# WHAT IS THE DIFFERENCE BETWEEN TYPE 1 & TYPE 2 DIABETES?

**Type 1 DIABETES** is a condition where the body does not produce the hormone insulin. Our body uses insulin to move blood sugar (glucose) from the blood stream into the cells of our body. Glucose is the main energy source or fuel our body's cells use. The main source of glucose comes from the carbohydrate in foods. Since individuals with type 1 Diabetes Mellitus are not able to produce insulin, their body will need to get insulin from insulin injections. Normally, food **RAISES** blood glucose levels, while insulin and physical activity **LOWER** blood glucose levels.

The child with Type 1 Diabetes Mellitus (DM) has the same nutritional needs as a non-diabetic child. The diet for a child with Type 1 DM is the same as a good healthy diet for any child. The only difference is that children with diabetes need to monitor and be consistent with their carbohydrate foods. They will need to match the amount of carbohydrates they eat with the correct amount of insulin for that amount of carbohydrate for their body. The carbohydrate food groups are: Bread/Cereals/starchy vegetables, fruits, milk and other carbohydrates.

Many parents of children with diabetes are concerned about the amount of carbohydrate their child needs to eat. If your child eats more carbohydrate, they need to match it with more insulin. If they eat less carbohydrate, they will need less insulin. Good blood sugar control comes when the carbohydrate, insulin and exercise are in balance.

TYPE 2 DIABETES is a condition where the body makes insulin, but doesn't use it very well. Sugar is able to move from the blood stream into the cells, but does it very slowly, causing high triglycerides, cholesterol and many other complications that can prevent good health. Some kids with Type 2 diabetes have to take additional insulin injections, while others take pills that help their body's use the insulin they already make. As with Type 1 diabetes, food normally **RAISES** blood sugar levels, while medication and physical activity help **LOWER** blood sugar levels. The key to good blood sugar control with Type 2 diabetes, is to get food, medication and exercise in balance.

# HEALTHY EATING WITH DIABETES

Staying healthy with diabetes isn't too different than "staying healthy" in general. It requires Eating Nutritious Food, being Active Every Day, and Taking Your Medication (insulin or pills) at the right times. It is also very important to Check Your Blood Sugar Often to see how you are doing.

The goal for kids with diabetes is the same as for kids without diabetes: OPTIMAL GROWTH, GOOD HEALTH, AND REDUCE RISKS FOR DIABETES COMPLICATIONS.

WHERE DO YOU START?

FIVE KEYS TO HEALTHY EATING

- Eat balanced meals
  - Eat from all of the food groups every day

    - 3 servings of milk, yogurt, or cottage cheese every day
    - 2 servings of fruit every day
    - 6 servings of whole grains, beans, or starch
    - 3 servings of vegetables every day
    - 2-3 servings of high protein foods every day

- Choose high fiber foods
  - When you have a choice, choose the higher fiber option
    - Whole wheat bread instead of white
    - Brown rice instead of white
    - Bran flakes instead of Corn Flakes
    - Choose whole fruits instead of juice

- Avoid high fat foods (saturated fat and trans fat)
    - Avoid fried foods – Grill and Bake instead (or use a Crockpot)
    - Avoid high convenience foods – chips, high fat crackers, Poptarts, snack bars, biscuits, croissants, and pizza.
    - Choose low-fat or non-fat dairy foods (milk, yogurt, cheese, sour cream)
    - Watch portion sizes when cooking with oil– use cooking sprays as an alternative
    - Avoid high fat meats: red meat, pepperoni, sausage, bacon, salami, hot dogs, and bologna.

- Limit Sweets, sodas and other sweetened drinks

    - Limit sweets to occasional (once a week or less)
    - Avoid regular soda, sweetened waters, fruit drinks, punch and sports drinks (unless you are playing a sport)

- Eat small meals, several times a day to prevent too high or too low blood sugars.

    - Don’t skip meals – eat every 2-3 hours
    - Spread your carbohydrates over 6 small meals
    - Avoid eating huge meals that keep you full for 4-5 hours

# PLANNING MEALS – COUNTING CARBS

Planning healthy meals and snacks with diabetes is about eating a variety of foods and knowing how many grams of carbohydrate are in those foods. Often your doctor, nurse or dietitian has already discussed the right amount of carbs for you to eat. Knowing or "counting" your carbohydrate foods is a way to make sure you are eating the right amount. One of your most important tools will be the "Nutrition Facts" food label, found on all commercially packaged food.

