



HEALTHY EATING

If you've just learned that you have diabetes or prediabetes, you probably have a lot of questions about what you can or can't eat. Do you wonder if you can ever have your favorite food again? What happens when you are eating at a restaurant or a friend's house? Do you have to change your whole diet just because you have diabetes?

The answer is **NO**. There is nothing that you can't eat. You don't have to give up your favorite foods or stop eating at restaurants.

But, it is important to know that everything you eat has an effect on your blood sugar. Learning to eat regular meals, controlling the amount you eat, and making healthy food choices can help you manage your diabetes better and prevent other health problems.

Some skills are more complex, but your diabetes educator or dietitian can help you learn about:

- » Counting carbohydrates
- » Reading food labels
- » Measuring the amount of a serving
- » Developing a practical meal plan
- » Preventing high or low blood sugar
- » Setting goals for healthy eating

Pick one or two of these skills and discuss them with your healthcare provider.

DID YOU KNOW?

There are only 3 main types of nutrients in food: carbohydrates, proteins, and fats. A healthy meal will include all three types.

TRUE OR FALSE:

People with diabetes can't have sugar.

FALSE: Sugar is just another carbohydrate and can fit into a meal plan. Sugary foods, however, do not have the same nutrition as grains or vegetables, and can often be high in fat and calories. It's best to limit sugar-containing foods to small portions, and be sure to count the carbohydrates toward the total recommended in your meal plan.

Word Wall

CARBOHYDRATE (AKA "CARBS"):

One of the three main types of nutrients found in food. Bread, pasta, rice, fruits, vegetables (especially starchy vegetables such as potatoes, corn, peas, dried beans), milk, and sweets are all carbs. Don't forget that carbohydrates can be found in beverages, too.

PORTION:

How much of a food you eat

MEAL PLAN:

A guide for healthy eating developed with your healthcare provider

HYPOGLYCEMIA:

Low blood sugar

HYPERGLYCEMIA:

High blood sugar



Eat breakfast every day. Breakfast helps begin the calorie-burning process that provides you with energy. Include small snacks between meals as part of your daily intake to help keep your body going.

Space your meals throughout the day. Going too long without eating may result in excessive hunger, which can lead to overeating later on. Try to eat every 4 to 5 hours during waking hours.



ACTIVITIES

ASK YOURSELF

When I think about healthy eating, I feel: _____, _____ and _____ . (Pick 3 words to fill in the blanks)

What did you eat for dinner last night? _____

Is there anything you could have done to make your meal healthier? _____

For you, what is the hardest part about healthy eating? _____

What is the best part about healthy eating? _____

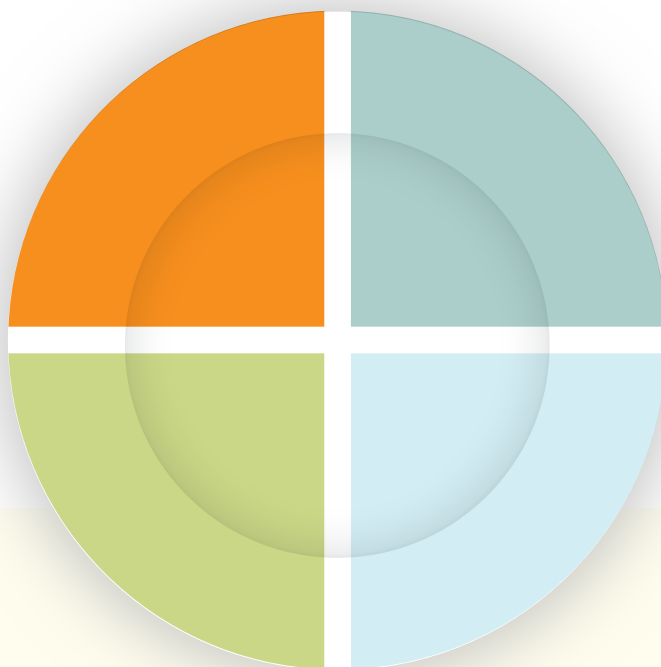
REMEMBER THAT A HEALTHY MEAL PLAN SHOULD INCLUDE:

