

DIABETES BASICS



Staying Healthy With Diabetes

Table of Contents

What Is Diabetes?	1
Why Should I Control My Blood Sugar?.....	2
Monitoring Your Blood Sugar	3
Hyperglycemia (High Blood Sugar)	4
Hypoglycemia (Low Blood Sugar)	5
Healthy Eating	6
Food Guide Pyramid	7
Reading Labels	8
Exercise	9
Medications	10
Insulin	11
Sick Days	12
Resources	13
Notes	14



This booklet is designed to give you basic information about diabetes. It is not meant to take the place of diabetes education classes or meeting with your health care team.

Ask your local health department or health care provider about diabetes education classes and an appointment with a dietitian.

Recommendations are based on the American Association of Diabetes Educators recommendations and the 2014 Clinical Practice Recommendations from the American Diabetes Association.
Printed 2014.

What Is Diabetes?

Diabetes is a lifelong medical condition that keeps your body from processing food normally.

Type 1 diabetes: your body no longer makes insulin.

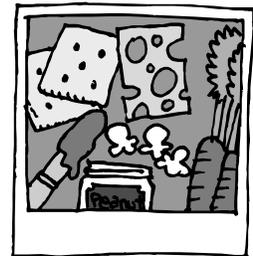
Type 2 diabetes: your body may still make insulin but it doesn't work effectively.

In both cases, sugar builds up in the blood and this is diabetes.



These are four things you can do to stay healthy with diabetes:

1. Monitor your blood sugar



2. Healthy eating



3. Exercise regularly

4. Take your medication as prescribed



You're Not Alone . . .

Learning you have diabetes can be overwhelming and scary. The good news is there is support! Ask your health care provider about classes, support groups and other services they offer for people with diabetes.



Why Should I Control My Blood Sugar?

High blood sugar over time can lead to problems such as:

- Heart Attack
- Nerve Damage
- Stroke
- Amputations
- Circulation Problems
- Eye Disease
- Kidney Disease
- Dental Problems

To help prevent these problems you can do the following:

Every day:

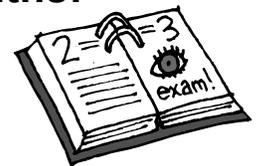
- Follow your diabetes meal plan
- Exercise
- Take your medication as prescribed
- Check your blood sugar
- Check your feet
- Brush and floss your teeth
- Find positive ways to cope with stress
- No tobacco products. If you do, quit!

At every office visit:

- Inspection of bare feet
- Blood pressure and weight check
- Bring blood sugar record and discuss

At least every six months:

- Get an A1C test
- See your dentist



Every year:

- Cholesterol and blood fat check
- Dilated eye exam
- Kidney exam
- Flu shot
- Complete foot exam
- Ask about a pneumonia shot.



Taking care of yourself makes a difference!



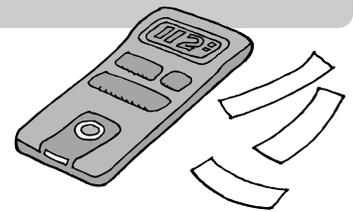
If you are overweight, losing 5-7% of your weight can help control your blood sugar.

For example:

If you weigh 200 lbs, losing 5-7% is 10-14 lbs.

Monitoring Your Blood Sugar

Ask your healthcare provider where you can get a blood sugar monitor. Take your monitor everywhere with you so you can see how things such as eating, exercising, and stress affect your blood sugar.



- Follow the instructions that come with your blood sugar monitor.
- Code your monitor if needed.
- Store your strips in the original package and at room temperature.
- Do not use expired or used strips.
- Wash your hands with soap and warm water before checking your blood sugar.
- Be sure you have enough blood on your test strip.
- Dispose of your lancet properly. Check with your health care provider, diabetes educator, and/or trash company about disposal.
- Write your blood sugar in your record. Bring your record to each medical visit.
- Follow guidelines for highs and lows on pages 4-5.

