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# Diabetes Life Lines



A newsletter from your County Extension Office  
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## Byetta - New Diabetes Medication for Type 2

**A** promising new drug that helps control blood glucose, doesn't cause hypoglycemia, and may even help with weight loss has just been approved by the Food and Drug Administration (FDA) for people with type 2 diabetes.

Byetta (exenatide) is the first in a new class of medications that works in a similar way to hormones produced in the intestines that regulate blood glucose. Byetta has many of the same effects as the hormone known as glucagon-like peptide, or GLP-1, that normally helps regulate blood glucose, but is significantly reduced in type 2 diabetes.

The primary effect of Byetta is to reduce after-meal blood glucose levels, although it may also improve fasting blood glucose and A1Cs. GLP-1 is secreted in the intestines when food is eaten and helps to control blood glucose in several ways:

- 1) increases insulin release by pancreas
- 2) reduces glucagon (a hormone that increases blood glucose levels)
- 3) reduces food intake
- 4) slows absorption of food

Because Byetta only increases insulin release based on the blood glucose level, it does not increase the risk of hypoglycemia, or low blood glucose. Therefore, if it is used with diabetes medications that do not have a risk of hypoglycemia like metformin, or Glucophage, it will not promote hypoglycemia. If used with diabetes medications that can cause hypoglycemia, dosages of those medications may need to be reduced.

In addition to controlling blood glucose, Byetta has an added advantage that it does not cause weight gain as do most other diabetes medications. In fact, it may cause weight loss due to slowing the rate of absorption of food and increasing the feeling of fullness with a meal. Most patients in the long-term clinical trials lost weight.

The major drawback of Byetta is that it is only available by injection. A small, consistent dose is given twice a day with a pen-injector device. Nausea

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is a common side effect when treatment is first started, but it diminishes with continued use.

The FDA approved Byetta for use in people with type 2 diabetes who are unable to control their blood glucose levels with other oral diabetes medications. It is expected to be approved later for use alone, as the first diabetes medication in people with type 2 who are unable to control their blood glucose with diet and exercise.



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## Choose the Right Footwear For Your Summer Activities

**S**ummer is a time to be active - hiking trips, swimming at the beach, or trying your hand at tennis or golf. Being active can provide many benefits to your health - but it can also put your feet at risk for injury.

The current fashion of wearing athletic shoes practically anywhere from sports events to work, school, or a night on the town makes it easy for your feet to be comfortable, fashionable (if you care), and protected all at the same time. The best shoes for

your feet are cushioned and provide support (such as walking or athletic shoes)



with soft, breathable uppers, shock-absorbing soles, and support around the heel. A cushioned running or walking shoe puts a lot less pressure on your feet than walking barefoot. Athletic shoes with air or silica gel pockets absorb shock the best.

Here are some tips to help protect your feet from injury:

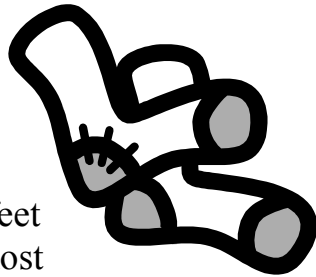
- Don't go barefoot.
- Avoid thong sandals, clogs, or flip-flops.
- Change shoes several times a day.
- Wear protective footwear on hot, sandy beaches to prevent burns.
- Wear water shoes (rubber-soled slip-ons) on cement areas around swimming pools and in swimming pools with cement bottoms.
- Wear shoes with a built-up heel to absorb shock.
- Choose shoes with a firm, but not rigid arch support.
- Choose socks with a cotton/polyester blend that will "wick" the

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moisture away from your feet to keep your feet dry.

- Consider sport socks that have an extra layer of cushioning in the sole and heel to protect your feet while walking on hard surfaces.
- Wear socks that have a constructed toe and heel design instead of tube-type socks.
- Avoid socks that are too tight, or that have holes or thick seams.

Have fun and stay active this summer, but keep your feet healthy by wearing the right footwear and inspecting your feet regularly. And most of all, keep up your physical activity after the summer's gone.



and snacks. When you think about it, there are a lot of hours in the day when your blood glucose is likely still high from the previous meal or snack.

Your diabetes team is more concerned now about high levels of blood glucose after meals due to recent evidence showing a link between after-meal hyperglycemia (high blood glucose) and increased risk of heart disease.

The American Diabetes Association (ADA) recommends keeping your blood glucose less than 180 mg/dl two hours after the start of a meal. Another organization of diabetes experts, the American College of Endocrinologists (ACE), recommends less than 140 mg/dl two hours after meals. Although these are general guidelines, you and your doctor may have a slightly different goal.

