything to eat or drink. He or she should be given a glucagon injection. If glucagon is not available, call an emergency number (such as 911); the unconscious person must be taken to the nearest emergency room immediately.

### New Products

Several commercial products are available that contain ingredients designed to either aid in the prevention of hypoglycemia or lessen the rise in blood glucose after meals or snacks.

Snack bars designed to help prevent hypoglycemia provide a more

sustained release of glucose because they contain uncooked cornstarch, a type of carbohydrate that may cause a delayed rise in blood glucose. Clinical studies have shown these snack bars to be effective in reducing episodes of hypoglycemia, particularly at night.

Snack bars and beverages that claim to reduce blood glucose surges also contain carbohydrate (starch) that is digested and absorbed at a slower rate. Diabetic snack bars and beverages are not to be used to treat hypoglycemia because they might not raise blood glucose levels as quickly as the glucose in other carbohydrate sources. ▲