

DIABETES AND NUTRITION— SPECIAL SITUATIONS



Some situations and occasions require extra attention if you take medication for your diabetes. These include low blood glucose (hypoglycemia), the use of alcohol, and sick-day management.

Hypoglycemia or “Insulin Reactions”

The purpose of oral diabetes medication and insulin is to lower your blood glucose. However, sometimes glucose levels can go too low, known as hypoglycemia or, if you are on insulin, an “insulin reaction.”

Several things can bring on hypoglycemia: too much insulin or some oral medications, too much unplanned activity or exercise, or not enough food. If your insulin dose is too high, it may need to be decreased. If you exercise a lot more than usual, you may need to change your meal plan or take less insulin. Insulin reactions can be serious, but if you know the symptoms of a reaction, you can take action before the situation gets dangerous. Symptoms of hypoglycemia include:

- Sweating
- Rapid heartbeat
- Headaches
- Blurry vision
- Dizziness
- Sleepiness
- Shakiness
- Confusion
- Hunger

If you have any of these symptoms and think you may be having a reaction, test your blood to make sure. If your blood glucose is below 70 mg/dL, eat a food or drink a beverage containing simple sugar (carbohydrate)—it will work the fastest. Here are some suggestions:

- A small box of raisins
- 5-6 Life Savers®
- 1/2 cup fruit juice or regular soda pop
- A small piece of fruit

There are also premeasured gels and tablets on the market for treating hypoglycemia. These are convenient to carry in your pocket, purse, or car and help you avoid over-treating a hypoglycemic reaction by eating too much food. Check with your pharmacist, your Numetra staff, or another health care professional specializing in diabetes about different brands.

After treating a hypoglycemic reaction, wait 10 to 15 minutes. If you still have symptoms, treat again with one of the suggestions above. If symptoms are still present or your blood glucose remains under 50 mg/dL, contact your doctor.

Alcohol Use

Can you drink alcoholic beverages? The answer depends on several things, such as your diabetes control, your weight control, medications you may be taking, other medical conditions, and what and how often you choose to drink. One 2007 study found a daily glass of wine with a carbohydrate-containing dinner may in fact lower the average fasting blood glucose levels of adults with type 2 diabetes who otherwise abstain from drinking. However, the alcohol had no effect on post-meal glucose levels measured one to two hours after eating. It is advised you discuss alcohol consumption with the Numetra staff or your health care provider, in particular if you are having low or high blood sugars.

Alcohol should not be consumed while using the Numetra nutritional products. If your diabetes control is poor, avoid alcohol until your blood glucose is back into a better range. Once diabetes is well controlled, blood glucose may not be greatly affected by the occasional use of alcohol.

Another question you need to ask yourself is can you afford the calories in alcohol. Many drinks average 100 calories or more a serving (see the following chart) and provide no additional nutrients. These extra calories can make maintaining your weight difficult.

Calorie Content of Alcoholic Beverages

Beverage	Amount	Exchanges	Calories
Beer, light (preferred)	12 ounces	1 alcohol equivalent + 1/2 carbohydrate	100
Beer, regular	12 ounces	1 alcohol equivalent + 1 carbohydrate	150
Liquor (any kind, 80 or 86 proof)	1-1/2 ounces	1 alcohol equivalent	80-100
Wine, dry (red or white)	5 ounces	1 alcohol equivalent	75-100

*Note: If you take insulin, take the alcohol calories as "extra" calories. Do not subtract food from your usual meal plan or you increase the risk of hypoglycemia.

Also be aware that diabetes medication and alcohol may not mix: Alcohol may react with some oral diabetic medication to cause unpleasant side effects. Ask your doctor if this could be a problem with the diabetes medication you are taking. Always check with your doctor or pharmacist whenever you start a medication to find out if alcohol can be consumed while taking the drug.