How often should I check my blood sugar?

Many people check their blood sugar several times throughout the day. Ask your health care provider how often they would like you to check.

What times should I check?

- Before and two hours after meals
- Before and after exercise
- Anytime you feel different than usual
- Ask your healthcare provider what times are best for you.

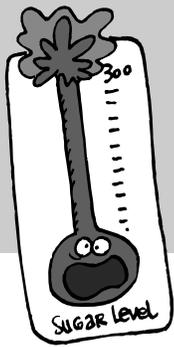


What should my numbers be?

Blood Sugar before meals	Blood Sugar 1-2 hours after eating
70-130 mg/dl	less than 180 mg/dl

A1C Test

Another test for blood sugar is the Hemoglobin A1C. This can be done by your health care provider. This test tells what your average blood sugar levels have been for the past 2 to 3 months. For good diabetes control, it is best to keep your A1C less than 7%.



Hyperglycemia

High Blood Sugar

(Set your goal with your health care provider.)

Causes

- Too much food
- Too little medication
- Sickness, infection, or stress
- Less exercise than usual

You may or may not have any of these symptoms:

Hungry
Headache
Nausea
Slow-healing Wounds
Weight Loss
(mainly Type 1)



Thirsty



Blurry Vision



Frequent Urination



Tired

Treatment

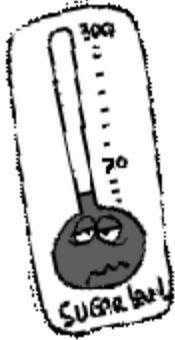
- Check blood sugar.
- If sugar is above 300, use ketone strips. Ketones act like a poison and form when the body starts to use its own fat, instead of sugar for energy. If you have ketones, call your health care provider immediately.
- Drink plenty of sugar-free liquid; water is the best choice.
- Make a plan with your health care provider if your blood sugar is high.



Hypoglycemia

Low Blood Sugar

(70 mg/dl or below, unless different values set with your health care provider.)



Causes

- Too little food
- Too much medication
- Extra exercise

You may feel any of these symptoms:

Tired
Weak
Irritable
Confused
Blurry Vision
Headache



Dizzy



Numb



Sweaty



Shaky

Treatment

- Check blood sugar. If you can't check but you have symptoms, treat anyway.
- If blood sugar is low, follow Rule of 15:

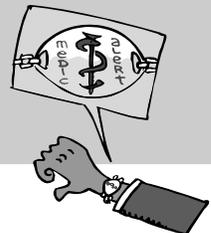
Rule of 15:

1. **Eat 15 grams** of carbohydrate such as 3-4 glucose tablets, 15g glucose gel, 1/2 cup juice or regular soft drink, 1 cup milk, or 1 Tbsp honey or sugar.
2. **Wait 15** minutes.
3. **Retest** blood sugar.



If blood sugar is still low, **repeat** Rule of 15. Be aware that your blood sugar may fall low again if a snack or meal isn't eaten within the next hour.

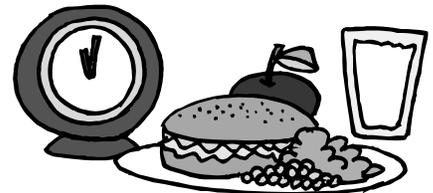
**Always wear
diabetes identification**



Healthy Eating

Eating right with diabetes doesn't mean you have to give up your favorite foods. Learning how to eat healthy is a key part of good diabetes care. Good diabetes meal planning includes:

- Choosing healthy foods
- Learning how different foods and the amount eaten affect your blood sugar
- Eating three meals a day at regular times



Carbohydrates are starches and sugars in food. They have more effect on blood sugar than protein or fat. Foods such as bread, pasta, potatoes, milk, fruit, and sweets are examples of foods high in carbohydrate. You can eat these foods but you may need to eat less at one time. Your blood sugar may go too high when you eat more carbohydrates than your body needs.

