Glucagon is a hormone that raises the level of glucose in the blood. It’s much like the hormone insulin, except insulin lowers the level of glucose in the blood. Think of glucagon as the opposite of insulin. Originating in the pancreas, both hormones are part of our body’s glucose regulation system. It is a beautiful thing when everything works normally. But for many of us, we have to help our bodies along in glucose regulation.

When taking insulin, low blood sugars can’t always be anticipated and prevented. We all hope we never have to use the glucagon kit, but it is important to be prepared with knowledge and familiarity.

- **Have a kit and know where it is.** If you don’t have a glucagon emergency kit, or if it has expired (it’s usually good for just one year), call your doctor and request a prescription. If you go on vacation, be sure to take the kit with you. Store it with your insulin in a place that stays below 90 degrees F.

- **Know the signs of low and extreme low.** Severe low blood sugar, hypoglycemia, can cause loss of consciousness and seizures, which are very frightening for any parent and awful for your child.

- **Practice.** Extremely low blood sugar is an emergency, and you must act quickly. It’s important to review how to use the kit now, and not wait until you are under pressure in an emergency to learn to use the kit.

**Here is a quick version of a step-by-step for using the kit** (the kit has more detailed instructions):

1. Act quickly; turn your child on their side to prevent choking. Don’t try to give food or drink when a person is unconscious from hypoglycemia. Don’t put anything in their mouth.

2. Open the kit. It comes with a liquid inside a prefilled syringe, plus a small bottle containing a white powder—the glucagon. Like insulin, glucagon needs to be injected.

3. Inject the liquid into the bottle with the powder and shake gently to mix. You’ll notice the syringe needle is much bigger than an insulin syringe needle. This is normal. It will go in deeper to get into the body faster. The solution

---

Is It Time for a Diabetes Team Check-in?

When was the last time you had a one-on-one with your Certified Diabetes Educator (CDE)? Did you know your benefits with PacificSource allow three hours of education with a CDE or through diabetes classes? Don’t get into a rut! New things are going on with diabetes treatment and self-care. Resolve to check in with your team in 2013!

Find Our Newsletter Online!

Find this and past issues of our Counterbalance newsletter, as well as links to resources on our website. Simply visit [PacificSource.com/juvenile-diabetes](http://PacificSource.com/juvenile-diabetes).
will be clear and water-like after mixing.

4. Inject air into the bottle to make it easier to draw up the liquid into the syringe.

5. Inject the glucagon just as you would insulin, but into any large muscle, such as the buttocks or thigh. There is NO DANGER OF OVERDOSE.

6. It takes about 10-15 minutes to work. Stay with your child to reassure him or her.

7. Many people throw up after a glucagon shot. This is normal. And a little mess is better than ending up in the hospital. If your child is not conscious and responding in 15 minutes, call 911.

**Triggers and What You Can Do**

What are some of the things that can trigger a low blood glucose episode?

- A lot of exercise during the day
- Change in the amount and intensity of exercise
- Not eating enough carbohydrates in meals or snacks

Many parents notice their child has lows in the week or so following school getting out for the year. A child may have increased physical activity throughout the day, but their insulin may not have been adjusted to their new activity level. Also, meal and snack times can vary during a vacation break, which can also contribute to lows.

What can you do? Be sure to keep some fast-acting sugars handy in case of a low blood glucose. Here’s a list of 15-gram amounts of fast-acting sugars:

- 3 glucose tablets
- 4 ounces of apple or orange juice
- 4 ounces of regular soda (not diet)
- 1 tablespoon of cake frosting or icing
- 3 Jolly Ranchers®
- 6 LifeSavers®

**Hint:** Candies like Jolly Rancher®, LifeSavers®, jelly beans, and gum drops are better choices than chocolate. Chocolate has fat and takes longer to digest, so your child won’t get that burst of sugar they need right away.

- After you treat with 15 grams of carbohydrate, be sure to wait 15 minutes (remember the rule of 15:15).
- People often overtreat themselves when they feel low, because they treat the symptoms and not the glucose level. Your child may not feel better instantly after eating 15 grams of carbs, and they may want to keep eating until they feel better. That can make their blood glucose shoot way up. Be patient and give it the full 15 minutes!
- Check your child’s blood glucose after 15 minutes to see how they are doing.

**Practice Makes Perfect... and Gives You More Confidence**

The American Diabetes Association recommends having a practice plan.

