

Chapter 28

Eat Right!

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Section 28.1

Eat Healthy Food

Text in this section is excerpted from “Food Safety for Diabetes Patients,” U.S. Department of Health and Human Services (HHS), June 2, 2015; and text from “Tips for Teens with Diabetes: Make Healthy Food Choices,” National Diabetes Education Program (NDEP), November 1, 2012.

Food Safety for Diabetes Patients

In addition to cardiovascular disease and kidney problems, diabetes also affects the immune system. These affects leave diabetes patients more prone to infectious disease, such as foodborne illness. A diabetic patient’s immune system may not immediately recognize harmful foodborne pathogens increasing a person’s risk for infection.

Glucose Levels

High glucose levels suppress the function of white blood cells that fight off infection, increasing one’s risk of contracting a foodborne illness. If someone with diabetes contracts a foodborne illness, their blood glucose levels may be affected because the illness impacts what and how much the person can eat.

Gastrointestinal Tract (GI)

Diabetes may cause the stomach to produce low amounts of digestive acid. In addition, nerves may not move food through the GI tract as quickly as in non-diabetic persons. When the stomach holds on to food longer than necessary, bacteria start to multiply. If the amount of unhealthy bacteria in the stomach gets too high, it can lead to foodborne illness.

Kidneys

Kidneys usually work to cleanse the body. For many diabetes patients, their kidneys may not function properly, giving unhealthy bacteria the opportunity to grow out of control.

Why eat healthy foods?

Healthy foods give you energy to live, learn, and be active.

They help you to:

- Grow at a healthy rate and stay active.
- Keep your blood glucose, also called blood sugar, in balance—not too high and not too low.
- Lose weight slowly, if needed, under your doctor’s care.

Do teens with diabetes need to eat special foods?

No, they do not. Meals that are healthy for teens with diabetes are great for everyone—you, your family, and your friends.

How does food affect my body?

Food is the fuel that our bodies use for energy.

The three main sources of fuel are carbohydrates, protein, and fat. The body changes these fuels into glucose for energy or stores them as fat. Eating a balance of foods that contain carbohydrates (carbs for short), protein, and fat every day will help keep your blood glucose close to normal. It may also keep your weight where you and your doctor want it to be.

Fats

Fats are a good source of fuel for the body and help you grow. Fat does not make blood glucose go up but too much fat can make you gain weight. Some fats are better for you than others.

Choose the types of **fats that keep your heart healthy**:

- Small portions of low-fat salad dressing, mayonnaise, and margarine.
- Small amounts of nuts, olives, and olive oil.
- A slice of avocado.

Choose these high fat foods less often. They are **not healthy for your heart**:

- Butter, stick margarine, and regular mayonnaise.

- Fried foods like potato chips and french fries.
- Meats with fat on them, bacon, deli meats, and hot dogs.
- Cakes, cookies, pies, and other desserts.

Protein

Protein helps build strong muscles and bones. Foods with protein do not make blood glucose go up like carbs do. **Having protein in your meal can help you feel less hungry.**

Foods that are a good source of protein include:

- Meat and poultry without skin or extra fat.
- Fish, low-fat cheese, and eggs.
- Natural peanut butter and soy products like tofu.

Carbs

Carbs are a great source of energy for our bodies. Many foods contain carbs. Some are better for you than others. If you eat too many carbs at one time, your blood glucose may get too high. **Learn to eat the right amount at meals and snack times to keep your blood glucose in balance.**

Choose carbs that have lots of fiber:

- Whole grain foods—whole wheat bread and crackers, oatmeal, brown rice, and cereals.
- Lentils and dried peas or beans such as kidney, black, white, split, or black-eyed. These foods are also a good source of protein.
- Fresh fruits and vegetables from every color of the rainbow—red, orange, yellow, white, green, blue, and purple.
- Other good sources of carbs include non or low-fat dairy foods, soy milk, pasta, potatoes, corn, squash, and yams.