- » **Complex carbohydrates** such as whole grain bread
- » **Fiber**, which is found in beans, whole grains, fruits and vegetables
- » **Lean protein**, such as chicken (without skin) or fish
- » **Lots of vegetables**—especially the green, leafy ones
- » **A limited amount of heart-healthy fats**, such as olive, peanut or canola oil, walnuts, almonds and flax seed

A good first step is to follow the “plate method” of meal planning, which includes a healthy balance of foods and controlled portions.

Visually divide your plate into 4 sections. For lunch or dinner, fill ½ the plate with non-starchy vegetables (such as: greens, green beans, broccoli, cabbage); ¼ should contain meat or other protein (fish, eggs, low-fat cheeses, cottage cheese, beans or legumes); ¼ contains starch (such as a potato or whole grain bread). On the side, include an 8 ounce glass of low fat milk or a small piece of fruit.

PLAN A HEALTHY DINNER THAT YOU WILL ENJOY IN THE SPACE BELOW.



PRACTICE IN MENU PLANNING

- Each group will prepare a menu: **Breakfast, Lunch, Dinner**
- Use the food guide in your book and this *Chart (Chart 11)* as a reference
- Write down the type of foods, portion size, and number of grams of protein and carbohydrates that each food contains
- Report back and share your menu with the whole group
- Use the following menu as an example:

Shrimp salad with a bread roll and a side of fruit:

Menu Items	Portion Size	Protein	Carbohydrates
Shrimp	6 oz	14	
Lettuce	2 cups		
Tomato	1	4	10
Hard boiled egg	1	7	
Low fat dressing	2 tbs		
Bread roll	1	6	30
Butter or margarine	1 tbs		
Fruit salad	1/2 cup		15
TOTALS		31	55

Healthy Snacking with Diabetes

Tips

- Between meal and bedtime snacks can be easily included in the meal plan
- Snacks can help to ward off hunger and help to prevent low blood sugar
- Plan snacks 3-4 hours after a meal and count the carbohydrates in your plan
- Monitor your blood sugar levels

1 Carbohydrate Choice Snacks (15 grams of Carbohydrates and 60-100 calories)

1 small fruit
1 cup Berries or Melon
1/2 Grapefruit or larger fruit
12-15 Bing Cherries or grapes
1/2 cup canned fruit, in light
syrup or juice
1 low-fat Granola Bar
2 Rice Cakes (4" diameter)
3/4 cup unsweetened cereal
2 Gingersnaps or Lorna Doones™
3 Graham Crackers (2 1/2 " square)
4-6 low-fat Crackers
5 Vanilla Wafers or Reduced Fat
Triscuits™
8 Animal Crackers
10 Baked Chips (potato or tortilla)
13 Reduced Fat Wheat Thins™
12 Mini Pretzels
1/2 cup sugar free, low-fat Ice Cream
1/2 cup sugar free Pudding
6 oz sugar-free, low-fat Yogurt

2 Carbohydrate Choice Snacks (30 grams of Carbohydrate and 100-150 calories)

1/2 bag Light Microwave Popcorn
1/2 cup regular Pudding
1/2 cup Sherbet or Sorbet
6 oz low-fat, sweetened Yogurt
1/4 cup Dried Fruit
1 Cereal Bar

Other Snack Ideas (very little or no carbohydrate)

Less than 30 calories:

1/4 cup Salsa
1/2 cup sugar free Gelatin
1 sugar free Popsicle
1 cup raw vegetables