Do a practice run (like a family fire drill) of what to do during a low blood glucose emergency.

- Practice how to administer glucagon with a toy syringe, or use an expired kit and inject the glucagon in an orange.
- Time how fast a family member can get the glucagon kit to you for use with your child.
- Be sure to review and update your plan every six months to make sure it still works for you and your family. Remember to do a practice run with your updated plan!

For more information about hypoglycemia, visit:

For more about preparing for a trip, visit:
Make Your Move in 2013!

Cold weather is here, so it’s time get your winter moves on! And indoors or out, there are lots of things to do to get moving, rather than sit on the couch.

Physical exercise is important for everyone’s health and well-being, but it’s especially important for people with diabetes. The steps you take to improve overall fitness can greatly benefit you, because regular exercise helps lower blood sugar levels and keep them in the target range.

You have probably heard the phrase “walk it down.” Taking a walk (or run), especially when it involves climbing a small hill, can drop blood glucose (BG) quite a bit in a short time. The large muscles in our bodies are the biggest “consumers” of blood glucose. When we move, our muscles “suck up” the glucose to move us along. The healthier, more fit the muscle, the more glucose it uses as we exercise or move.

You might have noticed another interesting thing about exercise and diabetes. After heavy or extended exercise, your BG reading for the next 48 hours can run a bit lower. In fact, you might have unexpected lows if you haven’t yet learned to adjust your amount of basal insulin after exercise. That’s because your muscles continue to soak up the sugar for a while after you stop exercising. If you start exercising every other day, you get great long-term health benefits. One really good benefit is that it increases sensitivity to insulin as the muscles begin pulling more sugar out of the blood. That means you need less insulin over time if you exercise regularly. It also lowers your overall A1C. And it’s great for your brain, heart, and lungs, too.

There are dozens of different activities to improve your muscles, besides just good old-fashioned weight lifting! Soccer, tennis, snowboarding or skiing, skateboarding, bike riding, roller hockey, ice hockey, swimming, sailing, softball...I could go on and on, but you get the idea. Exercise = fun. Movement = good health. And with all of the new and more effective approaches to diabetes management, such as easy, portable testing equipment and pumps, no physical activity should be ruled out.

So go ahead. Make your move in 2013!

Ask Sheila

**Question:** I’m 17 and my girlfriend has Type 1 diabetes and so do I. We met at a support group though a local hospital. I play soccer in the fall and run cross country, so I take really good care of myself and check my blood sugar 6–7 times most days. Lately, she has been really bad about checking, and has had a lot of really low blood sugars. It’s like she does not even know when she is low and starts to be out of it. It seems like she has kinda given up, and sometimes skips taking her insulin to keep from going low. Sometimes she looks awful and I think she is losing a lot of weight. She does not want to talk about it when I ask her. My parents just tell me to break up with her. I’m really worried about her, and I don’t just want to stop seeing her. Can you let me know what I could do?

**Answer:** I can’t give you specific medical advice, but I can, hopefully, help with a few ideas. It is clear that you care about her, and you want her to feel better and take good care of herself. It is also important to recognize that your ability to influence her diabetes control is limited. It sounds like she might be getting burned out. It can happen, especially in high school, where the last thing you want to be is different, as I’m sure you know. There is a lot of pressure for guys, but for a girl it can be pretty intense. She might be okay with you suggesting she see a professional counselor to talk about what is going on, rather than talking with you about her diabetes control. It also might be time for her to talk with her CDE about a diabetes “makeover” to look at her options. Do you think you could suggest this to her? Because you have diabetes and you know so much about diabetes care, it might seem natural to you to give her advice. You might want to back off and let her come around to talking with you about it when she is ready. You can find helpful and supportive information for people with Type 1 diabetes and the people they care about at: Tudiabetes.org/group/type1idiabetes BehavioralDiabetesInstitute.org/about-Behavioral-Diabetes-Institute.html
Help the Kids Get to the Park

Help the children get to the park to play, and keep away from all the unhealthy food along the way!

Directions
Cut out the face pieces at the bottom of this page.
Roll a die and move your kid on the path to the park.
Watch out for the dots!
The first to the park wins!

START

FINISH

You are a winner!

Eat only French fries and soda for lunch.
Go back to start.

Eat an apple for a snack.
Move ahead 5 spaces.

Test and take a shortcut.

Pig out on sweets.
Go back to start.

Test and take a shortcut.

Get stuck watching TV.
Lose 1 turn.