Choose these carbs less often:

- white bread
- white rice
- sweetened fruit drinks
- regular soda

- sweets and desserts

What should I eat?

Find below “Your Healthy Food Guide” which gives ideas about what kinds of foods are good for you. Remember, this is only a guide. Ask your doctor or dietitian about making a meal plan just for you.

Your Healthy Food Guide

Vegetables

Aim for 2 1/2 to 3 cups a day. Here are choices that equal 1 cup:

- 1 cup cut up raw or cooked or vegetables
- 2 cups leafy salad greens
- 1 cup vegetable juice

Fruits

Aim for 1 1/2 to 2 cups a day. Here are choices that equal 1 cup:

- 1 cup cut up raw or cooked fruit
- 1 cup fruit juice
- 1/2 cup dried fruit

Choose fresh whole fruits as often as you can.

Milk, Yogurt, and Cheese

Aim for 3 cups a day. Here are choices that equal 1 cup:

- 1 cup nonfat or low-fat milk or yogurt
- 1 1/2 ounces cheese

Breads, Cereals, Rice and Pasta

Aim for 6 to 7 ounces a day. Here are choices that equal 1 ounce:

- 1/2 cup of cooked cereal
- 1/2 cup cooked rice or pasta
- 1 cup ready-to-eat cereal

- 1 slice of whole grain bread
- 1/2 small bagel or 1 small muffin

Choose whole grain foods for at least 3 of your 6 choices.

Meat, Poultry, Fish, Dry Beans, Eggs, and Nuts

Aim for 5 to 6 ounces a day. Here are choices that equal 1 ounce:

- 1 ounce lean meat, fish, or chicken
- 1 egg
- 1 tablespoon peanut butter
- 1/2 ounce nuts
- 1/4 cup cooked dry peas or beans such as kidney, white, split, or blackeye
- 1/4 cup tofu

Heart healthy fats

One serving is:

- 1 teaspoon vegetable, olive, or canola oil
- 1 teaspoon tub margarine
- 5 large olives or 1/8 avocado
- 1 tablespoon low-fat mayonnaise
- 2 tablespoons low-fat salad dressing

How much should you eat?

You get most of the fat your body needs from other foods you eat—so choose only a few extra servings of these heart-healthy fats each day.

Regular Soda, Candy, Cookies, and Deserts

If you choose to eat these foods, have a very small amount and not every day.

What about sugar, sweets, and desserts? Am I allowed to eat them again?

Most people like the taste of sweet foods. Small amounts of foods that contain sugar can be part of a healthy meal plan.

Desserts such as cakes, muffins, pies, cookies, and ice cream contain a lot of fat as well as sugar. If you choose to eat any of these sweet foods, just have a small amount at the end of a healthy meal. Have a piece of fruit if you are still hungry.

Avoid regular soda, sweetened fruit drinks, and sports drinks as they are all high in sugar. Drink water instead.

How much should I eat?

The amount of food you need to eat each day varies with your age, sex, height, and activity level. The amounts in “**Your Healthy Food Guide**” are right for girls age 11 to 17 or boys age 11 to 14 who get 30 to 60 minutes of physical activity each day.

Ask your doctor or dietitian about making a meal plan just for you, especially if you need to lose weight. Being active and eating smaller amounts of food and fewer sweet or fatty foods can help you lose weight in a healthy way. You will keep your heart healthy, too.

It is best to spread your food out over the day. Eat breakfast, lunch, dinner, and a snack—check out your options with your doctor or dietitian. You will have a good supply of energy and you will not get too hungry.

Putting it all together

- Learn about healthy foods and make healthy choices at each meal and snack.
- Ask your health care team to help you make and use a healthy eating plan.
- Choose water to drink.
- Be physically active for at least 60 minutes every day.
- Take the correct amounts of insulin or pills, if you need them to manage your diabetes, and check your blood glucose at the times planned with your health care team.
- Keep screen time to two hours or less a day. This includes time watching TV, playing video or computer games, and using the computer.
- Use this tip sheet to help you reach your goals!

