

MEAL PLANNING WITH DIABETES EXCHANGES

GENERAL INFORMATION:

- Diabetes exchanges are groups of food with similar amounts of nutrients (carbohydrate, fat, and protein) and calories. The diabetes exchanges can be used to develop a healthy meal plan with the amount of nutrients that are right for you. Following a meal plan with the right amount of carbohydrates (karhr-boh-HI-drayts) is especially important for people with diabetes. Carbohydrates naturally raise your blood sugar after eating. Eating too many carbohydrates at one time can raise your blood sugar to a high level. Carbohydrates are found in starches (such as bread, cereal, starchy vegetables, and beans), fruit, milk, yogurt and sweets.
- Planning meals with the diabetes exchanges may help you keep your blood sugar levels under control. People with diabetes who have near-normal blood sugar levels have a lower risk of developing certain long-term health problems. These include heart, kidney, eye, or nerve problems. To keep track of your blood sugar levels, test your blood sugar regularly. Ask your caregiver for information about how and when to test your blood sugar.

What meal plan is right for me?

- A dietitian or caregiver will develop a healthy meal plan that is right for you. This meal plan will include the amount of exchanges you should have from each food group throughout the day. Your meal plan will be based on several types of information. This information may include your age, weight, usual food intake, physical activity level, blood sugar levels, and diabetes medicine.
- You will learn about the diabetes exchange groups and the foods within each group. Once you know how many exchanges you should have for each meal, you can "exchange" foods within the same group. Exchanging foods allows you to eat a variety of food while keeping your intake of carbohydrates and other nutrients the same. Follow your meal plan by keeping track of the amount of exchanges you eat for each meal and snack. Do not skip meals or avoid carbohydrates. Skipping meals or not eating enough carbohydrate can cause your blood sugar to fall to low levels.

What are the diabetes exchange food groups?

Starches: The following foods contain about 15 grams of carbohydrate, three grams of protein, 0-1 grams of fat, and 80 calories. Each serving counts as **one exchange of starch**.

- One-ounce slice of bread.
- One ounce of a bagel (equal to about one-fourth of a bagel from a bagel shop or bakery).
- One four-inch pancake (about one-fourth inch thick).

- One six-inch flour or corn tortilla.
- One-third cup of pasta or rice.
- Three-fourths of a cup of dry, unsweetened, ready-to-eat cereal. (Serving sizes of ready-to-eat cereals vary. Look at the serving size and the total carbohydrate amount listed on the food label.)
- One-half cup of cooked cereal (such as oatmeal).
- Three graham cracker squares or eight animal crackers.
- Six saltine-type crackers.
- Three cups of popcorn.
- Three-fourths of an ounce of pretzels.
- **Starchy vegetables and legumes:**
 - One-half cup of corn, green peas, sweet potatoes, or mashed potatoes.
 - One-fourth of a large baked potato.
 - One cup of winter squash (acorn, butternut, pumpkin).
 - One-half cup of beans and peas (garbanzo, pinto, kidney, white, split, black-eyed).
 - Two-thirds of a cup of lima beans.
 - One-half cup of lentils.
- **Fruit:** The following foods contain about 15 grams of carbohydrate and 60 calories. Each serving counts as **one exchange of fruit**.
 - One small fresh fruit (four ounces). Weigh fresh fruit at the grocery store. Large pieces of fruit usually weigh more than four ounces, and count as more than one serving.
 - One-half cup of canned or fresh fruit.
 - One-half cup (four ounces) of unsweetened fruit juice.
 - One-fourth cup of dried fruit.
- **Milk:** The following foods contain about 12 grams of carbohydrate and eight grams of protein. The amount of fat and calories in each serving depends on the type of product you buy (such as whole, low-fat, or fat-free). Each serving counts as **one exchange of milk**.
 - One cup of low-fat milk.

- Three-fourths of a cup of plain, nonfat yogurt.
- One cup of fat-free, flavored yogurt sweetened with nonnutritive (artificial) sweetener.
- **Non-starchy vegetables:** The following foods contain about five grams of carbohydrate, two grams of protein, and 25 calories. Each serving counts as **one exchange of vegetables**.
 - One-half cup of cooked vegetables or one cup of raw vegetables. Some of these vegetables include beets, broccoli, cabbage, carrots, cauliflower, cucumber, mushrooms, tomatoes, and zucchini.
 - One-half cup of vegetable juice.
- **Meat and meat substitutes:** The following foods contain no carbohydrate and about seven grams of protein. The amount of calories in each serving depend on the amount of fat (very lean, lean, medium-fat or high-fat). Meats with greater amounts of fat have greater amounts of calories. Each serving counts as **one exchange of meat or meat substitute**.
 - One ounce of chicken or turkey without skin, or one ounce of fish (not breaded or fried).
 - One ounce of lean beef, pork, or lamb.
 - One inch cube or one ounce of low-fat cheese.
 - One large egg (no more than 3 eggs each week) or one-fourth cup of egg substitute.
 - One-half cup of tofu.
- **Sweets and other desserts:** One carbohydrate exchange is equal to about 15 grams of carbohydrate.
 - One ounce of angel food cake (each serving counts as **one carbohydrate exchange**).
 - One two-inch square of an unfrosted brownie (each serving counts as **one carbohydrate and one fat exchange**).
 - Two small cookies (each serving counts as **one carbohydrate and one fat exchange**).
 - One-half cup of sugar-free, fat-free ice cream (each serving counts as **one carbohydrate exchange**).
- **Combination foods:**
 - One cup of an entrée such as lasagna, spaghetti with meatballs, macaroni and cheese, and chili with beans (each serving counts as **two carbohydrate and two medium-fat exchanges**).

