

## What Do I Need To Know About My Diabetes

What is Diabetes and how do I know which one I have?

Diabetes is a problem with your body that causes blood glucose (sugar) levels to rise higher than normal. This is also called hyperglycemia. When you eat your body breaks food down into glucose and sends it into the blood. Insulin then helps move the glucose from the blood into your cells. When glucose enters your cells, it is either used as fuel for energy right away or stored for later use. In a person with diabetes, there is a problem with insulin. But, not everyone with diabetes has the same problem. There are different types of diabetes – type 1, type 2, and a condition called gestational diabetes, which happens during pregnancy. If you have diabetes, your body either doesn't make enough insulin, it can't use the insulin it does make very well, or both. \*

What is Type 1 Diabetes?

In type 1 diabetes, your immune system mistakenly destroys the cells in your pancreas that make insulin. Your body treats these cells as invaders and destroys them. This can happen over a few weeks, months, or years.\*

What is Type 2 Diabetes?

In type 2 diabetes, your body does not use insulin properly. This is called insulin resistance. At first, the pancreas makes extra insulin to make up for it. Over time your pancreas isn't able to keep up and can't make enough insulin to keep your blood glucose levels normal. Type 2 is treated with lifestyle changes, oral medications (pills), and insulin. Some people with type 2 can control their blood glucose with healthy eating and being active. But, your doctor may need to also prescribe oral medications or insulin to help you meet your target blood glucose levels. Type 2 usually gets worse over time—even if you don't need to take medications at first, you may need to later on. <sup>1\*</sup>

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<sup>1</sup> <https://professional.diabetes.org/pel/type-2-diabetes-english>

## HOW WILL I KNOW IF MY DIABETES TREATMENT IS WORKING?

Getting an A1C test at least twice a year helps you and your health care team keep track of how well you are controlling your blood glucose levels. A1C is part of your diabetes ABCs, which will tell you if your overall diabetes treatment is working.

The ABCs of diabetes are:

A is for A1C or estimated average glucose (eAG) Your A1C test tells you your average blood glucose for the past 2 to 3 months. It's the blood check "with a memory."

B is for blood pressure Your blood pressure numbers tell you the force of blood inside your blood vessels. When your blood pressure is high, your heart has to work harder.

C is for cholesterol Your cholesterol numbers tell you about the amount of fat in your blood. Some kinds of cholesterol can raise your risk for heart attack and stroke.

# All About Blood Glucose

Keeping your blood glucose (sugar) in your target range can prevent or delay the health problems caused by diabetes. Most of the steps needed to take care of diabetes are things you do yourself.

- Use a meal plan.
- Be physically active.
- Take your medicines.
- Try to reach your blood glucose targets most of the time.
- Keep track of your blood glucose numbers using the results from your daily blood glucose testing and your A1C check.

## What makes my blood glucose levels rise or fall?

Blood glucose levels rise and fall throughout the day. One key to taking care of your diabetes is understanding why it rises and falls. If you know the reasons, you can take steps to help keep your blood glucose on target.

## What can make blood glucose rise?

- a meal or snack with more food or more carbohydrates (carbs) than usual
- physical inactivity
- not enough diabetes medicine
- side effects of other medicines
- infection or other illness
- changes in hormone levels, such as during menstrual periods
- stress

## What can make blood glucose fall?

- missing a meal or snack, or having a meal or snack with less food or fewer carbs than planned
- alcoholic drinks, especially on an empty stomach
- more activity than planned
- too much diabetes medicine
- side effects of other medicines



You can use a meter to check your own blood glucose levels.

## What are the blood glucose targets for people with diabetes?

Targets set by the American Diabetes Association (ADA) are listed below. Talk with your health care team about your personal goals.

ADA Targets for Blood Glucose	My Usual Results	My Goals
Before meals: 80 to 130 mg/dl	_____ to _____	_____ to _____
2 hours after the start of a meal: below 180 mg/dl	below _____	below _____

## What's the best way to keep track of my blood glucose levels?

Checking your blood glucose will tell you whether you're reaching your blood glucose targets. There are 2 ways to do it.

- Use a blood glucose meter to learn what your blood glucose is at the moment.
- Get an A1C check at least twice a year.

## Using a blood glucose meter

Many people use their meter to check their blood glucose several times a day. Talk with your health care

team about when and how often to check your blood glucose. They can give you a record book where you can write down your blood glucose numbers. You can learn how to use your numbers to make choices about food, physical activity, and medicines.