Section 28.2

Carbohydrate Counting

Text in this section is excerpted from “What I need to Know about Carbohydrate Counting and Diabetes,” National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), National Institutes of Health (NIH), December 2013.

What is carbohydrate counting?

Carbohydrate counting, also called carb counting, is a meal planning tool for people with type 1 or type 2 diabetes. Carbohydrate counting involves keeping track of the amount of carbohydrate in the foods you eat each day.

Carbohydrates are one of the main nutrients found in food and drinks. Protein and fat are the other main nutrients. Carbohydrates include sugars, starches, and fiber. Carbohydrate counting can help you control your blood glucose, also called blood sugar, levels because carbohydrates affect your blood glucose more than other nutrients.

Healthy carbohydrates, such as whole grains, fruits, and vegetables, are an important part of a healthy eating plan because they can provide both energy and nutrients, such as vitamins and minerals, and fiber. Fiber can help you prevent constipation, lower your cholesterol levels, and control your weight.

Unhealthy carbohydrates are often food and drinks with added sugars. Although unhealthy carbohydrates can also provide energy, they have little to no nutrients.

The amount of carbohydrate in foods is measured in grams. To count grams of carbohydrate in foods you eat, you'll need to:

- know which foods contain carbohydrates
- learn to estimate the number of grams of carbohydrate in the foods you eat
- add up the number of grams of carbohydrate from each food you eat to get your total for the day

Your doctor can refer you to a dietitian or diabetes educator who can help you develop a healthy eating plan based on carbohydrate counting.

Which foods contain carbohydrates?

Foods that contain carbohydrates include,

- grains, such as bread, noodles, pasta, crackers, cereals, and rice
- fruits, such as apples, bananas, berries, mangoes, melons, and oranges
- dairy products, such as milk and yogurt
- legumes, including dried beans, lentils, and peas
- snack foods and sweets, such as cakes, cookies, candy, and other desserts
- juices, soft drinks, fruit drinks, sports drinks, and energy drinks that contain sugars
- vegetables, especially “starchy” vegetables such as potatoes, corn, and peas

Potatoes, peas, and corn are called starchy vegetables because they are high in starch. These vegetables have more carbohydrates per serving than nonstarchy vegetables.

Examples of nonstarchy vegetables are asparagus, broccoli, carrots, celery, green beans, lettuce and other salad greens, peppers, spinach, tomatoes, and zucchini.

Foods that do not contain carbohydrates include meat, fish, and poultry; most types of cheese; nuts; and oils and other fats.

What happens when I eat foods containing carbohydrates?

When you eat foods containing carbohydrates, your digestive system breaks down the sugars and starches into glucose. Glucose is one of the simplest forms of sugar. Glucose then enters your bloodstream from your digestive tract and raises your blood glucose levels. The hormone insulin, which comes from the pancreas or from insulin shots, helps cells throughout your body absorb glucose and use it for energy. Once glucose moves out of the blood into cells, your blood glucose levels go back down.

How can carbohydrate counting help me?

Carbohydrate counting can help keep your blood glucose levels close to normal. Keeping your blood glucose levels as close to normal as possible may help you,

- stay healthy longer
- prevent or delay diabetes problems such as kidney disease, blindness, nerve damage, and blood vessel disease that can lead to heart attacks, strokes, and amputations—surgery to remove a body part
- feel better and more energetic

You may also need to take diabetes medicines or have insulin shots to control your blood glucose levels. Discuss your blood glucose targets with your doctor. Targets are numbers you aim for. To meet your targets, you will need to balance your carbohydrate intake with physical activity and diabetes medicines or insulin shots.

How much carbohydrate do I need each day?

The daily amount of carbohydrate, protein, and fat for people with diabetes has not been defined—what is best for one person may not be best for another. Everyone needs to get enough carbohydrate to meet the body's needs for energy, vitamins and minerals, and fiber.