Make an appointment with a dietitian to plan your meal and daily carbohydrate needs.

Tips for Healthy Eating

- Bake, broil or grill foods rather than fry them.
- Limit foods loaded with sugar such as regular soft drinks or desserts.
- Non-starchy vegetables such as carrots, celery, and broccoli are high in fiber, but low in calories and make great snacks!
- Read food labels to know what you are eating.



Diabetes Food Pyramid

The Diabetes Food Pyramid gives you an idea of how many servings of each food group to eat every day. A healthy meal plan includes foods from all major food groups.

Fats, Oils, & Sweets (use sparingly)

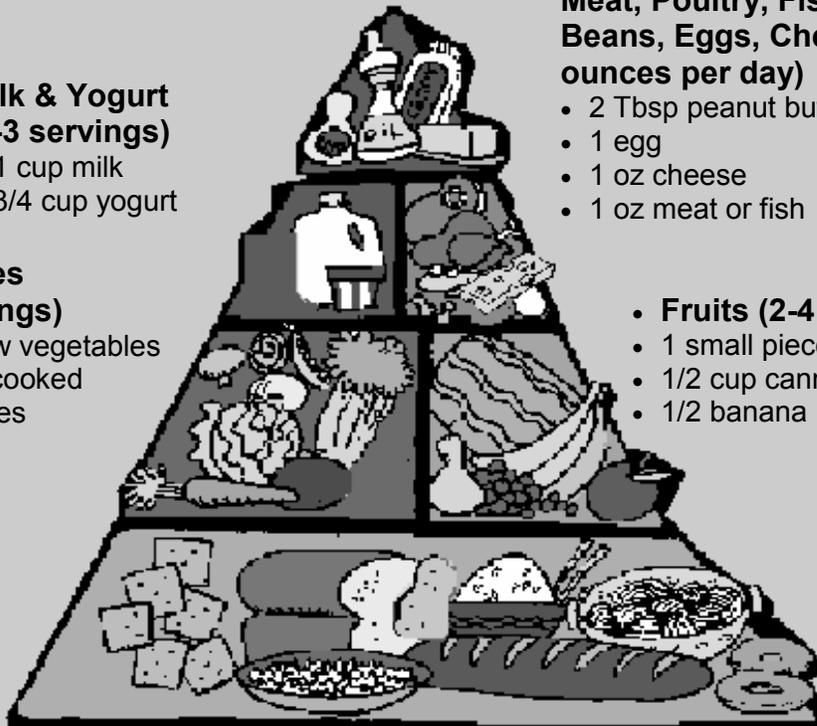
- 1 tsp butter, margarine, or oil
- 1Tbsp reduced fat mayonnaise

Milk & Yogurt (2-3 servings)

- 1 cup milk
- 3/4 cup yogurt

Vegetables (3-5 servings)

- 1 cup raw vegetables
- 1/2 cup cooked vegetables



Meat, Poultry, Fish, Dry Beans, Eggs, Cheese (4-6 ounces per day)

- 2 Tbsp peanut butter
- 1 egg
- 1 oz cheese
- 1 oz meat or fish

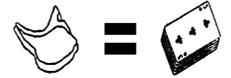
Fruits (2-4 servings)

- 1 small piece of fresh fruit
- 1/2 cup canned fruit
- 1/2 banana

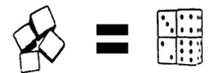
Bread, Cereal, Starchy Vegetables, Rice & Pasta (6-11 servings)

- 1 slice of bread
- 4-6 crackers
- 1/2 bun
- 1/3 cup rice or pasta
- 1/2 cup starchy vegetable

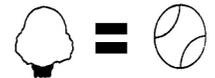
What does a serving look like?