How high your blood glucose increases after a meal depends on how quickly glucose gets into your bloodstream and how quickly insulin removes it. The type and amount of food you eat will affect how much your glucose increases. Typically, food from your meal begins to raise blood glucose levels in about 15-20 minutes. By about 2 hours after your meal, your blood glucose should ideally be in your goal range. This will vary somewhat based on what you eat. For example, a high-fat meal may delay the rise in blood glucose so that your blood glucose may be high 4-5 hours

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## Monitoring After Meals

If your A1C is higher than your goal, but your before-meal checks are looking pretty good, consider doing some blood glucose checks after meals. After all, your A1Cs don't just reflect your blood glucose control when you haven't eaten - they also include the period of time after meals

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after the meal. Of course, the insulin you have available will affect how quickly the glucose is removed from your blood and used by your body for energy or stored for later use.

The first step in determining your overall blood glucose control is to do some glucose checks before and after meals (checking only after a meal won't tell you if a high number was due to the meal or if your before-meal glucose was already high). If you have type 2 diabetes and are only checking a couple of times a day, you may want to check before and after supper one day and before and after another meal the next day to get a picture of what times of the day your blood glucose levels are highest. Be sure to keep a record of your glucose numbers in a book or log sheet.

If your glucose levels are higher than your goal after meals, the next step is to consider what you can do to lower them.

- Are you eating too much carbohydrate at a particular meal? Check your portions of foods that contain carbohydrate like breads, starchy foods, beverages that are not sugar-free, fruits and fruit juices, and determine how much carbohydrate you're getting. Although foods containing carbohydrate are important to include in your diet, too much at one time can

cause large spikes in your after-meal blood glucose.

- Any type of physical activity can help your insulin work more effectively, improving your blood glucose. You can choose to take an extra 30-minute walk each day. And, you can increase your activity level throughout the day by taking exercise breaks, using the stairs instead of the elevator, parking farther from your destination, and just spending less time sitting.
- If you take insulin or other diabetes medication, talk to your doctor about adjusting your medication. Be sure to take your blood glucose records to your visit.

Although the type of carbohydrate will make some difference, one of the major reasons for high blood glucose after meals is large portion sizes. Work with a dietitian to see how much carbohydrate is best for you. Then, keep track of how much you get at your meals and snacks. Your A1Cs will show the difference.

## Recipe Corner

### Spinach Ricotta Manicotti

*Preparation is made easier in this recipe by stuffing the uncooked Manicotti. It's important to cover it tightly with foil and let stand before serving to ensure tender pasta.*

1 (10-ounce) package frozen chopped spinach, thawed, drained, and squeezed dry  
1 egg, slightly beaten  
1 (15-ounce) container of fat free ricotta cheese  
1/2 cup shredded Mozzarella cheese  
1/2 cup grated Parmesan cheese  
1/8 teaspoon grated nutmeg  
1 (26-ounce) jar of tomato-basil pasta sauce  
1 (8-ounce) package Manicotti (large, tube-shaped pasta), uncooked  
Cooking spray  
1 cup water

1. Preheat oven to 375°. Mix together spinach, egg, cheeses, and nutmeg in a medium-sized bowl.  
2. Coat a 9x13 inch baking dish with cooking spray. Spread 1/2 jar of pasta sauce in bottom of dish. Fill each of 14 uncooked Manicotti with spinach-cheese mixture. Arrange in single layer over sauce and cover with remaining 1/2 jar of sauce. Pour 1 cup water into dish. Cover tightly with foil. Bake at 375° for 1 hour. Let stand 10 minutes before serving.

Makes 7 servings (serving size: 2 Manicotti)  
Carbohydrate choices: 2½  
Exchanges: 2 starch, 1 vegetable, 2 very lean meat

Calories: 279    Carbohydrate: 36 grams    Fat: 5 grams    Sodium: 716 milligrams  
Fiber: 3 grams    Cholesterol: 40 milligrams

### Suggested Menu

<u>Menu Item</u>	<u>Exchanges</u>	<u>Carbohydrate</u>
2 <i>Spinach-Ricotta Manicotti</i> *	2 starch, 1 vegetable, 2 very lean meat	36 grams
1 cup cucumbers, tomatoes, and onions	1 vegetable	5 grams
1/2 cup sliced fresh peaches	1 fruit	15 grams
1 cup skim milk	1 milk	12 grams

\* This issue's featured recipe

Note: Portions may need to be adjusted for your meal plan

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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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