Your results tell you how well your diabetes care plan is working. You'll be able to look at your record book and see patterns—look for similar results over and over. Looking at these patterns can help you and your health care team fine-tune your diabetes care plan in order to reach your targets.

## Getting an A1C check

The A1C tells you your average blood glucose level over the past 2 to 3 months. Your results will be reported in two ways:

- A1C as a percentage
- estimated Average Glucose (eAG), in the same kind of numbers as your day-to-day blood glucose readings

Ask your health care team for this test at least twice a year. If your average blood glucose is too high, you may need a change in your diabetes care plan.

Association's Targets	My Last Result	My Goal
A1C: below 7%		
eAG: below 154 mg/dl		

## What does my A1C number mean?

Find your A1C number on the left. Then, look at the number on the right under eAG to see your estimated Average Glucose for the past 2 to 3 months.

A1C (%)	eAG (mg/dl)
5	97
6	126
7	154
8	183
9	212
10	240
11	269
12	298



## What if my blood glucose is often too high?

See your health care provider soon if your blood glucose numbers are often higher than your goals. Talk with your health care team about changes in your meal plan, your physical activity, or your diabetes medicines.

## What if my blood glucose is too low?

Low blood glucose, also called hypoglycemia, occurs when your blood glucose level drops below 70 mg/dl. Low blood glucose can make you feel hungry, shaky, nervous, sweaty, light-headed, sleepy, anxious, or confused. If you think your blood glucose is too low, use your meter to check it. If the result is below 70 mg/dl, follow these guidelines to bring it back up to a safer range. Have one of the carb choices in this list (which each have about 15 grams carbohydrate) right away to raise your blood glucose:

- 3 or 4 glucose tablets
- ½ cup (4 ounces) of fruit juice
- ½ cup (4 ounces) of a regular (not diet) soft drink
- 8 ounces of milk
- 5 to 7 pieces of hard candy
- 1 tablespoon of sugar or honey

After 15 minutes, check your blood glucose again. If it's still below 70 mg/dl, eat another carb choice. Repeat these steps until your blood glucose is at least 70 mg/dl.

## What should I do about frequent low blood glucose?

If your blood glucose is often low, you may need a change in your meal plan, physical activity, or diabetes medicines. Keep track of when you've had low blood glucose events. Note possible causes, such as unplanned physical activity. Then talk it over with your health care team.

Provided By

## **Protein Foods:**

Foods high in protein such as fish, chicken, meats, soy products, and cheese, are all called “protein foods.” You may also hear them referred to as “meats or meat substitutes.”

The biggest difference among foods in this group is how much fat they contain, and for the vegetarian proteins, whether they have carbohydrates.

Protein Choices:

### **Plant Based Proteins**

Plant-based protein foods provide quality protein, healthy fats, and fiber. They vary in how much fat and carbohydrate they contain, so make sure to read labels.

- Beans such as black, kidney, and pinto
- Bean products like baked beans and refried beans
- Hummus and falafel
- Lentils such as brown, green, or yellow
- Peas such as black-eye or split peas
- Edamame
- Soy nuts
- Nuts and spreads like almond butter, cashew butter, or peanut butter
- Tempeh, tofu
- Products like meatless “chicken” nuggets, “beef” crumbles, “burgers”, “bacon”, “sausage”, and “hot dogs”

### **Fish and Seafood**

Try to include fish at least 2 times a week.

- Fish is high in omega-3 fatty acids like Albacore tuna, herring, mackerel, rainbow trout, sardines, and salmon.
- Other fish including catfish, cod, flounder, haddock, halibut, orange roughy, and tilapia
- Shellfish including clams, crab, imitation shellfish, lobster, scallops, shrimp, oysters.

### **Poultry**

Choose poultry without the skin for less saturated fat and cholesterol.

- Chicken, turkey, cornish hen

### **Cheese and Eggs**

- Reduced-fat cheese or regular cheese in small amounts.
- Cottage cheese
- Whole eggs

### **Game**

- Buffalo, ostrich, rabbit, venison
- Dove, duck, goose, or pheasant (no skin)

### **Beef, Pork, Veal, Lamb**

It's best to limit your intake of red meat which is often higher in saturated fat and processed meats like ham, bacon and hot dogs which are often higher in saturated fat and sodium. If you decide to have these, choose the leanest options, which are:

- Select or Choice grades of beef trimmed of fat including chuck, rib, rump roast, round, sirloin, cubed, flank, porterhouse, T-Bone steak, tenderloin
- Lamb: Chop, leg, or roast
- Veal: loin chop or roast
- Pork: Canadian bacon, center loin chop, ham, tenderloin

### **Grains and Starchy Vegetables**

There is no end in sight to the debate as to whether grains help you lose weight, or if they promote weight gain. Even more importantly, do they help or hinder blood glucose management?

