



living well with diabetes

Understanding carbohydrates

- How carbohydrates affect blood sugar
- More guidelines for healthy eating
- Sample meals for carbohydrate counting



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Carbohydrates come from starches and sugars. Understanding how carbohydrates affect your blood sugar can help you make important decisions about what kinds of foods you choose and when to eat them.

If you take fast-acting insulin to manage your diabetes, learning about carbohydrates is important in helping you match what you eat with the amount of insulin you take.

How carbohydrates affect blood sugar

Our bodies convert all food into energy. Our main source of energy is glucose, a type of sugar. We get glucose from the carbohydrate, protein, and fat in the food we eat.

Many foods contain a combination of carbohydrate, protein, and fat. The amount that's in the food affects how fast our bodies change that food into sugar.

This is how different foods affect our blood sugar.

Carbohydrate

Our bodies change 100% of the carbs we eat into sugar. This affects our blood sugar levels quickly, within an hour or 2 after eating.

The main sources of carbs in our diet are foods such as bread, rice, pasta, potatoes, vegetables, fruit, sugar, yogurt, and milk.

Eating carbs can make your blood sugar go up higher than other foods. The more you eat, the faster your blood sugar will rise. Eating fat and protein can affect how fast your body turns carbs into sugar.

Protein

Our bodies change some of the protein we eat into sugar. Most of this sugar is stored in our liver. Eating protein usually has very little affect on blood sugar.

Protein sources in our diet include fish, meat, cheese, and peanut butter.

Fat

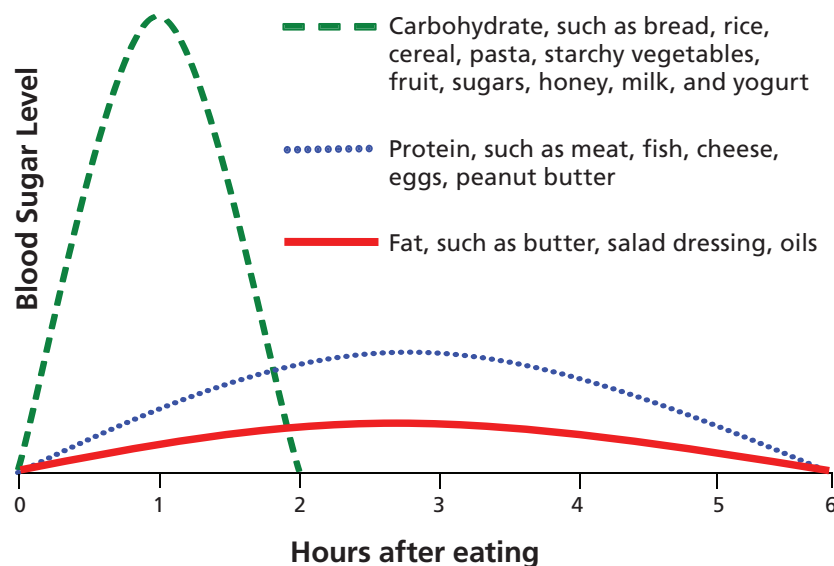
We turn less than 10% of the fat we eat into sugar. Fat slows down digestion, causing a delayed rise in blood sugar levels.

Fat in our diet comes from sources such as butter, salad dressing, avocado, olive oil.

When you know the amount of carb, protein, and fat you're eating at a meal, you can learn to choose foods that help to keep your blood sugar levels even.

How food affects blood sugar

This graph shows you the different rates that carbohydrate, protein, and fat each affect the rise in blood sugar.



How many carbohydrates can I have a day?

There isn't just one answer for this question. The American Diabetes Association recommends that about half (50 – 60%) of a person's daily calorie intake should come from carbs.

How many calories you eat or need depends on several things, including your age, overall health, and activity level. Your health care team will work with you to figure out the amount of calories you need each day, and how many of those calories will come from carbs.

Once you know how many carbs to eat each day, you might find that it helps to eat the same amount of carb at the same meal throughout the week. For example, each day you might eat 30 grams of carb for breakfast, 60 grams for lunch, and 90 grams for your evening meals. This gives you consistency in how many carbs you eat every day, making it easier to control calories and match carbs with how much insulin you take.

Are some kinds of carbohydrate better for me than others?