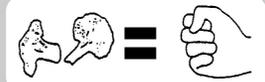
3 ounces of meat is about the size and thickness of a deck of playing cards



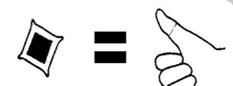
1 oz of cheese is about the size of 4 stacked dice



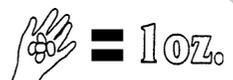
1/2 cup of ice cream is about the size of a tennis ball



1 cup of veggies is about the size of your fist



1 teaspoon of butter or peanut butter is about the size of the tip of your thumb



1 ounce of nuts or small candies equals one handful

Reading Labels

Learning to read labels is a key to healthy eating and can help you make good choices. Below are four important parts of a food label:

- 1. Serving Size:** Use measuring spoons, cups, or food scales. All the nutrition information listed is for one serving. If you eat two servings, multiply everything by two.
- 2. Calories:** This is key for weight loss.
- 3. Total Fat:** A low-fat food is less than three grams of fat per 100 calories. Choose mostly low-fat foods.
- 4. Total Carbohydrate:** Carbohydrates are needed everyday. Too much carbohydrate at one time may make blood sugar too high. Total carbohydrates may include fiber, sugars, and other carbohydrates. When counting carbohydrate only use Total Carbohydrate listed on the food label. Ask your dietitian how many grams of carbohydrate you need.

Sugar Substitutes

To cut carbohydrates, use sugar substitutes that are carbohydrate-free.



Nutrition Facts

Serving Size: 3/4 cup (33g/1.2 oz.)
Servings Per Container: about 11

Amount Per Serving

Calories 110 **Calories from Fat 15**
% Daily Value**

Total Fat 1.5g*	2%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 90mg	4%
Potassium 120mg	3%
Total Carbohydrate 25g	8%
Dietary Fiber 5g	20%
Soluble Fiber 1g	
Insoluble Fiber 4g	
Sugars 5g	
Other Carbohydrate 15g	

Protein 4g

Vitamin A 25% (25% DV as beta carotene)	
Vitamin C 50%	Calcium 0%
Iron 10%	Vitamin E 100%
Vitamin B6 100%	Folic Acid 100%
Vitamin B12 100%	Phosphorus 10%
Magnesium 25%	Zinc 10%

* Amount in cereal. One half cup of fat free milk contributes an additional 40 calories, 65mg sodium, 6g total carbohydrates (6g sugars), and 4g protein.

** Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

	Calories:	2,000	2,500
Total Fat	Less Than	65g	80g
Sat. Fat	Less Than	20g	25g
Cholesterol	Less Than	300mg	300mg
Sodium	Less Than	2,400mg	2,400mg
Potassium		3,500mg	3,500mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g
Protein		50g	65g

Calories per gram:

Fat 9 • Carbohydrate 4 • Protein 4

Brand Name	Name listed in ingredients
Sweet 'N Low, Sugar Twin, or Sucaryl	Saccharin
Equal or NutraSweet	Aspartame
Sweet One	Acesulfame K
Splenda	Sucralose
Truvia, PureVia	Stevia

Exercise

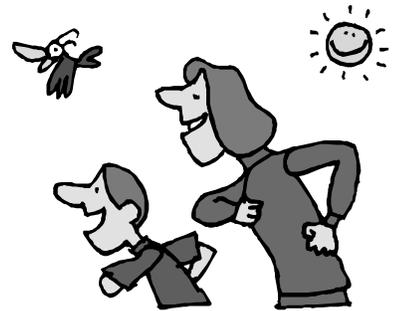
Regular exercise is a key part of your diabetes treatment plan. For most people with type 2 diabetes, exercise helps keep blood sugars in a healthy range.

Exercise may also:

- Reduce stress and increase energy
- Increase strength and range of motion
- Help control blood pressure and cholesterol
- Helps insulin work better

Tips for a Successful Exercise Plan

- Choose an exercise you enjoy.
- Plan for exercise.
- Find an exercise buddy.
- If you haven't exercised in a while, begin slowly.
- Aim for at least 30 minutes a day.