One thing is for sure. If you are going to eat grain foods, pick the ones that are the most nutritious. Choose whole grains. Whole grains are rich in vitamins, minerals, phytochemicals and fiber.

Reading labels is essential for this food group to make sure you are making the best choices.

Every time you choose to eat a starchy food, make it count! Leave the processed white flour-based products, especially the ones with the added sugar, on the shelves or use them only for special occasion treats.

## **What is a Whole Grain?**

A whole grain is the entire grain - which includes the bran, germ, and endosperm (starchy part).

The most popular grain in the US is wheat so that will be our example. To make 100% whole wheat flour, the entire wheat grain is ground up. "Refined" flours like white and enriched wheat flour include only part of the grain - the starchy part, and are not whole grain. They are missing many of the nutrients found in whole wheat flour.

Examples of whole grain wheat products include 100% whole wheat bread, pasta, tortillas, and crackers. But don't stop there! There are many whole grains to choose from.

Finding whole grain foods can be a challenge. Some foods only contain a small amount of whole grain but will say it contains whole grain on the front of the package. For all cereals and grains, read the ingredient list and look for the following sources of whole grains as the first ingredient.

- Bulgur (cracked wheat)
- Whole wheat flour
- Whole oats/oatmeal
- Whole grain corn/corn meal
- Popcorn
- Brown rice
- Whole rye
- Whole grain barley
- Whole farro
- Wild rice
- Buckwheat
- Millet
- Quinoa

Most rolls, breads, cereals, and crackers labeled as "made with" or "containing" whole grain do not have whole grain as the first ingredient. Read labels carefully to find the most nutritional grain products.

For cereals, pick those with at least 3 grams of fiber per serving and less than 6 grams of sugar.

### **Starchy Vegetables**

Starchy vegetables are great sources of vitamins, minerals, and fiber. The best choices do not have added fats, sugar, or sodium. While these foods can be part of a healthy diet, they do raise blood glucose.

Try a variety such as:

- Parsnip
- Plantain
- Potato
- Pumpkin
- Acorn squash
- Butternut squash
- Green peas
- Corn

### **Beans, Legumes, Peas, and Lentils**

Try to include beans into several meals per week. They are a great source of protein and are loaded with fiber, vitamins and minerals.

- Beans such as black, kidney, and pinto
- Bean products like baked beans and refried beans
- Hummus and falafel
- Lentils such as brown, green, or yellow
- Peas such as black-eyed or split peas
- Edamame
- Soy nuts
- Nuts and spreads like almond butter, cashew butter, or peanut butter
- Tempeh, tofu
- Products like meatless “chicken” nuggets, “beef” crumbles, “burgers”, “bacon”, “sausage”, and “hot dogs”

Food facts obtained from the American Diabetes Association.

<http://www.diabetes.org>





## 15 CARBS SNACK LIST

*These snacks have about 15 grams of carbohydrates. For packaged foods, always double-check the label.*

### Fruit

Apple, small, 2"  
Apricots, 5.5 oz  
Banana, extra-small, 4 ounces  
Blueberries or Blackberries, 3/4 cup  
Cantaloupe, honeydew, papaya, cubed, 1 cup  
Cherries, 12  
Dates, 3  
Figs, 2 medium  
Grapefruit, large, 1/2  
Grapes, small, 3 oz or about 17  
Kiwi  
Mango, cubed, 1/2 cup  
Nectarine, small  
Orange, small  
Peach, medium  
Pear, large, 1/2  
Pineapple, cubed, 3/4 cup  
Plums, small, 5 ounces  
Raspberries, 1 cup  
Strawberries, 1 1/4 cup  
Tangerines, small, 8 oz  
Watermelon, cubed, 1 1/4 cup

### Vegetables

(typically 1.5 cups of cooked or 3 cups raw)

Amaranth  
Artichoke  
Artichoke hearts  
Asparagus  
Baby corn  
Bamboo shoots  
Bean sprouts