Yes. The types of carbohydrate you eat are as important as the amount you eat. Refined or simple carbs — found in candy, sodas, cookies, doughnuts, syrups, and jams — are broken down and digested quickly by the body. When you have diabetes, your body doesn't have enough insulin to move this sudden rush of sugar into the cells where it can be used, so sugar levels in the blood go up.

Eating fiber-rich foods — such as whole-grain breads and cereals, beans, and green and yellow vegetables — slows this process down. Because it takes longer to digest foods high in fiber, blood sugar levels go up more slowly and peak at lower levels. This gives diabetes medicine time to work.

How to count carb choices

Grams of carb	Number of carb choices
0 to 5 grams	Don't count
6 to 10 grams	½ carb choice
11 to 20 grams	1 carb choice
21 to 25 grams	1½ carb choice
26 to 35 grams	2 carb choices

Each of the following = 1 carb choice (about 15 grams)

Bread 1 ounce each

- 1 slice
- Small dinner roll
- 6 soda crackers
- ½ of a small, 2-ounce, bagel
- ½ English muffin

Starchy vegetables

- ½ cup corn, potato, green peas, yam, or sweet potato
- 1 cup winter squash (butternut or acorn)
- 1 cup veggies mixed with corn, peas, and beans

Milk and yogurt

- 1 cup nonfat or low-fat milk
- 6 ounces no sugar added nonfat or low-fat yogurt

Cereal and grain

- ½ cup cooked cereal
- ¾ cup low sugar cold cereal flakes
- ⅓ cup cooked pasta
- ⅓ cup cooked rice
- ½ cup cooked dried beans, peas, or lentils

Fruit

- Small apple, pear, or orange
- ½ banana
- ½ cup canned fruit (no sugar added)
- 1 cup berries or melon
- ½ cup fruit juice
- 2 Tbsp raisins

Dessert

- 2 small cookies
- ½ cup low-fat ice cream
- ¼ cup sorbet or sherbet
- 2" square un-iced cake or brownie

Vegetables

These vegetables are low in carbs. Eat at least 3 servings every day.

3 cups raw or 1½ cups cooked = 1 carbohydrate choice.

- | | | |
|--------------------|-------------------|-------------------|
| ▪ Asparagus | ▪ Eggplant | ▪ Peppers |
| ▪ Green beans | ▪ Green onions | ▪ Radishes |
| ▪ Beets | ▪ Greens (such | ▪ Rutabaga |
| ▪ Broccoli | as collard, kale, | ▪ Snap peas |
| ▪ Brussels sprouts | mustard, and | ▪ Sprouts |
| ▪ Cabbage | turnip) | ▪ Tomatoes |
| ▪ Carrots | ▪ Jicama | ▪ Turnips |
| ▪ Cauliflower | ▪ Mushrooms | ▪ Vegetable juice |
| ▪ Celery | ▪ Okra | ▪ Zucchini |
| ▪ Cucumber | ▪ Pea pods | |

Carb choices for snacking

Each of the following is one carb choice.

- 3 cups fat-free popcorn
- 4 to 5 whole grain crackers
- 3 graham cracker squares
- 1 slice whole grain bread
- 1 small flour or corn tortilla
- ½ of a small, 2-ounce, bagel
- 1 piece small fresh fruit (4 ounces)
- 6 ounces light yogurt
- 1 ounce (½ to 1 cup) low sugar cereal
- 17 grapes
- ¾ cup blueberries
- 1 cup melon, cut into cubes
- ½ cup canned fruit packed in juice (not syrup)
- 8 ounces nonfat or low-fat milk
- ¾ ounce pretzels
- 6 saltine crackers

Free and low-calorie foods

Low-calorie foods

The following foods have fewer than 20 calories and less than 5 grams of carbohydrate per serving. You can have up to 3 servings of these per day. More than 3 servings will count toward your carbohydrate servings per day.

- | | |
|---|---|
| ▪ Candy, hard – 1 piece | ▪ Rhubarb, sweetened with artificial sweetener – ½ cup cooked |
| ▪ Cranberries, sweetened with artificial sweetener – ½ cup cooked | ▪ Salsa – ¼ cup |
| ▪ Jam or jelly – low sugar – 2 tsp | ▪ Sweet and sour sauce 2 tsp |
| | ▪ Syrup, sugar-free – 2 Tbsp |

Free foods

The following foods have 0 calories, or close to 0 calories. You can have these anytime and in any amount.