Finally, avoid alcohol if you have any of these conditions:

- High triglycerides: Alcoholic beverages can raise the triglyceride level and further increase the risk of heart disease.
- Gastritis, pancreatitis, certain types of kidney and heart diseases: Discuss alcohol use with your doctor.

If you have good control of your diabetes, can afford the calories, and don't have medical conditions in which alcohol is forbidden, follow these general guidelines for when and how much to drink:

- Limit your drinks
 - For women, one serving or less per day
 - For men, two servings or less per day
- Drink alcohol no more than twice a week
- Accompany alcohol with food
- Check with your dietitian to help fit alcohol into your meal plan.

Sick Days

Diabetes can get out of control quickly during illness. Fever, dehydration (loss of body fluid), infection, and the stress of illness can all trigger the release of “stress” hormones (glucagon, epinephrine and norepinephrine, cortisol, and growth hormone) that raise blood glucose levels.

If you take insulin or oral diabetes medication to help control your blood glucose, you must continue taking your medication when you’re sick. The guidelines on the following page can be helpful. If you’re sick for longer than one day, call your doctor for additional advice.

Guidelines for Sick-Day Management

1. During acute illnesses, take your normal dose of diabetic medication. The need for medication continues, or may increase, during periods of illness. Please contact your health care provider prior to changing or stopping any medications.
2. If you have type 2 diabetes, you may need to check your blood glucose four or more times daily. If your blood glucose is above 300 mg/dL, you may need to check your ketones. Keep records of your results and provide this information to your healthcare provider so that medication adjustments can be made.
3. Drink at least 8 oz. of calorie-free fluids—such as water, diet sodas, unsweetened tea, and other sugar free drinks—every hour while you are awake. Eight ounces of bouillon, consommé, and canned clear soups should be consumed every third hour to provide sodium and electrolytes (a major cause of persistent ketoacidosis is inadequate sodium intake). If nausea or vomiting occurs, consume 1-2 Tbsp every 15 to 30 minutes.
4. Substitute mild foods (gelatin, crackers, soup) if you are nauseous at mealtime. In general, approximately 150-200 grams of carbohydrate per day, evenly divided into 45-50 gram doses (3-4 carbohydrate choices every 3-4 hours) should be sufficient. By frequently eating small amounts, your food is quickly absorbed and changes to blood glucose. The following foods contain approximately 15 grams of carbohydrate and are appropriate for sick day use:

1/2 cup apple juice

1 cup Gatorade®

1/2 cup regular soft drink

1/2 cup regular pudding

1 Popsicle® stick

1/2 cup regular gelatin

5 Life Savers® candies

6 oz. yogurt

1 slice dry toast

1 Tbsp honey

1/2 cup cooked cereal

Milkshake (1/2 cup lowfat milk and 1/4 cup ice cream)

6 saltines

1/2 cup frozen yogurt

Conditions that Require Immediate Contact with a Healthcare Provider

- You've been sick for more than one or two days and aren't getting well
- Vomiting, diarrhea, or upset stomach for longer than 6 hours
- Breathing is difficult or has a fruity/acetone smell, lips and/or tongue are dry, pain in your chest (These are symptoms of ketoacidosis or dehydration.)
- Repeated blood glucose levels higher than 240 mg/dL or lower than 60 mg/dL, even after correct medication
- Moderate/high ketone level in your urine

Sources

A Core Curriculum for Diabetes Education, 5th ed. Chicago, Ill: American Association of Diabetes Educators; 2003.

Choose Your Foods: Exchange Lists for Diabetes. American Dietetic Association and American Diabetes Association; 2008.

Shai I, Wainstein J, et al. Glycemic Effects of Moderate Alcohol Intake Among Patients With Type 2 Diabetes. *Diabetes Care* 2007; 30:3011-3016.

"When You're Sick," American Diabetes Association website, <http://www.diabetes.org/type-2-diabetes/sick.jsp>, accessed April 9, 2008.