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# Diabetes Life Lines



A newsletter from your County Extension Office  
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## Eating Habits Related to Blood Glucose Control

If you have type 2 diabetes and your blood glucose is out of control, stop a minute and consider what changes in your eating habits might improve your blood glucose control.

Researchers thought it might be helpful to ask people living with type 2 diabetes who are successfully controlling their blood glucose levels about their food habits. In a study published in the Journal of the American Dietetic Association, researchers at Penn State interviewed 89 people with type 2 diabetes and compared the food habits of those who were successful in controlling their blood glucose levels and those who were not. The following were food habits of people with the lowest A1Cs.

DOs:

- Eating fewer high-sugar foods
- Eating smaller portions of food
- Eating fewer and smaller desserts
- Reducing high-fat foods
- Choosing low-fat foods and menu choices
- Eating regularly, three meals a day
- Planning meals (using shopping lists, planning a weekly menu, taking meals to work or on trips)
- Eating more vegetables and limiting some carbohydrates like bread, pasta, rice, crackers or potatoes

The following were some food habits of the group with high A1Cs.

DON'Ts:

- Eating at buffets, fast-food and large chain restaurants
- Choosing high-fat or high carbohydrate menu selections (such as bacon, fried eggs, or biscuits for breakfast)
- Eating high-fat meats (red meat, fried and processed meat)

In looking at some of the habits of those with low A1Cs, can you identify some food habits that you might be able to change? For example, begin planning your meals. In the study, those who planned their meals were more likely to eat regularly and to eat healthier lunches. Or if you eat many of your meals out, make an effort to eat less frequently at fast food restaurants and buffets.

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Making long-term changes in food and lifestyle habits is challenging for anyone. Becoming aware of some of the food habits that may be contributing to higher A1Cs is the first step to making changes. Try to target just one or two food habits at a time and concentrate on making those changes. Keep in mind that these are habits that should last a lifetime to help you maintain the best blood glucose control.

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## Protect Your Heart

The primary cause of death in people with diabetes is heart attack and stroke. A large study, known as the Heart Protection Study, recently showed that people with diabetes who took a drug called a statin were much less likely to have a heart attack or stroke. Despite this news, more than half of adults with diabetes are not taking statins.

The purpose of the Heart Protection Study was to determine if lowering the LDL (bad) cholesterol with a statin would reduce the number of heart attacks and strokes over a 5-year period in adults with diabetes. The study involved nearly 6,000 people with diabetes over the age of 40, some with heart disease, or some without. People in the study started off with total cholesterol levels at least 135 mg/dl and the average LDL

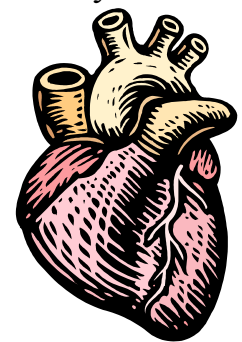
cholesterol was 125 mg/dl (goal is less than 100 mg/dl).

Statins are a class of drugs that lower LDL cholesterol, the major culprit in clogging arteries and increasing the risk of heart attacks and strokes. Statins work by reducing the amount of cholesterol made in the liver and removing LDL cholesterol from the blood. Statins also lower total cholesterol and triglycerides (blood fats) and slightly increase HDL (good) cholesterol levels. Although the statin used in this study was simvastatin (Zocor), there are several other types of statins available.

The results of this study showed that statins lowered the number of heart attacks and strokes by 25% even if they had pretty normal LDL cholesterol (near 100) and no known heart disease. The average LDL cholesterol level was reduced from 125 mg/dl to 86 mg/dl. People on the statin drugs had no more side effects than those who did not receive the statin.

You should make every effort to reduce your risk of heart disease if you have diabetes. The America Diabetes Association suggests you do the following:

- Get your cholesterol and triglycerides checked every year. After not eating overnight, get your LDL (bad) cholesterol checked. It



should be less than 100. Your HDL (good) cholesterol should be over 40 for men and over 50 for women. Triglycerides should be less than 150.