- Artificial sweeteners
- Broth – clear, low-sodium
- Club soda
- Coffee – unsweetened or artificially sweetened
- Greens – including collard, mustard, and turnip
- Gum, sugar-free
- Horseradish
- Jell-o or other gelatin – unsweetened or artificially sweetened
- Lemon juice
- Mustard
- Salad greens – including endive, spinach, romaine, arugula, Boston or butter lettuce
- Seasonings – including garlic, dried and fresh herbs, spices, Worcestershire sauce
- Soft drinks – sugar-free
- Tea – unsweetened or artificially sweetened
- Vinegar
- Water, plain, carbonated, or mineral

More guidelines for healthy eating

Sugar

Read food labels. Sugar has many different names. The most common include dextrose, fructose, lactose, high fructose corn syrup, maltose, and sucrose. Foods high in simple sugar (such as table sugar) don't offer much in the way of nutrients. They're also high in calories and should only be a small part of your diet. These foods include white bread, cake, and cookies.

Sugar-free food and artificial sweeteners

Only foods with calories affect blood sugar. Most artificial sweeteners have no calories, but use them in moderation. They can increase your craving for sweets. Sugar alcohols (maltitol, sorbitol, and xylitol) added to gum and sugar-free candy affect blood sugar a little, but not as much as regular sugar. Too much sugar alcohol can cause bloating, gas, and diarrhea.

Keep salt and sodium to a minimum

Extra salt and sodium can increase your risk for high blood pressure. High blood pressure is more common in people with diabetes and can lead to stroke, heart disease, and kidney failure. Processed food, such as lunch meat, is usually high in sodium. Limit the amount of processed food you eat and use the salt shaker sparingly.

Watch protein and fat

It's important to keep track of the protein and fat you eat. Like carbohydrates, protein and fat give your body important nutrients. But, eating too much can cause you to gain weight, and lead to health problems, such as high cholesterol and heart disease.

Meat and other protein

Choose low fat or lean proteins. Most people need 6 ounces of protein or less per day. The following are some good choices for lean protein:

- Fish and Shellfish
- Chicken and other poultry without skin
- Beef, pork, lamb, or veal trimmed of fat
- Egg whites and egg substitutes
- Cheese and cottage cheese with 3 grams or less of fat per ounce
- Tofu and tempeh
- Cooked soy beans (edamame)

Meat / protein group

Aim for 4 to 6 ounces each day. Each of the following is equal to one ounce of protein

- 1 oz meat, fish or poultry (chicken, turkey)
- 1 oz cheese
- ¼ cup cottage cheese
- 1 egg
- 1 tablespoons peanut butter
- 4 oz. tofu
- ½ cup beans (count as 1 oz. protein and 1 carbohydrate choice)

Fat

Choose fats that are mono or poly-unsaturated, such as vegetable and olive oils, avocados, and nuts. Limit saturated fats such as butter, shortening, and cream. Also watch out for trans-fats, which are used in many packaged foods.

Fat group

Limit fat to 3 to 5 servings each day. Each of the following is equal to one serving of fat

- 1 teaspoon butter, margarine, oil, or mayonnaise
- 1 tablespoon salad dressing
- 2 tablespoons reduced calorie salad dressing
- 1 tablespoon cream cheese
- 2 tablespoons sour cream
- 6 almonds or cashews
- 4 walnut or pecan halves
- 10 peanuts
- ½ tablespoon peanut butter
- 1 tablespoon sunflower seeds
- 2 tablespoons (one ounce) avocado

Alcohol





People with diabetes can enjoy alcoholic beverages, but need to know how alcohol affects triglyceride and blood sugar levels. Alcohol can raise triglycerides increasing risk for heart disease, stroke, and pancreatitis. Alcoholic beverages can also have a serious effect on blood sugar levels.

Blood sugar levels can go too high if an alcoholic beverage has sugar or other carbohydrates. Examples include beer and sweet cocktails made with fruit juice or sweet syrups. On the other hand, alcoholic beverages with no carbohydrate, such as dry wine, whiskey, and vodka, can cause blood sugar levels to go down quickly in people taking diabetes medicine.