The things you should know on the food label are:

- number of **SERVINGS PER PACKAGE** and/or **SERVING SIZE**.
- grams of **TOTAL CARBOHYDRATE**
- grams of **DIETARY FIBER**

Knowing the "sugar" content of a food is not very useful in determining how a food will affect your blood sugar, or how much insulin you will need.

**Nutrition Facts**

Serving Size 1 cup (228g)
Servings Per Container 2

| Amount Per Serving | |
|---|---|
| Calories 250 | Calories from Fat 110 |
| | % Daily Value* |
| Total Fat 12g | 18% |
| Saturated Fat 3g | 15% |
| *Trans* Fat 1.5g | |
| Cholesterol 30mg | 10% |
| Sodium 470mg | 20% |
| Total Carbohydrate 31g | 10% |
| Dietary Fiber 0g | 0% |
| Sugars 5g | |
| Protein 5g | |
| Vitamin A | 4% |
| Vitamin C | 2% |
| Calcium | 20% |
| Iron | 4% |

* 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 |
| Total Carbohydrate | | 300g | 375g |
| Dietary Fiber | | 25g | 30g |

## DON'T HAVE A FOOD LABEL?

When you don't have a food label to read, you can estimate the amount of carbohydrates you eat by learning 15 gram portions of common foods. You can use the lists in this packet as a guide.

Though there are many methods you could use to estimate quantities of food, it is best if you use either measuring cups or a food scale, so that you can be as accurate as possible. Carbohydrate counting is not going to be perfectly exact, because of variations in the food itself. What you are trying to do is get as close as you can to your goal, and to be as consistent as possible with your carbohydrate intake.

## DIETARY FIBER and SUGAR ALCOHOLS

If a food contains 5 grams or more of dietary fiber and/or sugar alcohol per serving, subtract half the grams from the total grams of carbohydrate. This will determine the number of carbohydrate grams you will "count" for that particular food.

# CARBOHYDRATE COUNTING BASICS

Most carbohydrate foods affect the blood sugar in about the same way when the same amount of carbohydrates are eaten. (If you eat high fiber foods, the affect on blood sugar may be less, than if you eat refined and processed foods.)

## *WHICH FOOD GROUPS ARE "CARBOHYDRATE" GROUPS?*

1. BREADS/CEREALS/STARCH/STARCHY VEGETABLES

| | | | |
|---|---|---|---|
| Bread | Potatoes | Beans | Flour |
| Cereal | Corn | Lentils | Grains |
| Rice | Peas | | |
| Pasta | | | |

2. FRUIT

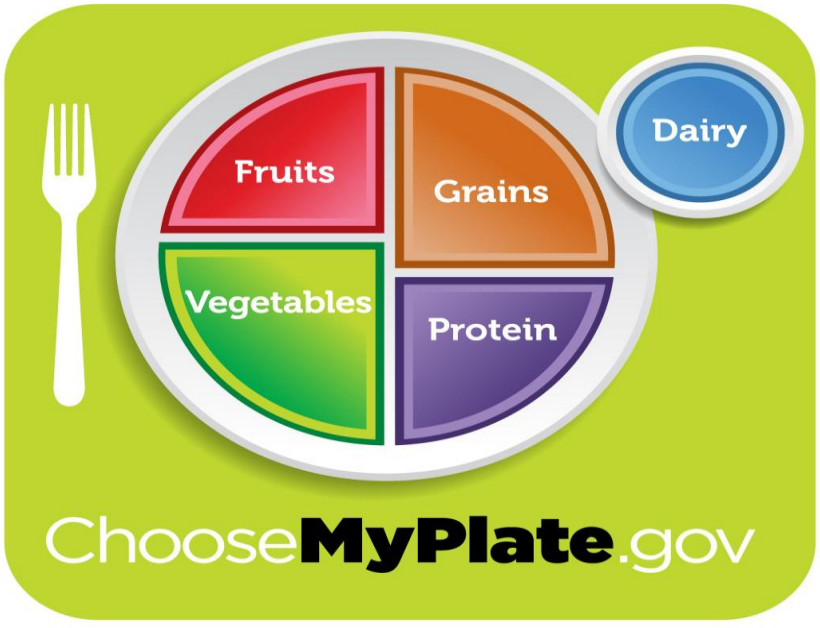
Fresh Fruit Canned Fruit Dried Fruit Fruit Juice Fruit Leather/Rolls