Experts suggest that carbohydrate intake for most people should be between 45 and 65 percent of total calories. People on low-calorie diets and people who are physically inactive may want to aim for the lower end of that range.

One gram of carbohydrate provides about 4 calories, so you'll have to divide the number of calories you want to get from carbohydrates by 4 to get the number of grams. For example, if you want to eat 1,800 total calories per day and get 45 percent of your calories from carbohydrates, you would aim for about 200 grams of carbohydrate daily. You would calculate that amount as follows:

- $.45 \times 1,800 \text{ calories} = 810 \text{ calories}$
- $810 \div 4 = 202.5 \text{ grams of carbohydrate}$

You'll need to spread out your carbohydrate intake throughout the day. A dietitian or diabetes educator can help you learn what foods to eat, how much to eat, and when to eat based on your weight, activity level, medicines, and blood glucose targets.

How can I find out how much carbohydrate is in the foods I eat?

You will need to learn to estimate the amount of carbohydrate in foods you typically eat. For example, the following amounts of carbohydrate-rich foods each contain about 15 grams of carbohydrate:

- one slice of bread
- one 6-inch tortilla
- 1/3 cup of pasta
- 1/3 cup of rice
- 1/2 cup of canned or fresh fruit or fruit juice or one small piece of fresh fruit, such as a small apple or orange
- 1/2 cup of pinto beans
- 1/2 cup of starchy vegetables such as mashed potatoes, cooked corn, peas, or lima beans
- 3/4 cup of dry cereal or 1/2 cup cooked cereal
- 1 tablespoon of jelly

Some foods are so low in carbohydrates that you may not have to count them unless you eat large amounts. For example, most non-starchy vegetables are low in carbohydrates. A 1/2-cup serving of cooked nonstarchy vegetables or a cup of raw vegetables has only about 5 grams of carbohydrate.

As you become familiar with which foods contain carbohydrates and how many grams of carbohydrate are in food you eat, carbohydrate counting will be easier

Nutrition Labels

You can find out how many grams of carbohydrate are in the foods you eat by checking the nutrition labels on food packages.

Nutrition labels tell you:

- the food's serving size—such as one slice or 1/2 cup
- the total grams of carbohydrate per serving
- other nutrition information, including calories and the amount of protein and fat per serving

If you have two servings instead of one, such as one cup of pinto beans instead of 1/2 cup, you multiply the number of grams of carbohydrate in one serving—for example, 15—by two to get the total number of grams of carbohydrate—30.

$$15 \times 2 = 30$$

Cooking at Home

To find out the amount of carbohydrate in homemade foods, you'll need to estimate and add up the grams of carbohydrate from the ingredients. You can use books or websites that list the typical carbohydrate content of homemade items to estimate the amount of carbohydrate in a serving.

You can also weigh foods with a scale or measure amounts with measuring cups or spoons to estimate the amount of carbohydrate. For example, if a nutrition label shows that 1 1/2 cups of cereal contain 45 grams of carbohydrate, then 1/2 cup will have 15 grams of carbohydrate and 1 cup will have 30 grams of carbohydrate.

Eating Out

Some restaurants provide nutrition information that lists grams of carbohydrate. You can also use carbohydrate counting food lists to estimate the amount of carbohydrate in restaurant meals.

Can I eat sweets and other foods and drinks with added sugars?

Yes, you can eat sweets and other foods and drinks with added sugars. However, you should limit your intake of these high-carbohydrate foods and drinks because they are often high in calories and low in vitamins, minerals, and fiber. Fiber-rich whole grains, fruits, vegetables, and beans are wiser choices.

Instead of eating sweets every day, try eating them in small amounts once in a while so you don't fill up on foods that are low in nutrition. Ask your dietitian or diabetes educator about including sweets in your eating plan.

What are added sugars?