Normally, when blood sugar is getting too low, the liver releases sugar to keep blood sugar in a normal range. Both alcohol and diabetes medicine keep this from happening. That's why, when people take diabetes medicine AND drink alcohol on an empty stomach, the blood sugar can go dangerously low. When blood sugar drops too low, a person can pass out or have a seizure. To keep this from happening, eat a carbohydrate food if you drink an alcoholic beverage that has no added sugars or carbohydrates. Talk with your health care team about drinking alcohol and how to include it in your meal plan.

Here are some tips to help you drink alcohol safely:

- If you want to drink alcohol, limit yourself to 1 drink a day for women or 2 drinks a day for men.
- Mix club soda with wine or other alcohol.
- Sip slowly to make the drink last.
- Only drink alcohol when your diabetes is under good control.
- Don't drink alcohol on an empty stomach. If you're not drinking with a meal, snack on crackers or other carbohydrate snack.
- Include the carbohydrate and calories in your daily food count.
- NEVER drink alcohol before getting into a car to drive.

Drink	Serving size	Carbohydrate count	Calories
Beer			
▪ Regular beer	 12 ounces	13 grams	150
▪ Light beer	12 ounces	6 grams	100
▪ Near beer (no alcohol)	12 ounces	13 grams	65
Distilled			
▪ 80 proof gin, rum, vodka, whiskey, and scotch	 1.5 ounces	0 grams	100
▪ Dry brandy, cognac	1 ounce	0 grams	75
Table wine			
▪ Dry white	 5 ounces	4 grams	120
▪ Red or rose	5 ounces	6 grams	127
▪ Rose	5 ounces	3 grams	100
Sparkling wine			
▪ Champagne	4 ounces	1 gram	78
▪ Sweet Kosher wine	4 ounces	15 grams	132
Dessert/ appetizer wine			
▪ Dry Sherry	 4 ounces	0 grams	128
▪ Sweet sherry and port	4 ounces	15 grams	185
▪ Muscatel	4 ounces	6 grams	98
▪ Liqueurs	1 ounce	24 grams	150
Cocktails			
▪ Bloody Mary	10 ounces	7 grams	125
▪ Cosmo	4 ounces	13 grams	212
▪ Daiquiri	2 ounces	0 grams	111
▪ Manhattan	2 ounces	0 grams	178
▪ Margarita	4 ounces	20 grams	185
▪ Martini	2 ounces	1 grams	123
▪ Mojito	5 ounces	8 grams	215
▪ Old-fashioned	4 ounces	0 grams	180
▪ Tom Collins	4 ounces	0 grams	144
▪ Wine Cooler	12 ounces	30 grams	215
Mixers			
▪ Mineral water	Unlimited	0 grams	0
▪ Sugar-free tonic	Unlimited	0 grams	0
▪ Club soda	Unlimited	0 grams	0
▪ Diet soda	Unlimited	0 grams	25
▪ Tomato juice	4 ounces	7 grams	25
▪ Bloody Mary mix	4 ounces	15 grams	60
▪ Orange juice	4 ounces	15 grams	60
▪ Grapefruit juice *	4 ounces	15 grams	60
▪ Pineapple juice	4 ounces	15 grams	60

* Don't drink grapefruit juice if you're taking a statin drug.

Sample meals for carbohydrate counting

Sample breakfasts

Meals with **2** carb choices (about 30 grams of carbohydrate)

- ½ cup cooked oatmeal
- ½ cup nonfat or low-fat milk
- 1 Tbsp raisins
- 1 Tbsp chopped pecans

- ½ English muffin
- ½ banana
- 1 Tbsp peanut butter

- 6 ounces light yogurt
- ½ cup high-fiber cereal
- 1 Tbsp sliced almonds

- 1 slice toasted whole grain bread
- ½ cup fruit juice
- ¼ cup nonfat or low-fat cottage cheese

Meals with **3** carb choices (about 45 grams of carbohydrate)

- 1 cup cooked oatmeal
- ½ cup nonfat or low-fat milk
- 1 Tbsp raisins
- 1 Tbsp chopped walnuts

- 1 English muffin
- ½ banana
- 1 Tbsp peanut butter

- 1 cup nonfat or low-fat milk mixed with one packet of sugar-free instant breakfast drink
- 1 small orange

- 2 slices toasted whole grain bread
- 1 Tbsp light margarine
- ½ cup fruit juice
- 1 poached egg

Meals with **4** carb choices (about 60 grams of carbohydrate)