3. MILK & YOGURT

All Milk, Soy Milk, Rice Milk All Yogurt

4. SWEETS

Everything made with sugar or corn syrup: cookies cakes pies sweet breads pudding ice cream candy milk shakes gum mints soda punch sweetened drinks sports drinks



# CARBOHYDRATE FOODS

The following lists indicate the portion sizes for approximately 15 grams of carbohydrate for the carbohydrate food groups (Bread/Starch, Fruit, Milk & Yogurt, and Sweets). Also included are the No-or-Low Carb food groups (Vegetables, Meat, and Fats). Food groups are determined by the amount of carbohydrate, protein and fat in a food. Foods with this ♥ symbol are high in fiber, and are recommended choices. Foods with this symbol ▲ are high in fat and are best eaten in small quantities, not very often.

## BREAD / CEREAL/STARCH GROUP

The Bread/Cereal/Starch group includes grain products:

- ❖ bread
- ❖ cereal
- ❖ rice
- ❖ pasta
- ❖ crackers

It also includes starchy vegetables:

- ❖ corn
- ❖ peas
- ❖ potatoes

It also includes:

- ❖ beans
- ❖ lentils

Each portion in this food group contains approximately fifteen grams of carbohydrate. Each portion has approximately 80 calories.

| **Bread** | **15 gram portion** |
|---|---|
| Bagel | 1/4 large (1 ounce) |
| Biscuit, 2 ½ inches across ▲ | 1 biscuit |
| Bread, white, whole wheat♥`, pumpernickel or rye | 1 slice (1 ounce) |
| Corn bread, 2 inch cube | 1 (2 ounces) |
| English muffin | 1/2 muffin |
| Hot dog or hamburger bun (regular not large) | 1/2 to 1 (1 ounce) |
| Muffin ▲ | 1/4 large (1 1/2 oz.) |
| Pancake, 4 inches across | 2 |

| | |
|---|---|
| Pita bread, 6 inches across | 1/2 bread |
| Stuffing, bread (prepared) ▲ | 1/3 cup |
| Tortilla, corn, 6 inches across ♥ | 1 tortilla |
| Tortilla, flour, (burrito size) | 1/2 tortilla |
| Waffle, toaster size | 1 waffle |
| **Cereals and Grains** | **15 gram portion** |
| Bran cereals♥ | 1/2 cup |
| Bulgur/whole wheat/cream of wheat or rice/oatmeal | 1/2 cup |
| Cereals, unsweetened (Cheerios, Corn Flakes, Kix Wheaties, Rice Krispies, Wheat/Corn/Rice Chex) | 3/4 cup for most |
| Cornmeal, Wheat germ or Flour (dry) | 3 Tbs. |
| Couscous | 1/3 cup |
| Granola or Muesli | 1/4 cup |
| Grape-nuts ♥ | 1/4 cup |
| Grits | 1/2 cup |
| Kashi | 1/2 cup |
| Oats ♥ | 1/2 cup |
| Pasta (macaroni, spaghetti, egg noodles) | 1/3 cup |
| Chow mein noodles ▲ | 1/2 cup |
| Puffed Rice cereal | 1 1/2 cups |
| Rice, white or brown steamed | 1/3 cup |
| Rice, fried▲ | 1/3 cup |
| Shredded Wheat ♥ | 1/2 cup |

| **Crackers and Snacks** | **15 gram portion** |
|---|---|
| Animal crackers | 8 crackers |
| Crisp bread | 3 crackers |
| Crackers, butter type (e.g. Ritz) ▲ | 6 crackers |
| Croutons▲ | 1 cup |
| Gold Fish▲ | ½ Cup (3/4 oz.) |
| Graham crackers | 2 squares |
| Matzoh | 2 slices |
| Melba toast | 4 slices |
| Oyster crackers | 20 crackers |
| Popcorn▲ | 3 cups |
| Potato chips ▲ | 3/4 oz (small bag) |
| Pretzels | 3/4 oz (small bag) |
| Rice cakes, 4 inches across | 2 cakes |
| Saltine crackers | 6 crackers |
| Tortilla chips▲ | 3/4 ounce |
| Whole wheat crackers ♥ | 5 crackers |