Beets  
Borscht  
Broccoli  
Brussels sprouts  
Cabbage  
Carrots  
Cauliflower  
Celery  
Chayote  
Cucumber  
Eggplant  
Green beans  
Green onions or scallions  
Jicama  
Kohlrabi  
Leeks  
Mung bean sprouts  
Mushrooms  
Okra  
Onions  
Oriental radish or daikon  
Pea pods  
Peppers, all varieties  
Radishes  
Rutabaga  
Sauerkraut  
Soybean sprouts  
Spinach  
Sugar snap peas  
Summer squash  
Swiss chard  
Tomato  
Turnips  
Water chestnuts  
Zucchini

### Dairy

Milk, 8 oz  
Chocolate Milk, 8 oz  
Soy Milk, 8 oz  
Yogurt, 1/2 cup  
Frozen yogurt  
Egg nog, 1/2 cup  
Rice drink, unflavored, 1 cup

### Drinks

4oz of most juices  
Hot chocolate  
Lower-sugar sports drink  
Vegetable juice cocktail

### Packaged Snacks

5 Triscuits  
Jello Sugar Free puddings  
2 Rice Cakes

### Other Fun Stuff

Peanuts, 2 1/2 oz  
Small tortilla pizza  
Slice of bread with peanut butter  
Greek yogurt with berries or a dash of balsamic vinegar  
A few crackers and cheese  
Hummus and veggies  
Pickles

### Desserts

Small brownie  
2" chocolate chip cookie

# Plan Your Portions

## NONSTARCHY VEGETABLES



Asparagus



Broccoli



Brussels  
sprouts



Cabbage  
(cole slaw)



Cauliflower



Cucumbers



Dark leafy  
greens



Eggplant



Mushrooms



Okra



Pea pods



Peppers



Radishes



Salad greens



Tomatoes



Zucchini



Use a 9-inch plate to help guide your portions.



Corn



Corn  
tortilla



Fruit



Berries



Whole  
grains



Winter  
squash



Bean, lentils  
and peas



Milk and  
yogurt

## CARBOHYDRATES



Chicken



Eggs and  
cheese



Fish: salmon,  
tuna, etc.



Lean beef



Nuts



Nut butter



Shrimp



Tofu

## PROTEIN

# Plan Your Portions

Your fist is a handy tool that is  
always with you. Place your fist on  
the outline to the right to see how it  
compares to a measuring cup.

My fist = \_\_\_\_\_ cup(s)

This fist = 1 cup

## Healthy Tip:

Choose low-cost recipes and meals. Recipes with fewer ingredients are often cheaper and quick to make. One place to look for recipes is [diabetesfoodhub.org](https://www.diabetesfoodhub.org).