- 1 cup cooked oatmeal
- ½ cup nonfat or low-fat milk
- 1 Tbsp raisins
- ½ small (2-ounce) bagel
- 1 Tbsp peanut butter

- 1 large (4-ounce) bagel
- 1½ Tbsp low-fat cream cheese
- ¼ cup egg substitute

- 1 cup nonfat or low-fat milk mixed with 1 packet of sugar-free instant breakfast drink
- 1 banana

- 2 slices toasted whole grain bread
- 1 Tbsp light margarine
- 1 cup nonfat or low-fat milk
- ½ cup fruit juice
- 1 egg

Sample snack ideas

1 carb choice (about 15 grams carbohydrate)

- 3 cups fat-free popcorn
- 4 to 5 whole grain crackers
- 3 graham cracker squares
- 1 slice whole grain bread
- 1 small flour or corn tortilla
- ½ small (2-ounce) bagel
- 1 piece small fresh fruit (4 ounces)
- 6 ounces light yogurt
- 17 grapes
- ¾ ounce pretzels
- 6 saltine crackers

2 carb choices (about 30 grams carbohydrate)

- ¾ cup cereal with 1 cup nonfat or low-fat milk
- 1 fruit and grain bar
- 6 graham cracker squares
- 1 English muffin
- 20 baked tortilla chips
- 1 small (2 ounce) bagel
- 1 banana
- 6 ounces light yogurt with ¼ cup low-fat granola
- 1 cup sugar-free pudding
- 16 animal crackers
- 12 saltines

Sample lunches or dinners

Meals with **3 carb choices** (about 45 grams of carbohydrate)

Week 1

Monday

- 2 slices whole-grain bread
- 2 ounces sliced turkey or chicken breast
- Lettuce, sliced tomato
- 2 tsp low-calorie sandwich spread
- 1 small (4 ounce) apple



Tuesday

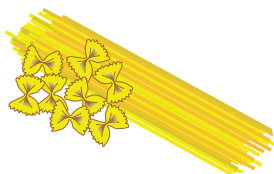
- $\frac{2}{3}$ cup cooked brown rice
- 1 cup cooked broccoli
- 3 ounces baked skinless chicken breast
- 1 small whole-grain roll
- 1 Tbsp light margarine
- Sugar-free Jell-o

Wednesday

- 2 corn tortillas
- $\frac{1}{2}$ cup refried beans
- 2 Tbsp guacamole
- $\frac{1}{4}$ cup tomato salsa
- Shredded lettuce
- 2 Tbsp light sour cream

Thursday

- $\frac{2}{3}$ cup pasta
- $\frac{1}{2}$ cup tomato-based pasta sauce
- 2 ounces lean ground turkey or beef
- Tossed salad
- 2 Tbsp low-fat salad dressing



Friday

- $\frac{2}{3}$ cup cooked brown rice
- 1 cup stir-fry vegetables
- 3 ounces tofu
- 1 tsp. low sodium soy sauce
- $\frac{1}{2}$ cup low-fat frozen dessert

Saturday

- 1 cup mashed potato
- $\frac{1}{2}$ cooked corn
- $\frac{1}{2}$ cup cooked green beans
- 3 ounces skinless turkey
- 2 Tbsp nonfat gravy

Sunday

- 1 cup mashed sweet potato
- 1 cup cooked broccoli
- 3 ounces broiled fish
- 1 Tbsp light margarine
- $\frac{1}{2}$ cup unsweetened applesauce

Week 2

Monday

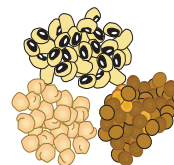
- 1 whole-grain pita
- 2 ounces canned tuna packed in water
- 2 Tbsp light mayo
- Cherry tomatoes
- Carrot and celery sticks
- 1 small (4 ounce) apple

Tuesday

- 1 piece corn bread (about $1\frac{1}{2}$ ounces)
- 1 cup chili beans made with lean ground beef
- 2 Tbsp light sour cream
- Tossed green salad
- 2 Tbsp light salad dressing

Wednesday

- $\frac{1}{2}$ cup cooked lentils
- $\frac{1}{3}$ cup cooked brown rice
- Tossed green salad
- 2 Tbsp light salad dressing
- 1 cup sliced mixed berries