| Starchy Vegetables | 15 gram portion |
|---|---|
| Corn canned or on the cob | 1/2 large (5 ounce) |
| Mixed vegetables with corn, peas, or pasta | 1 cup |
| Peas, green | 1/2 cup |
| Plantain | 1/2 cup |
| Potato, baked or boiled | 3 oz (1/3 large) |
| Potato, mashed | 1/2 cup |
| Potatoes (French Fried) ▲ | about one cup |
| Squash, winter (acorn, butternut) | 1 cup |
| Yam, sweet potato, plain cooked | 1/2 cup |

| Beans, Peas, and Lentils | 15 gram portion |
|---|---|
| Beans (garbanzo, pinto, kidney, white, navy, black) ♥ | 1/2 cup |
| Hummus* | 1/3 cup |
| Lima beans ♥ | 2/3 cup |
| Lentils ♥ | 1/2 cup |
| Miso | 3 Tbs. |
| Peas (split, black eyed) | 1/2 cup |

The most accurate and up to date information on these foods will always be in the Nutrition Facts on the food label.

# Fruit Group

Fruits are full of important vitamins, minerals and fiber. Fruit is the one food where the carbohydrate content may vary somewhat depending on how much sugar the fruit contains. The amounts below provide general guidelines for carbohydrate content.

Eating fruit does not usually raise your blood sugar any differently than other carbs with the same number of grams. Drinking fruit juice however, because it is a liquid and is digested more quickly, will increase blood sugar quickly. Eating whole fruit instead of fruit juice is always a better choice for meals and snacks. Children with diabetes mostly use juice **ONLY TO RAISE BLOOD SUGARS WHEN THEY ARE LOW**.

Each portion of fruit contains 15 grams of carbohydrate and 60 calories. All fruits contain little or no fat and protein.

| Fruit | 15 gram portion |
|---|---|
| Apple, unpeeled, small ♥ | 1 (4 ounce) |
| Applesauce, unsweetened | 1/2 cup |
| Apples, dried | 4 rings |
| Apricots, fresh | 4 whole (5 1/2 ounce) |
| Apricots, dried | 8 halves |
| Apricots, (canned in juice) | 1/2 cup |
| Banana, small or 1/2 large | 1 (4 ounce) |
| Blackberries | 3/4 cup |
| Blueberries | 3/4 cup |
| Cantaloupe, small | 1 cup cubes |
| Cherries, sweet, fresh | 12 (3 ounce) |
| Cranberries, sweetened | 1/3 cup |
| Dates | 3 dates |
| Figs, dried ♥ | 1 1/2 |
| Fruit cocktail | 1/2 cup |
| Fruit snacks, chewy | 1 roll |
| 100% fruit spreads | 1 tbsp. |
| Grapefruit, large | 1/2 fruit |
| Grapefruit, sections, canned | 3/4 cup |
| Grapes, small | 17 (3 ounce) |
| Honeydew melon | 1 cup cubes |
| Kiwi | 1 large (3 1/2 ounce) |
| Mandarin oranges, canned | 3/4 cup |
| Mango, small | 1/2 fruit |
| Nectarine, small | 1 |
| Orange, small | 1 (6 1/2 ounce) |
| Papaya | ½ cup fruit (8 oz) or 1 cup cubes |
| Peach, medium, fresh | 1 fruit |
| Peaches, canned | 1/2 cup |
| Pear, large, fresh | 1/2 fruit |
| Pears, canned | 1/2 cup |

| | |
|---|---|
| Pineapple, fresh | 3/4 cup |
| Pineapple, canned | 1/2 cup |
| Plums, small | 2 fruits |
| Pomegranate | 1/2 medium (3 oz) |
| Prunes, dried ♥ | 3 prunes |
| Raisins ♥ | 2 Tbsp |
| Raspberries | 1 cup |
| Strawberries ♥ | 1 1/4 cup whole berries |
| Tangerines, small | 2 fruit |
| Watermelon | 1 slice or 1 1/4 cup cubes |

| **Fruit Juice** | **15 gram portion** |
|---|---|
| Apple juice/cider | 1/2 cup |
| Cranberry juice cocktail | 1/3 cup |
| Cranberry juice cocktail, reduced calorie | 1 cup |
| Fruit juice blends, 100% juice | 1/3 cup |
| Grape juice | 1/3 cup |
| Grapefruit juice | 1/2 cup |
| Orange juice | 1/2 cup |
| Pineapple juice | 1/2 cup |
| Prune juice | 1/3 cup |
| Fruit juice bar | 1 (3 ounce bar) |

# Milk Group

Milk is the main dietary source of calcium, Vitamin D and other important minerals.