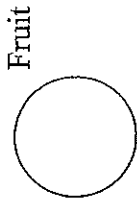
~100 calories

3 Tbsp Nuts
1 Tbsp Peanut Butter
1 oz low-fat String Cheese
1/4 cup low-fat Cottage Cheese
1-2 oz jerky

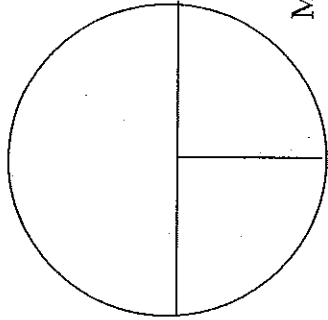


My Daily Meal Plan

Breakfast

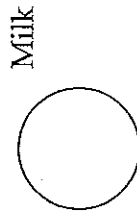


Fruit



Bread/
Starch

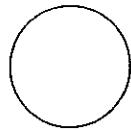
Meat/Protein



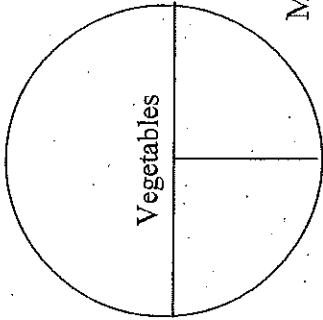
Milk

Snack

Lunch

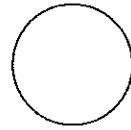


Fruit



Bread/
Starch

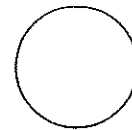
Meat/Protein



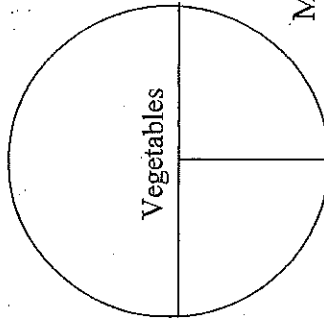
Milk

Snack

Dinner

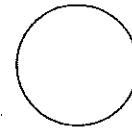


Fruit



Bread/
Starch

Meat/Protein



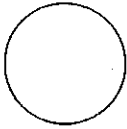
Milk

Bedtime Snack:

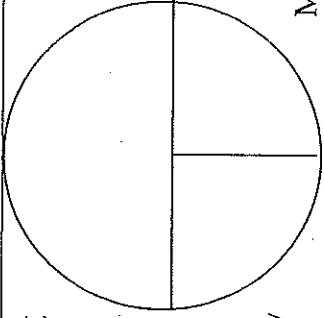
Activities:

Sample Food Diary

Breakfast

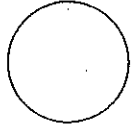


Fruit



Bread/
Starch

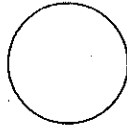
Meat/Protein



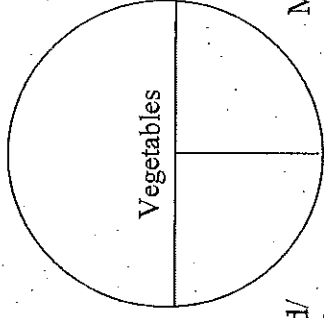
Milk

Snack

Lunch

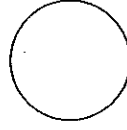


Fruit



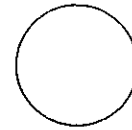
Bread/
Starch

Meat/Protein

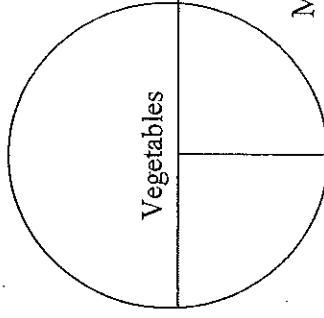


Milk

Snack

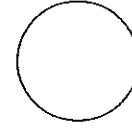


Fruit



Bread/
Starch

Meat/Protein



Milk

Bedtime Snack:

Activities:

My Plate Planner

A Healthy Meal Tastes Great



The Plate Method is a simple way to plan meals for you and your family. You don't have to count anything or read long lists of foods. All you need is a 9-inch plate.



1/4 protein. 1/4 starch. 1/2 vegetable.