Thursday

- $\frac{1}{3}$ cup hummus
- $\frac{1}{4}$ cup chopped olives
- 1 whole-grain pita
- Sliced tomato and cucumber
- Shredded lettuce

Friday

- 1 small (2-ounce) bagel
- $1\frac{1}{2}$ Tbsp low-fat cream cheese
- 1 ounce bag pretzels
- 1 small can low-sodium vegetable juice

Saturday

- $\frac{2}{3}$ cup cooked brown rice
- 3 ounces broiled fish
- Sliced beets
- Spinach salad
- 2 Tbsp light salad dressing
- 1 small whole-grain roll
- 1 Tbsp light margarine

Sunday

- 1 cup mashed potato
- $\frac{1}{2}$ cup cooked carrots
- 3 ounce slice meat loaf
- Tossed green salad
- 2 Tbsp light salad dressing
- 1 small Dinner roll
- 1 Tbsp light margarine



Meals with 4 carb choices (about 60 grams of carbohydrate)

Week 1

Monday

- 2 slices whole-grain bread
- 2 ounces sliced turkey or chicken breast
- Lettuce, sliced tomato
- 2 tsp low-calorie sandwich spread
- 1 small (4 ounce) apple
- 1 cup nonfat or low-fat milk

Tuesday

- 1 cup mashed potato
- 3 ounces baked skinless chicken breast
- Small whole-grain roll
- Tossed salad
- 2 Tbsp low-fat salad dressing
- 1 Tbsp light margarine
- ½ cup unsweetened apple sauce



Wednesday

- 2 corn tortillas
- ½ cup refried beans
- 2 Tbsp guacamole
- ¼ cup tomato salsa
- Shredded lettuce or cabbage
- 3 Tbsp light sour cream
- 17 grapes

Thursday

- ⅔ cup pasta
- ½ cup tomato sauce
- 2 ounces lean ground turkey or beef
- Tossed green salad
- 2 Tbsp low-fat salad dressing
- 1 small dinner roll
- 1 Tbsp light margarine

Friday

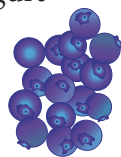
- ⅔ cup cooked brown rice
- 1 cup stir-fry vegetables
- 3 ounces tofu
- 1 tsp low-sodium soy sauce
- ¾ cup blueberries
- ½ cup frozen yogurt

Saturday

- 1 cup mashed potato
- ½ cup cooked carrots
- 3 ounces skinless turkey
- 2 Tbsp nonfat gravy
- 1 small dinner roll
- 1 Tbsp light margarine
- 1 chocolate brownie (about 1 ounce, unfrosted)

Sunday

- 1 cup mashed sweet potato
- ½ cup cooked green peas
- 3 ounces lean pork chop
- 1 Tbsp light margarine
- ½ cup unsweetened applesauce



Week 2

Monday

- 1 cob of corn
- ½ cup potato salad
- Cole slaw made with low-fat dressing
- 3 ounces broiled skinless chicken breast
- 1 slice watermelon



Tuesday

- 2 cups chicken noodle soup with vegetables
- 6 saltine crackers
- 1 small apple

Wednesday

- 1 cup sweet potato
- ½ cup cooked green beans
- 3 ounces baked lean ham
- 1 piece corn bread (about 1½ ounces)
- ½ cup canned peaches (packed in water)

Thursday

- 1 beef and bean burrito (made with lean ground beef)
- 1 ounce shredded low-fat cheddar cheese
- Shredded lettuce or cabbage
- ¼ cup tomato salsa
- 1 frozen fruit juice bar



Friday

- 1 cup beef and vegetable soup
- 1 small bagel (2 ounces)
- 1½ Tbsp low-fat cream cheese
- 17 grapes

Saturday

- 1 cup winter squash (acorn or butternut)
- ⅔ cup cooked couscous
- 1 cup cooked broccoli
- 3 ounces broiled or poached fish
- 3 gingersnap cookies

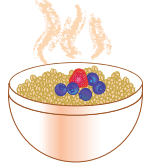


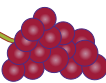
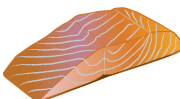

Sunday

- 1 cup mashed potato
- 3 ounces skinless turkey
- Tossed green salad
- 2 Tbsp low-fat salad dressing
- 1 small dinner roll
- 1 Tbsp light margarine
- 1 small piece pumpkin pie (about ⅛ of 8" pie)