Safe Exercise Tips:

Things to carry with you when exercising:

1. Phone numbers of family and health care providers in case of an emergency
2. Cell phone
3. Blood sugar monitor
4. Diabetes identification
5. Emergency food to treat low blood sugar such as glucose tablets (See page 5)



See your health care provider before beginning any exercise program.

- Drink plenty of sugar-free fluids like water.
- Check your blood sugar before and after exercise.
- People with diabetes are at higher risk for a low blood sugar during and for several hours after exercise.
- Wear good fitting shoes while exercising.
- Check your feet before and after exercise.
- Include a warm-up and cool-down each time you exercise.
- Avoid an intense workout outdoors if it is very hot, humid, smoggy or cold.



Medications

- You may have to take medications if it is not possible to control your diabetes with healthy eating and exercise.
- Medications work better when you follow a healthy eating and exercise plan.
- Medications may be pills taken by mouth or medications that must be injected.
- If your doctor has prescribed a medication, there are some tips that will help you.
- Keep a current list of ALL your medications with you including over-the-counter.
- If your doctor has prescribed medication, there are some tips that will help you.



Tips for Medications

- Learn the name of your medication, the amount to take, and the time to take it.
- Carry a list of your medications with you at all times.
- Learn how your medication works and side effects.
- Call your health care provider if you have any side effects.
- Do NOT stop taking your medication or change the amount without asking your health care provider.
- Ask your pharmacist about your medication.

Insulin

- If you have type 1 diabetes, you must take insulin because your body no longer makes it. If you have type 2 diabetes, you may take pills or insulin and sometimes both.
- When insulin is prescribed, your health care provider will teach you how to take it.

Tips for Taking Insulin



- Check the expiration date on the vial of insulin or pen.
- Do NOT use the insulin if there are solids or frosting in the bottle.
- Do NOT store insulin in extreme temperatures – either hot or cold. Keep away from sunlight.
- Warm up cold insulin before injecting by gently rolling bottle between your palms.
- Ask your pharmacist or health care provider about mixing insulins.
- Measure insulin carefully for the correct amount.
- Dispose of your needles appropriately. Check with health care provider, diabetes educator, and/or trash company about proper disposal of these items.

Sick Days

When you are sick, your blood sugar may go higher or lower than usual. It is important to have a plan for your sick days **BEFORE** you get sick. Discuss this plan with your health care provider.



Call your health care provider if you:

- Have blood sugars that stay over 300 mg/dl or under 70 mg/dl
- Lose 5 lbs or more when you are sick
- Have vomiting or diarrhea for more than six hours
- Can't eat solid foods for more than 24 hours
- Can't keep liquids down
- Feel dizzy, confused, or in pain

Sick Day Foods

Try to eat regular meals. If you can't, here are some examples of foods to keep your carbohydrate intake about the same:

- 1/2 cup pudding
- 4-6 crackers
- 1/2 cup regular gelatin
- 1/2 cup juice

Sick Day Tips

- Never stop taking your diabetes medication without talking to your health care provider.
- Check your blood sugar at least every four hours when you're sick.
- Drink water to prevent dehydration. Do not drink liquids with caffeine.



Resources

- **Kentucky Diabetes Prevention and Control Program**
<http://chfs.ky.gov/dph/info/dpqi/cd/diabetes.htm>
502-564-7996
- **American Association of Diabetes Educators**
www.diabeteseducator.org 1-800-338-3633
- **American Diabetes Association**
www.diabetes.org 1-800-DIABETES
- **Centers for Disease Control and Prevention**
www.cdc.gov/diabetes 1-877-CDC-DIAB
- **National Diabetes Education Program**
www.ndep.nih.gov 1-301-496-3583
- **Kentucky Diabetes Network, Inc.**
www.kentuckydiabetes.net



Contact Information

Write in the names and phone numbers for your diabetes care team :

Health Care

Provider: _____

Phone: _____

Dietitian: _____

Phone: _____

Nurse: _____

Phone: _____

Pharmacy: _____

Phone: _____

Other: _____

Phone: _____



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