- One cup of tomato or vegetable beef soup (each serving counts as **one carbohydrate exchange**).
- **Fats:** Each serving below contains five grams of fat and 45 calories. Each serving counts as **one fat exchange**.
 - One teaspoon of oil (such as canola, olive or corn oil).
 - Six almonds or cashews, 10 peanuts, or four pecan halves.
 - Two tablespoons of a medium avocado.
 - One-half tablespoon of peanut butter.
 - One teaspoon of regular margarine or two teaspoons of low-fat margarine.
 - One teaspoon of regular butter or one tablespoon of low-fat butter.
 - One teaspoon of regular mayonnaise or one tablespoon of low-fat mayonnaise.
 - One tablespoon of regular salad dressing or two tablespoons of low-fat salad dressing.
- **Free foods:** The foods on this list are called free foods because they have very few calories. Free foods usually do not increase your blood sugar if you do not eat too much of them. You may have 3 servings each day from this list. Do not eat all three servings at the same time because your blood sugar may increase.
- One tablespoon of catsup or taco sauce.
 - One-fourth cup of salsa.
 - Two tablespoons of sugar-free syrup or two teaspoons of light jam or jelly.
 - One tablespoon of fat-free salad dressing or fat-free sour cream.
 - Four tablespoons of fat-free margarine or fat-free mayonnaise.
 - You can eat the following foods as often as you like.
 - Sugar-free drinks: soda, drink mixes, or mineral water.
 - Low-sodium bouillon or fat-free broth.
 - Mustard.
 - Seasonings such as spices, herbs, and garlic.
 - Sugar-free gelatin without added fruit.

What other important guidelines should I follow?

Fat: Ask your dietitian or caregiver how much fat you should eat each day. As part of a healthy diet, you should limit the amount of fat you eat each day. Choose low-fat protein foods such as poultry (turkey or chicken) without the skin, fish, lean cuts of meat, and beans. Choose low-fat dairy foods such as one percent low-fat or fat-free milk, cheese and yogurt. People with high blood fat levels (such as high cholesterol) may need to count fat grams in their diet.

- **Sugar:** You may occasionally include sugar and sweets as part of your meal plan. Sugar and sweets must be counted towards the carbohydrate exchanges that you can have within your meal plan. Limit sugar and sweets because they are usually also high in calories, fat and cholesterol. Try eating smaller portions of sweets by sharing a dessert or asking for a child-size portion at a restaurant.
- **Sodium:** Limiting sodium (found in table salt) in your diet may help to lower blood pressure. Your dietitian may suggest that you limit sodium in your diet if you have high blood pressure. Foods high in sodium include salt, soy sauce, processed meats (bologna, hot dogs), snack foods (potato chips) and soups.
- **Alcohol:** Adults who have certain health conditions should not drink alcohol. Talk to your caregiver before you drink alcohol. If you may drink alcohol, drink it with meals. Drinking alcohol on an empty stomach may cause a drop in your blood sugar. Alcohol is an addition to your meal plan and should not replace food. Limit alcohol to one serving of alcohol per day if you are a woman, or two servings of alcohol per day if you are a man. A serving is the same as five ounces of wine, 12 ounces of beer, or one and one-half ounces of hard liquor (like gin or whiskey).
- **What is my meal plan?**
- **Breakfast:**
 - Carbohydrate : _____ exchanges of starch, _____ exchanges of fruit, _____ exchanges of milk.
 - _____ exchanges of meat or meat substitute.
 - _____ exchanges of fat.
- **Snack:**
 - Carbohydrate : _____ exchanges of starch, _____ exchanges of fruit, _____ exchanges of milk.
 - _____ exchanges of non-starchy vegetables.
 - _____ exchanges of meat or meat substitute.
 - _____ exchanges of fat.
- **Lunch:**
 - Carbohydrate: _____ exchanges of starch, _____ exchanges of fruit, _____ exchanges of milk.

- _____ exchanges of non-starchy vegetables.
- _____ exchanges of meat or meat substitute.
- _____ exchanges of fat.
- **Snack:**
 - Carbohydrate: _____ exchanges of starch, _____ exchanges of fruit, _____ exchanges of milk.
 - _____ exchanges of non-starchy vegetables.
 - _____ exchanges of meat or meat substitute.
 - _____ exchanges of fat.
- **Dinner:**
 - Carbohydrate: _____ exchanges of starch, _____ exchanges of fruit, _____ exchanges of milk.
 - _____ exchanges of non-starchy vegetables.
 - _____ exchanges of meat or meat substitute.
 - _____ exchanges of fat.
- **Snack:**
 - Carbohydrate: _____ exchanges of starch, _____ exchanges of fruit, _____ exchanges of milk.
 - _____ exchanges of non-starchy vegetables.
 - _____ exchanges of meat or meat substitute.
 - _____ exchanges of fat.

Risks: Not making changes suggested by your dietitian or caregiver may cause your blood sugar levels to rise too high or drop too low. Having near-normal blood sugar levels can decrease your risk for developing certain long-term health problems. These include heart, kidney, eye, or nerve problems.

Call _____ if:

- You have high blood sugar during a certain time of day, or almost all of the time.
- You often have low blood sugar.

CARE AGREEMENT: You have the right to help plan your care. To help with this plan, you must learn about your diet. You can then discuss treatment options with your caregivers. Work with them to decide what care may be used to treat you. You always have the right to refuse treatment.