My meal plan

Daily goals











Calories	
Carbohydrate	
Protein	
Fat	

Meals and Snacks	Choices
Breakfast Time_____	_____ Carbohydrate choices _____ Starch/bread _____ Fruit _____ Milk _____ Protein _____ Fat 
Mid-morning snack Time_____	_____ Carbohydrate choices _____ Protein 
Lunch Time_____	_____ Carbohydrate choices _____ Starch/bread _____ Fruit _____ Milk _____ Vegetable _____ Protein _____ Fat 
Afternoon snack Time_____	_____ Carbohydrate choices _____ Protein 
Dinner Time_____	_____ Carbohydrate choices _____ Starch/bread _____ Fruit _____ Milk _____ Vegetable _____ Protein _____ Fat 
Bedtime snack Time_____	_____ Carbohydrate choices _____ Protein _____ Other 

Serving sizes

Even foods that are low in fat or sugar can have calories. Plan your meals for single serving sizes. That way you won't be as likely to eat too much. Watching serving sizes can also help you maintain a healthy weight. This is especially important for managing diabetes, since being overweight makes it harder to keep diabetes in good control.

Use these pictures as an easy way to help you measure your foods.

Quantity	Hand Portion	Object	Foods
1 cup	=  fist	=  baseball	<ul style="list-style-type: none"> • starches/ grains • vegetable • fruit
3 ounces	=  palm	=  deck of cards	<ul style="list-style-type: none"> • meat • fish • poultry
2 ounces	=  small handful	=  4 dice	<ul style="list-style-type: none"> • cheese • nuts
1 ounce	=  thumb	=  2 dice	<ul style="list-style-type: none"> • peanut butter
1 teaspoon	=  thumb tip	=  1 die	<ul style="list-style-type: none"> • cooking oil • mayonnaise • butter • margarine • sugar

Understand the label

Below is a sample food label showing some important points to consider as you begin to look at carbohydrate content of foods.

Nutrition Facts			
Serving Size 12 oz. (340g)			
Servings per container 1			
% Daily Value			
Total Fat	5g		8%
Saturated Fat	2g		10%
Cholesterol	30mg		10%
Sodium	470mg		20%
Total Carbohydrate	61g		20%
Dietary Fiber	5g		20%
Sugars	2-3g		
Protein	14g		
Vitamin A 10% Vitamin C 35%			
Calcium 15% Iron 10%			
*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	2500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g
Calories per gram:			
Fat	9	Carbohydrate	4
Protein	4		

Calories per gram

This is the number of calories you get from one gram of each fat, carbohydrate, and protein.

Serving size

The serving size is set by the maker of this product.

You may need to adjust the size of your serving according to your meal plan.

Servings per container

The number of servings in this container is based on what the maker says is a serving size.

Always adjust the serving size to meet your individual meal plan. For example, this package might be equal to 2 servings, according to your individual meal plan.

Total carbohydrate

Total carbohydrate is the number of carbohydrate grams in one serving of this product.

(Remember, one serving of starch, fruit, or milk has about 15 grams of carbohydrate.)

You may need to adjust the size of your serving as you plan the number of carbohydrate choices in your meal. For example, if you plan to eat 2 carb choices (30 grams of carb) at this meal, you will eat only ½ of the amount in this package.

Sugars

Grams of sugar is “nice to know” information. Sugars are carbohydrates and are included above in the total carbohydrate information.

Resources

Registered dietitians

Ask your personal physician for a referral to a registered dietitian to help you develop a meal plan that works best for you.

- The **Kaiser Permanente Resource Line** has information on a variety of health topics and community resources. Call weekdays from 9 a.m. to 4 p.m. toll-free 1-800-992-2279 or by e-mail at kpwa.resource.L@kp.org.

- The Health and Wellness Resources section on the **Kaiser Permanente website** at kp.org/wa has information on diabetes, meal planning, healthy eating, exercise, and hundreds of other health topics.

- USDA’s **MyPlate** website at www.choosemyplate.gov has interactive tools, including meal planners, food and physical activity trackers, and a look-up tool to find the calories and food exchanges for thousands of foods.

- American Diabetes Association** on the web at diabetes.org has books, including cookbooks, articles, and tips that can help you eat healthfully and manage your diabetes.