Added sugars are various forms of sugar added to foods or drinks during processing or preparation. Naturally occurring sugars such as

those in milk and fruits are not added sugars but are carbohydrates. The most common sources of added sugars for Americans are:

- sugar-sweetened soft drinks, fruit drinks, sports drinks, and energy drinks
- grain-based desserts, such as cakes, cookies, and doughnuts
- milk-based desserts and products, such as ice cream, sweetened yogurt, and sweetened milk
- candy

Reading the list of ingredients for foods and drinks can help you find added sugars, such as:

- sugar, raw sugar, brown sugar, and invert sugar—a mixture of fructose and glucose
- corn syrup and malt syrup
- high-fructose corn syrup, often used in soft drinks and juices
- honey, molasses, and agave nectar
- dextrose, fructose, glucose, lactose, and sucrose

For a healthier eating plan, limit foods and drinks with added sugars.

How can I tell whether carbohydrate counting is working for me?

Checking your blood glucose levels can help you tell whether carbohydrate counting is working for you. You can check your blood glucose levels using a glucose meter.

You should also have an A1C blood test at least twice a year. The A1C test reflects the average amount of glucose in your blood during the past 3 months.

If your blood glucose levels are too high, you may need to make changes in your eating plan or other lifestyle changes. For example, you may need to make wiser food choices, be more physically active, or make changes to your diabetes medicines. Talk with your doctor about what changes you need to make to control your blood glucose levels.

If you use an insulin pump or take more than one daily insulin shot, ask your doctor how to adjust your insulin when you eat something that isn't in your usual eating plan.

Can I use carbohydrate counting if I am pregnant?

You can use carbohydrate counting to help control your blood glucose levels when you are pregnant. Meeting your blood glucose targets during pregnancy is important for your and your baby's health. High blood glucose during pregnancy can harm the baby and increase the baby's chances of having type 2 diabetes later in life.

Women diagnosed with gestational diabetes—a type of diabetes that develops only during pregnancy—can also use carbohydrate counting to help control their blood glucose levels.

Talk with your doctor about using carbohydrate counting to help meet your blood glucose targets during your pregnancy.

Section 28.3

Diabetes and Dietary Supplements

Text in this section is excerpted from “Diabetes and Dietary Supplements,” National Center for Complementary and Integrative Health (NCCIH), November 2014.

Diabetes is a group of chronic diseases that affect metabolism—the way the body uses food for energy and growth. Millions of people have diabetes, which can lead to serious health problems if it is not managed well. Conventional medical treatments and following a healthy lifestyle, including watching your weight, can help you prevent, manage, and control many complications of diabetes. Researchers are studying several complementary health approaches, including dietary supplements, to see if they can help people manage type 2 diabetes—the focus of this section—or lower their risk of developing the disease.

Key facts

A healthy diet, physical activity, and blood glucose testing are the basic tools for managing type 2 diabetes. Your health care providers will help you learn to manage your diabetes and track how well you are controlling it. It is very important not to replace proven conventional

medical treatment for diabetes with an unproven health product or practice.

Are dietary supplements for diabetes safe?

Some dietary supplements may have side effects, including interacting with your diabetes treatment or increasing your risk of kidney problems.

Are any dietary supplements for diabetes effective?

There is not enough scientific evidence to suggest that any dietary supplements can help prevent or manage type 2 diabetes.

Keep in mind

Tell all your health care providers about any complementary health approaches you use. Give them a full picture of what you do to manage your health. This will help ensure coordinated and safe care.

What the science says

Overall, there is not enough scientific evidence to show that any dietary supplement can help manage or prevent type 2 diabetes. This section addresses some of the many supplements studied for diabetes, with a focus on those that have undergone clinical trials (studies in people).

Alpha-lipoic acid

Alpha-lipoic acid is an antioxidant (a substance that may protect against cell damage). Studies have examined the effects of alpha-lipoic acid supplements on complications of diabetes.

For example:

A 2011 clinical trial of 467 participants with type 2 diabetes found that supplements of 600 milligrams of alpha-lipoic acid daily did not prevent diabetic macular edema, an eye condition that causes blurred vision.