9-inch plate

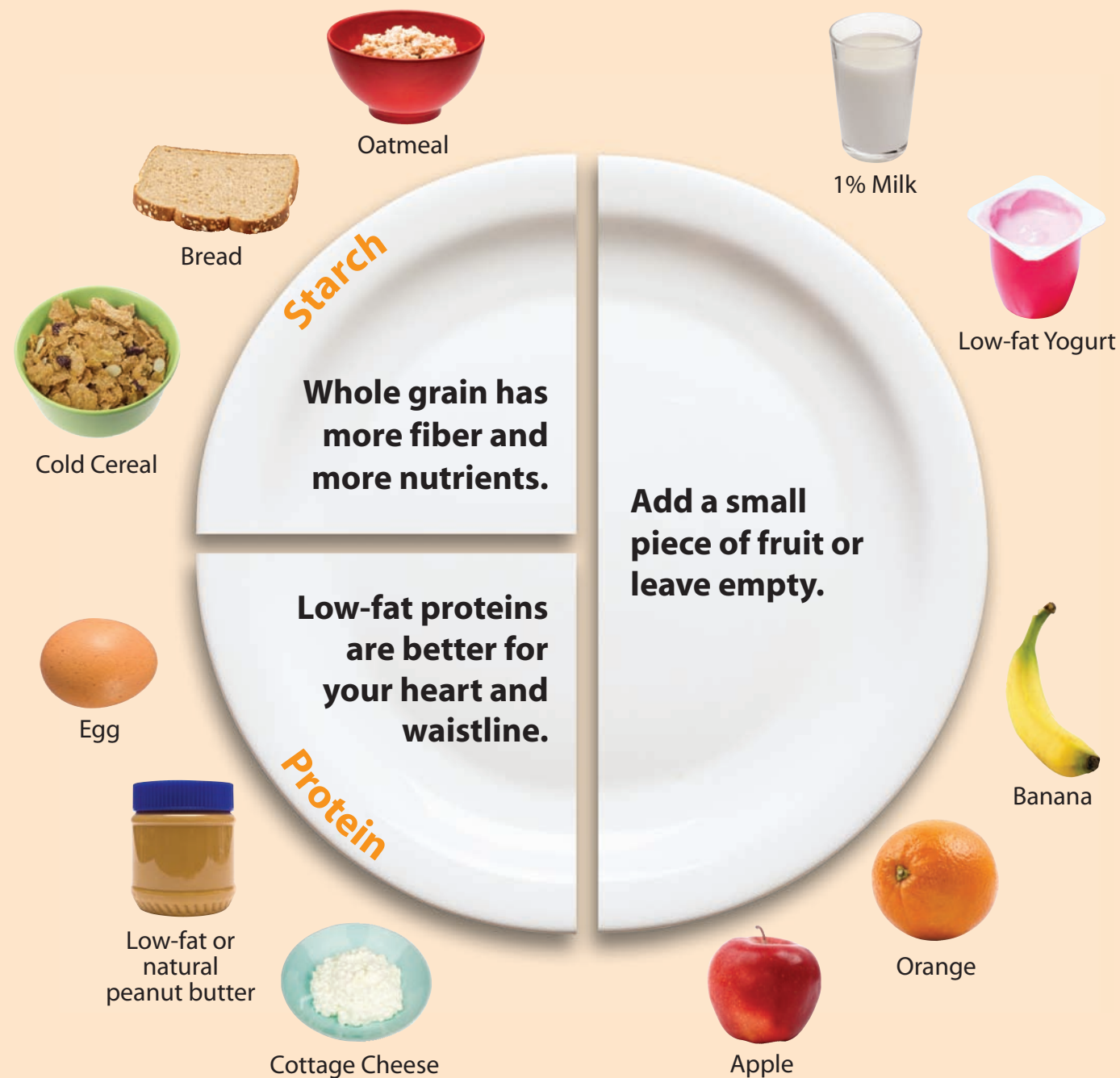


Michael R. Bloomberg,
Mayor
Thomas R. Frieden, M.D., M.P.H.,
Commissioner



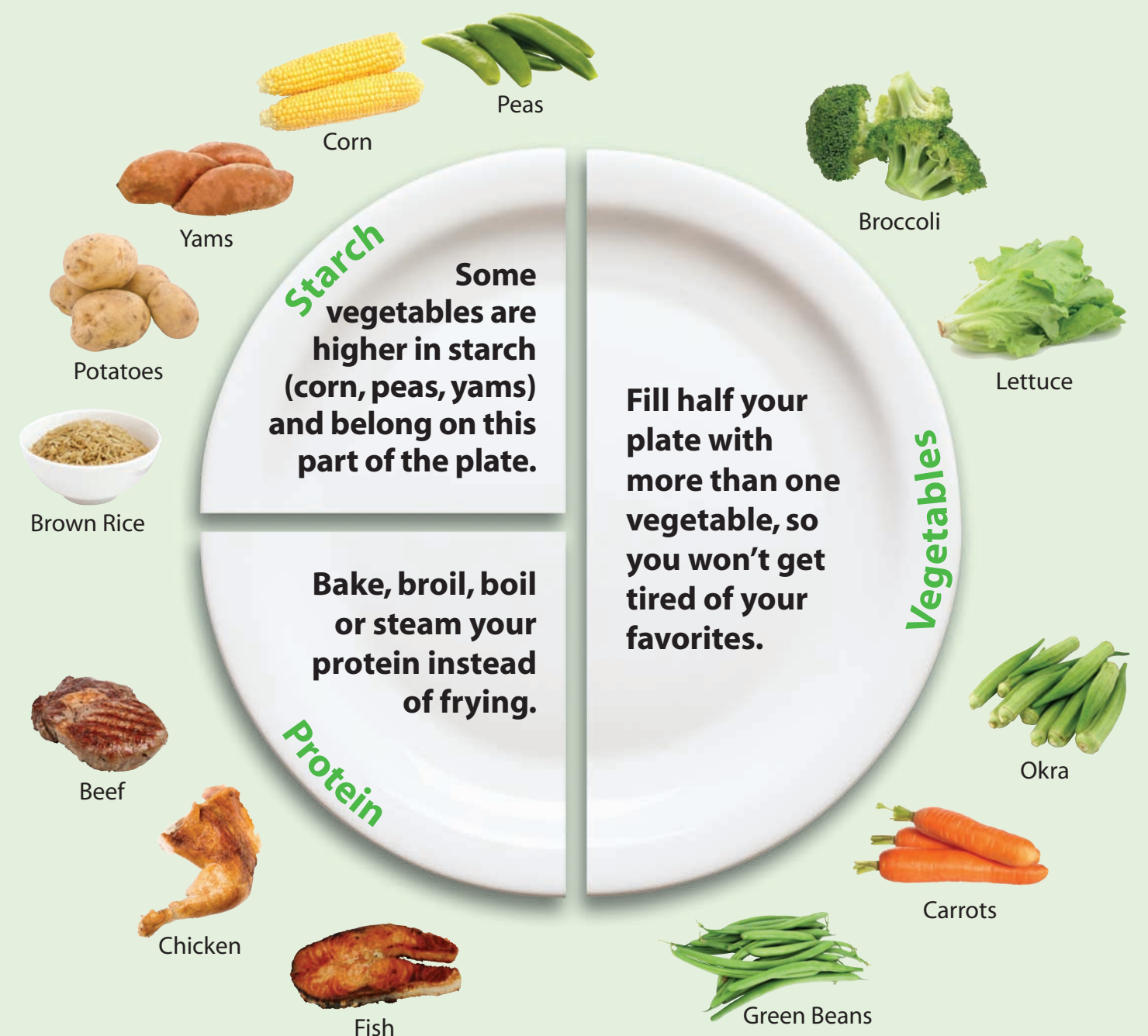
Let's Plan Your Meal

Breakfast



Note: Only use 1/2 of your plate — 1/4 protein and 1/4 starch

Lunch/Dinner



Buffet Table Tips for People with Diabetes

Barbecues, picnics and family reunions are gatherings to enjoy and treasure. If you have diabetes, these events can pose special challenges. How can you stick with your meal plan, yet join in the celebration and have some fun? You can do it. If you choose wisely and watch how much you eat, you can have a delicious meal and feel good too. So, grab your plate and head for the buffet table.