**FATS:** All fats are high in calories, so keep the portion size small (less than 1 tablespoon in most cases).

### EAT OFTEN

Oil-based salad dressing: vinaigrette, oil and vinegar

Oils: canola, olive, sunflower, peanut

Avocado, olives, seeds, peanut or almond butter

### SOMETIMES

Low-fat creamy salad dressing like light ranch

Oils: corn, soybean, safflower, sesame

Mayonnaise

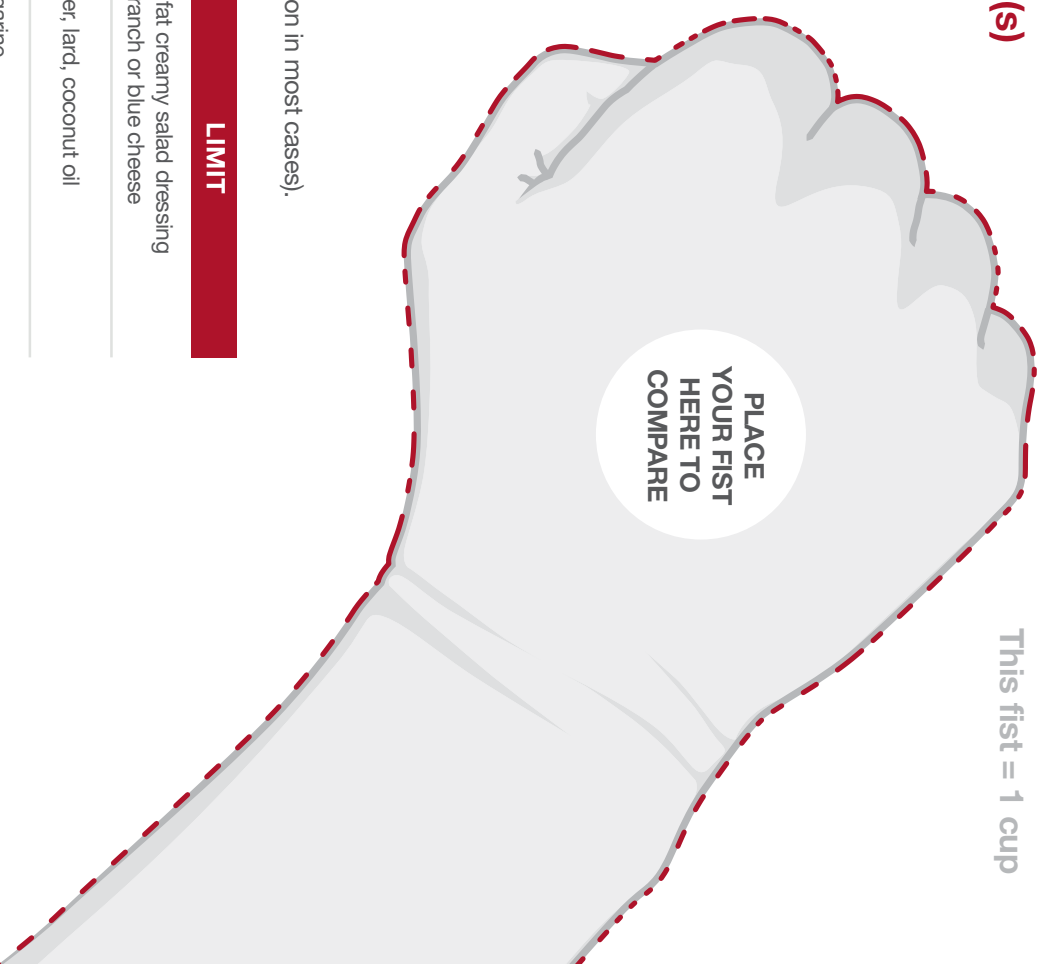
### LIMIT

Full-fat creamy salad dressing like ranch or blue cheese

Butter, lard, coconut oil

Margarine

Cream



# Nutrition Facts

16 servings per container

**Serving size** 1 Tbsp. (21g)

Amount per serving

**Calories** 60

% Daily Value\*

**Total Fat** 0g 0%

Saturated Fat 0g 0%

*Trans* Fat 0g

**Cholesterol** 0mg 0%

**Sodium** 0mg 0%

**Total Carbohydrate** 17g 6%

Dietary Fiber 0g 0%

Total Sugars 17g

34%†

**Protein** 0g

Vitamin D 0mcg 0%

Calcium 0mg 0%

Iron 0mg 0%

Potassium 0mg 0%

\* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

† One serving adds 17g of sugar to your diet and represents 34% of the Daily Value for Added Sugars.

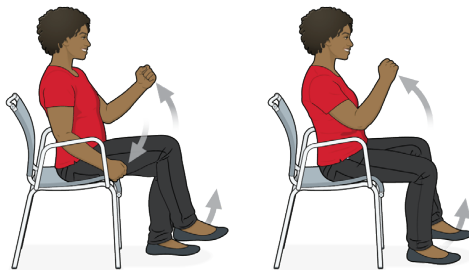
# Desk Moves

It's important to break up periods of sitting with activity to stay healthy. The American Diabetes Association® recommends that you limit your time of inactivity with movement every 30 minutes. Read on to learn movements you can do sitting at your desk or standing by your chair.

## Try these seated moves to improve your fitness

1.

AEROBIC EXERCISE

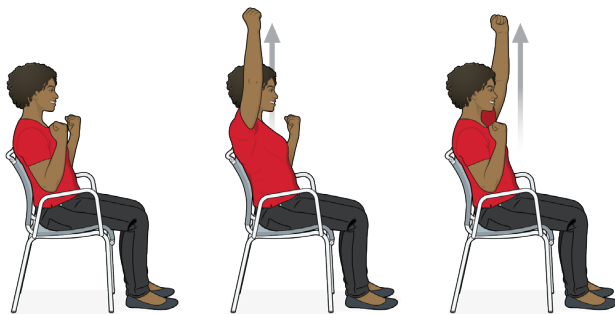


### Seated March

- ❑ Start by sitting upright and marching your feet in place.
- ❑ Lift right foot up; place right foot down. Lift left foot up; place left foot down.
- ❑ Swing your arms back and forth with your elbows bent while you march.
- ❑ March for about 1 minute.