Alpha-lipoic acid and vitamin E supplements taken separately or in combination did not improve cholesterol levels or the body's response to insulin in a 2011 clinical trial of 102 people with type 2 diabetes.

Safety

High doses of alpha-lipoic acid supplements can cause gastrointestinal problems.

Chromium

Found in many foods, chromium is an essential trace mineral. If you have too little chromium in your diet, your body can't use glucose efficiently. Studies, including a 2007 systematic review, have found few or no benefits of chromium supplements for controlling diabetes or reducing the risk of developing it. Many of the studies used for the review were small or not high quality.

Safety

Chromium supplements may cause stomach pain and bloating, and there have been a few reports of kidney damage, muscular problems, and skin reactions following large doses.

Herbal supplements

There is no strong evidence that herbal supplements can help to control diabetes or its complications.

- Researchers have found some risks but no clear benefits of cinnamon for people with diabetes.
- A 2012 systematic review of 10 randomized controlled trials did not support using cinnamon for type 1 or type 2 diabetes.
- A trial of 59 people with type 2 diabetes found that a combination of cinnamon, calcium, and zinc didn't improve their blood pressure.
- When researchers tested samples of the common spice cassia cinnamon for sale at grocery stores in Europe, they found many samples contained coumarin, a substance that may cause or worsen liver disease in people who are sensitive. Also, eating large amounts of cinnamon containing coumarin may be especially risky for people taking blood-thinning drugs; the interaction of coumarin and blood thinners can increase the likelihood of bleeding.
- Researchers are studying whether Asian ginseng and American ginseng may help control glucose levels. Currently, research reviews and clinical trials show that there is not enough evidence to support their use.
- Other herbal supplements studied for diabetes include aloe vera, bitter melon, Chinese herbal medicines, fenugreek, garlic, *Gymnema sylvestre*, milk thistle, nettle, prickly pear cactus, and sweet potato. None have been proven to be effective.

Safety

Information on the safety of herbal supplements for people with diabetes is generally inconclusive or unavailable. Interactions between herbs and conventional diabetes drugs have not been well studied and could be a health risk. For example, in some people cinnamon might worsen liver disease and interact with blood thinners.

Magnesium

Found in many foods, including whole grains, nuts, and green leafy vegetables, magnesium is essential to the body's ability to process glucose. Magnesium deficiency may increase the risk of developing diabetes.

- There is no evidence from clinical trials that magnesium helps to manage diabetes.
- A 2011 meta-analysis reviewed the results of 13 studies that looked at how much magnesium people got in their diets, either through supplements or food, and their risk of diabetes. The review found that people who had lower magnesium intake had a greater risk of developing diabetes.
- One of the studies in the 2011 research review mentioned above, a large 2007 clinical trial, found that people who ate more cereal fiber and magnesium-rich food had a lower risk of developing type 2 diabetes.
- People who had a diet rich in magnesium had a 15 percent reduced risk of developing type 2 diabetes, according to a 2007 meta-analysis of studies that looked at magnesium from foods or supplements.

Safety

No serious side effects were reported in studies where people with diabetes were given magnesium supplements for up to 16 weeks. However, the long-term safety of magnesium supplements for people with diabetes has not been established. Large doses of magnesium in supplements can cause diarrhea and abdominal cramping. Very large doses—more than 5,000 mg/day per day—can be deadly.

Omega-3s

Omega-3s supplements don't help people with diabetes control their blood sugar levels, a 2008 systematic review found. A 2012 study that

combined a meta-analysis and a systematic review looked at the possible link between eating seafood or plants with omega-3s and the risk of developing type 2 diabetes. The study found little evidence that these dietary sources of Omega-3s affected the risk of developing diabetes.