Though milk and yogurt both contain significant amounts of “milk sugar” (lactose) they are excellent sources of protein, and contain varying amounts of fat. In California, all low fat milks are required to add powdered non-fat milk. This causes the difference in amounts of carbohydrate and protein in the types of milk.

| **Milk** | **15 gram portion** |
|---|---|
| Skim milk | 1 cup |
| 1 % milk | 1 cup |
| 2% Milk | 1 cup |
| Whole milk | 1 cup |
| Chocolate milk | 1/2 cup |
| Nonfat or low-fat buttermilk | 1 cup |
| Soy milk, low-fat or fat free | 1 cup |
| Rice milk | 1/2 cup |
| Goats milk | 1 cup |
| Evaporated milk | 1/2 cup |
| Nonfat dry milk powder | 1/3 cup dry |
| Nonfat or low-fat Yogurt – plain or artificially sweetened | 1 cup |
| Acidophilus milk or Lactaid | 1 cup |

Check the Nutrition Facts on the food label for most accurate and up to date information.

# Other Carbohydrates:

## OTHER CARBOHYDRATES

| | **15 gram portion** |
|---|---|
| BBQ Sauce | 2 Tbsp |
| French Dressing | ¼ Cup |
| Honey | 1 Tbsp |
| Chocolate Syrup | 3 tsp |
| Teriyaki Sauce | 2 Tbsp |
| Sweet & Sour Sauce | 2 Tbsp |
| Cranberry sauce, jellied | 1/4 cup |
| Spaghetti Sauce | ½ Cup |
| Regular jam or jelly | 1 tsp |
| Maple Syrup, light | 2 Tbsp. |
| Maple Syrup, regular | 1 Tbsp. |

## SWEETS & DESSERTS (most are high in fat and calories)

| | **15 gram portion** |
|---|---|
| Brownie, small unfrosted | 2 inch square |
| Cake, frosted | 2 inches by 1 inch |
| Cookie ( store bought choc chip) | 2 small |
| Cupcake, frosted | 1/2 small |
| Doughnut, plain cake | 1 ounce |
| Doughnut, glazed | 1/2 - 4 inch doughnut |
| Ice cream | 1/3 Cup |
| Ice Cream (No Sugar Added) | ½ Cup |
| M & Ms (plain) | 20 pieces |
| Pie, fruit with crust top and bottom | 1/18 of the pie (a sliver) |
| Pie, pumpkin or custard | 1/8 pie |
| Vanilla wafers | 5 |
| Sorbet | ¼ Cup |
| Sherbet | 1/4 cup |
| Sweet roll or Danish | 1/2 roll |
| Sweet Bread | ½ small |

Because many of these foods are concentrated sources of carbohydrate and fat, the portion sizes are very small. The most accurate and up to date information on these foods will always be in the Nutrition Facts on the food label.

# FREE FOODS

A free food is any food or drink that contains less than 20 calories and 5 grams or less of carbohydrate. These foods may or may not contain many nutrients, but have limited effect on blood sugar, weight, or overall health. Usually the portion size of these foods is not something you will need to monitor or measure. Usually these foods may be eaten as desired, in the quantities desired.