Look for the high fiber, low-fat dishes. Great choices are beans, peas and lentils, and dark green vegetables such as broccoli, cabbage, spinach and kale. Go for the green bean, three-bean, black bean and black-eyed pea dishes or pasta salads mixed with summer vegetables. Choose whole grain foods such as brown rice, couscous, whole wheat bread and pasta. Everyone benefits from eating these foods, not just people with diabetes.

Watch out for dishes loaded with mayonnaise, sour cream and butter. Choose veggies that are light on salad dressing, cheese or cream sauce. If you can, make your own dressing with a little olive oil and vinegar.

Vegetables and grains should fill up most of your plate, but leave room for some lean meat, poultry or fish. Be sure to choose grilled chicken and remove the skin—instead of the fried variety. If you're going to make a sandwich, use whole wheat bread with mustard or salsa, rather than mayonnaise.

What's for dessert? Summer means terrific fruits. It's hard to beat a fresh peach, fruit salad, cantaloupe or watermelon. Fruit is an excellent source of fiber, vitamins and minerals, and has zero fat. Everyone, including people with diabetes, should eat three to four servings of fruit a day. Pies, cakes and cookies are high in fat and cholesterol. If you can't resist, have a small serving.

It's best to drink water, unsweetened tea or diet soda. Add a wedge of lemon for flavor. If you choose to drink alcoholic beverages, limit your intake to no more than one drink a day for women, two for men, and drink only with a meal.

Eating the right foods to control your blood sugar means being prepared and planning ahead. If you need help putting together a meal plan, ask your doctor or nurse to refer you to a dietitian or diabetes educator. For more information about controlling your diabetes, call the National Diabetes Education Program at 1-800-438-5383 or visit the program's web site at <http://www.ndep.nih.gov> on the Internet.



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Type 2 Diabetes: The Dawn Phenomenon (High Fasting Blood Glucose in the Morning)

There are two common things that cause a high fasting blood glucose in the morning for people with type 2 diabetes.

1. Since human beings are mammals we need to carry a store of carbohydrate energy with us so that even when we are sleeping or fasting, there will be a supply of glucose to fuel our brains and our muscles. All of us (whether we have diabetes or not) carry about 300 grams of carbohydrate in our liver (in the form of a kind of starchy substance called glycogen). That is like carrying about 20 slices of bread under our rib cage! During the night if the liver does not have enough insulin around it responds by pouring glucose into the blood stream all night long.
2. In the few hours before our bodies wake up for the day we secrete several hormones (including cortisol and growth hormone). This is normal, but these hormones make it harder for insulin to work. Secreting cortisol and growth hormone make our bodies a bit more insulin resistant in the morning.

In both of these situations described above there is a need for extra insulin to be in the system. If the insulin level in the body is not high enough, then blood glucose levels rise and you wake up with a high fasting blood glucose. Many patients with type 2 diabetes try hard all day long to eat right, exercise properly and can go to bed with a blood glucose that is quite good (let's say 100-120 mg/dl). They then sleep all night and wake up with a blood glucose that is over 200 mg/dl! This is VERY frustrating!

The solution is to work with your doctor and his or her team to modify your regimen to deal with this. Typically using a medium-to-long acting insulin (like NPH, Lantus or Levemir) will work well so long as the dose is raised high enough. This can be done gradually, working with your doctor and his or her team. Sometimes that dose needed is well above 100 units (and I have occasionally had to go over 200 units at bedtime!). It just depends on the type of person and the type of insulin they are on and what level of insulin resistance they have. The commonest reason for this problem to persist is that the type of insulin was wrong, or the timing of when it was taken was wrong, or the dose wasn't pushed high enough.

I hope that helps you to have a good conversation with your health care team.

Best wishes,

David K. McCulloch, MD
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Seattle, Washington, USA