Safety

- Omega-3 supplements usually do not have negative side effects. When side effects do occur, they typically consist of minor gastrointestinal symptoms, such as belching, indigestion, or diarrhea.
- Omega-3 supplements may extend bleeding time (the time it takes for a cut to stop bleeding). People who take drugs that affect bleeding time, such as anticoagulants (“blood thinners”) or nonsteroidal anti-inflammatory drugs (NSAIDs), should discuss the use of omega-3 fatty acid supplements with a health care provider.

Vitamins

- Studies (including a 2010 research review and 2009 clinical trial) have found no evidence that taking vitamin C supplements is helpful for diabetes.
- The research on diabetes and vitamin D and calcium supplements is not conclusive.
- Supplementing with vitamin D combined with calcium appears to lower the risk of developing type 2 diabetes, according to a 2007 systematic review and meta-analysis.
- In a 2008 clinical trial studying 33,951 post-menopausal women over 7 years, calcium plus vitamin D supplements did no better than a placebo at reducing the risk of developing diabetes.
- The lower risk seen in some studies in people who consume more calcium may be because those individuals are also getting more magnesium, a 2012 meta-analysis reported.

Safety

Getting too much calcium may interfere with the body’s ability to absorb iron and zinc. Also, calcium supplements can interact with certain medicines.

Other supplements

- There is no strong evidence that supplements of the trace mineral vanadium improve blood sugar control in people with type 2 diabetes.
- The evidence is still preliminary on the effects on diabetes of supplements and foods rich in polyphenols—antioxidants found in fruits, grains, and vegetables, a 2010 research review concluded.

If you have diabetes and are thinking about using a dietary supplement

- Talk to a health care provider before considering any dietary supplement for yourself, particularly if you are pregnant or nursing, or for a child. Many supplements have not been tested in pregnant women, nursing mothers, or children.
- Do not replace scientifically proven treatments for diabetes with unproven health products or practices. The consequences of not following your prescribed medical regimen for diabetes can be very serious.
- Keep in mind that dietary supplements may interact with medications or other dietary supplements and may contain ingredients not listed on the label.
- Tell all your health care providers about any complementary health approaches you use. Give them a full picture of what you do to manage your health. This will help ensure coordinated and safe care.

6 Things to Know About Type 2 Diabetes and Dietary Supplements

Here are 6 things you should know about taking dietary supplements for type 2 diabetes.

1. A healthy diet, physical activity, and blood glucose testing are the basic tools for managing type 2 diabetes. Your health care providers will help you learn to manage your diabetes and track how well you are controlling it. It is very important not to replace proven conventional medical treatment for diabetes with an unproven health product or practice.

2. Some dietary supplements may have side effects, including interacting with your diabetes treatment or increasing your risk of kidney problems. This is of particular concern because diabetes is the leading cause of chronic kidney disease and kidney failure in the United States. Supplement use should be monitored closely in patients who have or are at risk for kidney disease.
3. Chromium (an essential trace mineral found in many foods) has been studied for preventing diabetes and controlling glucose levels, but research has found it has few or no benefits. There have been a few reports of kidney damage, muscular problems, and skin reactions following large doses of chromium.
4. There is no evidence that magnesium helps to manage diabetes; however research suggests that people with lower magnesium intake may have a greater risk of developing diabetes. A large 2007 study found an association between a higher intake of cereal fiber and magnesium and a reduced risk of developing type 2 diabetes. Large doses of magnesium in supplements can cause diarrhea and abdominal cramping, and very large doses—more than 5,000 mg/day per day—can be deadly.
5. There is no strong evidence that herbs and other dietary supplements, including cinnamon and omega-3s, can help to control diabetes or its complications. Researchers have found some risks but no clear benefits of cinnamon for people with diabetes. For example, a 2012 review of the scientific literature did not support using cinnamon for type 1 or type 2 diabetes.
6. Talk with your health care provider before considering any dietary supplement for yourself, particularly if you are pregnant or nursing, or for a child. Do not replace scientifically proven treatments for diabetes with unproven health products or practices. The consequences of not following your prescribed medical regimen for diabetes can be very serious.