- Check your blood pressure regularly. The top number should be less than 130 and the bottom number less than 80.
- Keep your A1C less than 6.5-7%, indicating that your blood glucose levels are under control.
- Take a coated aspirin daily (75 mg).
- Don't smoke.
- Follow a heart-healthy diet that is low in saturated fats and trans fats. Include skinless chicken, fish, and lean meats, low-fat dairy foods, fruits and vegetables, and whole grains.
- Get plenty of exercise each day - at least 30 minutes a day is recommended.

If you have diabetes and are over 40, talk to your doctor or nurse about taking a statin if you are not currently taking one. Cholesterol is a silent killer. The pay-off could be huge for you and your family - avoiding a heart attack or stroke.

### Statin Drugs

Generic Name	Brand Name
Atorvastatin	Lipitor
Fluvastatin	Lescol
Lovastatin	Mevacor, Altacor
Pravastatin	Pravachol
Simvastatin	Zocor

## Treating Hypoglycemia (Low Blood Glucose)

Overtreating or undertreating low blood glucose can cause frustration, anxiety and wide swings in your blood glucose levels. If you don't eat enough when your blood glucose is low, you may continue to feel the typical symptoms of low blood glucose. But, if you eat too much to be "on the safe side," your blood glucose may skyrocket.

Low blood glucose occurs more often in people taking insulin, but can also occur if you take diabetes medications that cause your pancreas to release more insulin. Although you may get symptoms of low blood glucose at higher or lower levels, the typical initial symptoms of shaking, sweating, and pounding heart often occur when your blood glucose drops below about 70 mg/dl.

### *What to Eat to Treat Low Blood Glucose*

Carbohydrates are used to treat low blood glucose because they turn into glucose. Carbohydrate foods that contain fat, such as candy bars or pastries, will not raise your blood glucose as quickly because fat delays absorption. Typically, 15 grams of carbohydrate will raise your glucose levels about 40-50 mg/dl. So, if your blood glucose is 50, 15 grams of carbohydrate will raise it to about 90-100 mg/dl. Studies do not show that

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fruit juices and milk work better than solid food in treating low blood glucose. The sugar in fruit juice and milk is only about half glucose. They also contain other sugars that have less effect on your blood glucose. Starches, such as crackers and bread, can also be used to treat hypoglycemia because they break down entirely into glucose.

Adding protein to your snack, such as meat or cheese, has not been shown in studies to prevent hypoglycemia any better than carbohydrate alone. Instead, it adds extra calories that are often unwanted.

### ***Don't Rely on How Your Blood Glucose "Feels"***

Checking your blood glucose frequently is important to help you decide when you should treat low blood glucose. Although you may think you can "feel" when your blood glucose is low, it is not a reliable indicator of how low your blood glucose has dropped. Your symptoms of low blood glucose may change as the years go by. Some people develop "hypoglycemia unawareness" where they lose the warning signs of low blood glucose. Their glucose levels can quickly and unexpectedly drop dangerously low.

### ***Treating Low Blood Glucose***

If you think your blood glucose is low:

- Check your blood glucose with your meter to make sure.
- Treat low blood glucose with about 15 grams of carbohydrate (see box).
- Wait 15-20 minutes for your symptoms to disappear and test again. Do not keep eating until you feel better or your blood glucose will skyrocket. If your blood glucose is still low, treat again with 15 grams of carbohydrate.
- Check again in about one hour if you have not had a meal or snack since your reaction to see if you need additional carbohydrate.

The bottom line is that any carbohydrate containing glucose will work to treat low blood glucose - preferably one that is convenient, doesn't spoil easily, and tastes pleasant. The key is to test, treat, and test again.

#### **15 Grams of Carbohydrate**

- 3-4 glucose tablets
- 2 Tbs raisins
- 3 hard candies
- 8 LifeSavers
- 10 jellybeans
- 4 ounces regular soft drink
- 4 ounces fruit juice



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**Cooperative Extension Service**

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Dear Friend,

*Diabetes Life Lines* is a bi-monthly publication sent to you by your local county Extension agent.

It is written by Food and Nutrition Specialists at the University of Georgia, College of Family and Consumer Sciences. This newsletter brings you the latest information on diabetes, nutrition, the diabetic exchange system, recipes, and important events.

If you would like more information, please contact your local county Extension office.

Yours truly,

County Extension Agent

Janine Freeman, Principal Writer

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