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# Diabetes Life Lines



A newsletter from your County Extension Office  
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## Type 2 Diabetes and Bariatric Surgery

Bariatric surgery refers to several types of weight-loss surgery. The different types include stomach stapling, gastric bypass, removal of part of the stomach and intestine, and gastric banding. Bariatric surgery may help some people with Type 2 diabetes to lose weight permanently when other ways have not succeeded.

According to the American Diabetes Association, bariatric surgery can lead to normal or near normal blood sugars (glucose) in 55 to 95 percent of patients with type 2 diabetes. In other words, many people no longer have Type 2 diabetes or can control their blood glucose much better after surgery. However, the effect on the blood glucose depends on the type of surgery. Gastric by-

pass seems to improve diabetes control the most.

Weight-loss surgery can have complications and it is expensive. Although mortality rates have decreased to about 3 deaths per 1000 operations, the risk is still there.

Nutrient deficiencies can also occur after surgery. A person usually needs to take a variety of nutritional supplements that supply protein, calcium, B<sub>12</sub>, iron and folate. Other nutrients may also become low. Blood tests will tell which ones must be supplemented.

Insurance companies often will not pay for the procedure unless the person has made some changes in diet and activity

with the help of the medical team during the months before the surgery. The week or two



before the operation, the person will switch to a low calorie, liquid diet to shrink the liver. This makes the surgery easier to do. Afterward, only small amounts of clear liquids like broth and gelatin will be allowed for a few days. Then slowly more filling liquids like low fat cream soup and liquid meal replacements will be added. Gradually, pureed foods or soft foods will be offered and after about

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six weeks, normal healthy meals will be resumed.

After surgery, the person should drink eight 8-ounce cups of calorie-free or low calorie fluids during the day. Each beverage should be consumed 30 minutes before or 30 minutes after eating solid food to prevent nausea and vomiting. Chewing food well and eating slowly also improves digestion. Sweets and fatty foods can make people sick so they must be limited. For 3-6 months, high fiber foods and foods that are dry or tough may also be hard to ingest. The goal is to eat enough, but not so much that a person feels ill or starts to gain weight again.

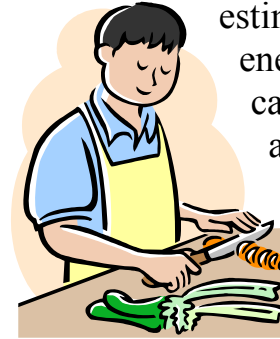
Julie Schwartz, a dietitian at the Emory Bariatric Center, says, “Those who succeed at bariatric surgery plan weekly eating and activity goals and learn from the obstacles they meet.” They also attend support groups regularly with other bariatric patients, see their dietitian and the rest of the medical team as scheduled, are physically active every day and continue to eat well-balanced meals with plenty of high quality protein.

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## Energy Density of Food May Affect Diabetes Risk

A study from England shows that the energy density of the food your family eats may influence their risk for getting Type 2 diabetes.

People in the study filled out detailed food frequency records that showed the foods they ate and how often they ate them. From these records, the energy and weight of the foods were



estimated. Then the energy density was calculated as the amount of calories per unit weight of the food.

The researchers kept track of these people for several years and noted whether they got diabetes or not. They discovered that no matter what people weighed, if they ate more energy dense foods, they were more likely to get diabetes.

Your relatives need to know this if diabetes runs in your family. Switching to less energy dense foods will be good for everyone since these foods tend to be richer in vitamins, minerals and fiber. Some **low** energy dense foods are:

- Non-fat milk
- Non-starchy vegetables like broccoli, green beans, tomatoes, lettuce, yellow squash and greens
- Fruit
- Soups made with broth

Examples of **energy dense foods** are crackers, chips, candy, chocolate, nuts, butter, vegetable oil and baked goods like cookies and cakes.

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Dr. Barbara Rolls from Penn State University has written a book called *The Volumetrics Eating Plan*. She shows how to calculate the energy density of various foods and offers recipes made from foods that are less energy dense. According to her theory, we eat the same volume of food each day to fill up our stomachs. If we choose less energy dense foods and eat the same weight or volume of food, we will feel full with fewer calories. She includes many pictures of different foods with the same number of calories. These pictures clearly show that you can eat bigger portions of the less energy dense foods.

Eating less energy dense foods will be good for everyone. You will control your diabetes better and your family will eat food that will keep them healthier their entire lives. Most people want to pass along family traditions to younger relatives, but the risk for Type 2 diabetes doesn't have to be one of them.

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## **Saving Money on Diabetes Drugs**

Diabetes is an expensive disease to manage. Dr. Ann Peters at the University of California, Los Angeles



recommends that you talk to your medical team about how to cut costs on medicine and monitoring. If you are on diabetes pills, the first place to look is at generic drugs. Metformin and a group of drugs called sulfonylureas are available as generics. See whether you can switch to a generic if you currently are on a brand name drug.

Also some large discount stores and grocery stores now offer up to 90 days of certain drugs for only \$12. You or your medical team can go on-line to the Web sites of these companies and see what is available at that price. You may be able to get not only your diabetes medicines, but many other drugs this way. To get the better price, you may have to buy a larger dose and split it in two, but the money you save may be worth it.