2.

AEROBIC EXERCISE



### Seated Overhead Punches

- ❑ Start with our fists in front of our shoulders.
- ❑ Punch your right fist up overhead and bring it back down.
- ❑ Then punch your left fist up overhead and bring it down.
- ❑ Switch from right- to left-side punches for 45 seconds (about 20 times for each arm).

3.

BALANCE EXERCISE



### Single Leg Balance

- ❑ Stand with a chair in front of you to hold on to for balance, if needed.
- ❑ Raise your right foot off the ground.
- ❑ Hold it there for 10 to 20 seconds.
- ❑ Put your right foot back on the ground.
- ❑ Raise your left foot.
- ❑ Hold it up for 10 to 20 seconds.
- ❑ Repeat for one minute.



# Desk Moves (continued)

4.

BALANCE EXERCISES

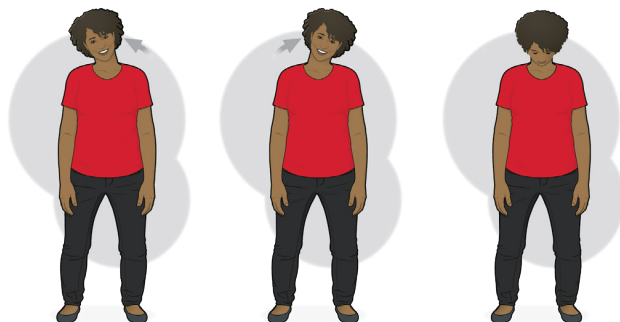


## Three-way Leg Swing

- Stand on one foot, with your hands on your hips or, if you need to, hold a chair or wall.
- Keeping your leg straight, move your raised foot forward and hold it there for 5 seconds.
- Put your foot back on the ground.
- Repeat the forward lift 10 times.
- Now lift it sideways 10 times.
- And finally, backwards 10 times.
- Repeat with other foot.

5.

FLEXIBILITY EXERCISE

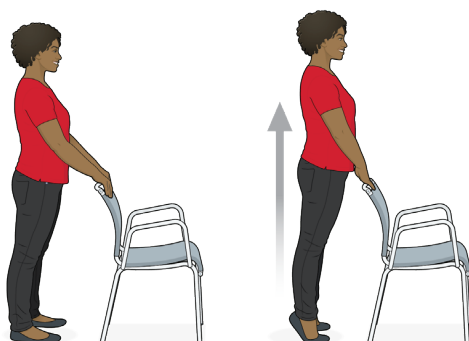


## Neck Stretch

- For the neck stretch, stand with your feet apart and your knees slightly bent (or sit in a chair with your back straight and your feet on the floor).
- Relax your shoulders and gently bend your head toward your right shoulder.
- Hold it there for 5 seconds.
- Repeat on the left side and hold it for 5 seconds.
- Now tip your head forward toward your chest and hold it for 5 seconds.
- Then tilt your head back, looking up toward the ceiling for 5 seconds.

6.

RESISTANCE EXERCISE



## Standing Calf Raises

- Stand behind a chair with your feet about shoulder-width apart.
- Keep your fingertips on the chair for support as you slowly raise your heels off the ground.
- Then, slowly lower your heels back to the ground.
- Repeat 20 times.



## SAFETY NOTE

Work with your diabetes care team if you have concerns about how much, and what type of activity is right for you.

**Staying active will not only help keep you healthy, but it also will help you manage your diabetes.**

*Brought to you by the American Diabetes Association. For answers to your questions about prediabetes and diabetes, call 1-800-DIABETES (800-342-2383).*

# My Game Plan: Food & Activity Tracker

- Name: \_\_\_\_\_

Date: From \_\_\_\_\_ to \_\_\_\_\_

## MY GOALS THIS WEEK

- For making smart food choices:

For getting more physical activity:

DAY: Monday		DAILY FOOD AND DRINK TRACKER	
TIME		AMOUNT/NAME/DESCRIPTION	
8:00 AM		½ cup oatmeal	
		1 cup 1% milk	

**TO MAKE MORE WEEKLY TRACKERS:** Make one (1) copy of this page and three (3) copies of the next page. Cut the pages in half, placing this page on top. Staple in the upper left-hand corner and fold to fit in your pocket or purse. ©2012 by the American Diabetes Association, Inc. 1/15

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