Dr. Peters points out that the newer analog insulin like Lantus or Novolog are much more expensive than the older regular and NPH insulin. Your medical team may be able to switch you to regular and NPH insulin without changing your blood glucose control. This can save you up to 50% or more on your insulin costs.

Some strips for blood glucose monitors cost nearly a dollar a strip. Ask your medical team whether a less expensive monitor and strips may work just as well for you. Also sometimes you can find strips on-line

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for your current meter at a much lower price.

If you are monitoring often, but have fairly **stable** blood glucose readings, your health professional may be able to give you a less frequent monitoring schedule. For example, Dr. Peters sometimes has her patients only test fasting one day, then the next day before lunch and the third day before supper. That way her patients still see how their blood glucose readings change at different times of day, but they use fewer strips.

If you must use name brand drugs, there are medical assistance programs offered by most of the drug manufacturers. You will need your medical team help to apply for these programs, but they can result in big savings.

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## Why Monitor?

Blood glucose monitoring helps you to manage your diabetes. But let's face it, it's hard to check your blood glucose (sugar) every day. So why should you do it? That is the question everyone has to ask. What will the blood glucose results do for you?

- Will it help you to control your blood glucose better so you will live a longer, healthier life with your family and friends?

- Does it allow you to play sports or eat out without fearing your blood glucose will get too high or too low?
- Does it show whether you are eating the right amount of food or prove that being more active is worth it?

Blood glucose monitoring can tell you a lot if you look for patterns. It can show whether you are getting enough medicine or whether it needs



to be changed. It can warn you that you are getting sick or have an infection even

before you have symptoms. It can even prove that you are under too much stress. In a way, monitoring is like a mirror that reflects the changes your body is handling on a daily basis. It tells you what is happening even when you are too busy to notice.

Looking for patterns is important. A single reading may not mean much, but if that high or low blood glucose level shows up for at least three days in a row at the same time, you may need to do something. That is why people keep written records of their values so they can jot down possible reasons for an unusual reading.

For example, Paula, a grandmother of five, noticed that for the last three days her blood glucose was higher than she liked when she got up. She looked back at her blood glucose and food records and noticed that she had begun eating a new type of low fat frozen yogurt before bed. She wondered if that was the cause. When she looked at the label, she saw that the amount of carbohydrate in this new brand was higher than her old brand. Paula decided to go back to her old brand once this new yogurt was gone, but in the mean time, she was going to eat smaller amounts of the new one.



Similarly, Jonathan, a busy executive, noticed all his blood glucose values over the last 3-4 days were creeping up. The afternoon readings were really getting out of hand. He was puzzled, but then he realized he was working harder than usual on a special project for his boss, so he was under more stress. He made a plan to exercise at lunchtime to see if that would relieve some of his pressure. Plus the physical activity might help lower his blood glucose.

If you are not sure how to interpret your blood glucose readings, ask your health care provider to teach you. Just checking your blood glucose and not doing anything about out of

range numbers is a waste of your time. You know your lifestyle better than anyone else so you should be the one studying your records and making decisions about what to do. Your blood glucose results are not good or bad; they are just bits of information that give you the power to make choices about your care. It'll take some practice and the help of your medical team to get good at seeing patterns and figuring them out, but the more you do it, the better off you will be. Using this skill will make all the other efforts you are making to eat right, be active and take your medicine seem more worthwhile.

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## Recipe Corner

### Asian Beef Steak and Noodles

(adapted from [www.beefitswhatsfordinner.com](http://www.beefitswhatsfordinner.com))

#### **You'll Need -**

¼ cup water	¼ cup sliced green onion
3 tablespoons hoisin sauce	3 ounces Chinese noodles, broken and cooked
1 tablespoon red wine vinegar	4 teaspoons chopped fresh cilantro
1 tablespoon peanut oil	4 beef eye of round steaks (total 1 pound)
1 small cucumber, peeled, seeded and sliced	
1 small red bell pepper, sliced into thin strips	

1. Combine water, hoisin sauce and vinegar in small bowl.
2. Heat large non-stick skillet over medium-high heat until hot. Brush skillet with oil.
3. Add cucumber, bell pepper and green onion. Stir fry 1 minute. Stir in noodles, ½ of cilantro, and ½ of hoisin mixture. Remove from skillet.
4. Heat same skillet over medium-high heat until hot. Place steaks in skillet and cook 2-4 minutes, turning once. Do not overcook.
5. Add remaining hoisin sauce. Turn steaks to coat.
6. Serve over noodle mixture and sprinkle with remaining cilantro.

#### **4 servings**

Calories: 253   Carbohydrate: 24 grams   Fat: 5 grams   Protein: 28 grams  
Sodium: 250 milligrams   Fiber: 1 gram   Cholesterol: 59 milligrams

Exchanges: 1 ½ starches, 4 very lean meats

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The University of Georgia

## Cooperative Extension

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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

Connie Crawley, Principal Writer

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Scott Angle, Dean and Director

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