### Examples of Free Foods:

Asparagus ♥
Bean sprouts
Beets
Broccoli ♥
Brussels sprouts ♥
Cabbage ♥
Cauliflower ♥
Celery ♥
Cucumber
Eggplant
Green Onions
Greens ♥
Green Beans
Kohlrabi
Leeks
Lettuce
Mushrooms
Okra
Peppers
Radishes
Sauerkraut
Spinach ♥
Summer Squash
Turnips
Watercress
Zucchini

Broth, bouillon
Diet/sugar free candies
Sugar free gum or mint
Dill pickles
Sugar free Jell-O
Sugar free popsicles

## Condiments/Spices

A-1 sauce
Butter buds
Cool Whip Free
Chili sauce
Cream cheese, fat free
Flavor extracts
Herbs
Horseradish
Ketchup
Lemon/Lime juice
Mustard, unsweetened
Nonfat mayonnaise
Nonfat sour cream
Pickle relish – sour
Salsa
Soy sauce
Spices
Tabasco sauce
Taco sauce
Non-stick spray
Vinegar
Worcestershire Sauce
Salad dressing, nonfat or diet (amount not to exceed 20 calories)

## Beverages

Diet soda
Kool Aid, Sugar Free
Crystal Light
Sugar Free Tea
V-8 Vegetable Juice
Mineral Water

# Vegetable Group

Vegetables contain important nutrients. The brighter the color, usually the greater the nutrition. Most vegetables have little effect on blood sugar, due to their high fiber content. For this reason, most are considered "free foods". In large quantities however, some vegetables could cause a slight rise in blood sugar. These higher carb veggies are listed below. (Remember that corn, peas and all potatoes act more like "breads" when raising blood sugar, and therefore are in the bread group.)

Because most kids don't eat enough vegetables, they are always healthy choices for meals and snacks. They fill up your stomach, but add very few calories or fat.

**Carrots** **Jicama** **Tomatoes** **Water Chestnuts**

### Tips:

Fresh and frozen vegetables have less added salt than canned vegetables. Drain and rinse canned vegetables, if you want to remove added salt.

# Meat and High Protein Foods

Meats and other high protein foods usually do not contain significant amounts of carbohydrate, and therefore do not cause a large rise in blood sugar. These foods do however contain protein and fat and often lots of calories. The type of fat found in animal products is usually "artery clogging" saturated fat and dietary cholesterol. For this reason, it is recommend that most meals and snacks include only the Lean and Very Lean food choices. Many high fat foods have low fat alternatives which may make it easier to eat healthy. Including high protein foods in a bedtime snack can help prevent low blood sugar in the middle of the night.

### Very Lean Meats 0 grams Carbohydrate

Poultry:
Chicken or turkey (white meat, no skin)

Fish: Cod, flounder, haddock, halibut, trout, tuna (fresh or water packed)
Shellfish: Clams, crab, lobster, scallops, shrimp, imitation shellfish

Cheese: nonfat or low-fat cottage cheese
fat free cheese
Lunch meats (thinly sliced): chicken and turkey breast, ham, fat-free bologna
Egg whites
Non-fat hot dogs

## Lean Meats 0 grams Carbohydrate

Beef: USDA Select or Choice grades of lean beef trimmed of fat. Includes: round, sirloin, flank, T-bone, porterhouse, cubed steak, tenderloin, roasts (rib, chuck, rump) and <7% fat ground beef, ground turkey .

Pork: Lean hams, Canadian bacon, tenderloin, center loin chop

Lamb: roasts, chops, leg

Poultry: Chicken, turkey (dark meat w/o skin or white meat w/ skin),

Fish: herring, salmon, catfish, tuna, sardines (canned), oysters

Low Fat Cheese : 4.5% fat cottage cheese
Grated Parmesan
String Cheese
Cheeses with 3 grams or less fat per ounce

## Medium-Fat Meats 0 grams Carbohydrate

Beef: Most beef products (ground beef, meatloaf, corned beef, short ribs, prime grades of meat trimmed of fat)

Pork: roast, shoulder, chops, cutlet

Lamb: rib roast, ground

Veal: cutlet (ground or cubed, unbreaded)

Poultry: Chicken, turkey (dark meat with skin) ground turkey or chicken

Fish: any fried fish product

Cheese with 5 grams or less fat per ounce: feta, mozzarella, ricotta, queso fresco

Eggs (whole)

Turkey or Vegetarian Sausage

Tempeh

Tofu

## High Fat Meats 0 grams Carbohydrate

Pork: Spareribs, ground pork, sausage

Cheese: All regular cheeses, such as American, Cheddar, Monterey Jack, Swiss

Processed sandwich meat, such as bologna, pimento loaf, salami, pepperoni

Sausages: bratwurst, Italian sausage, knockwurst, Polish sausage, Vienna sausage

Hot dogs

# FATS

**ALL FATS ARE HIGH IN CALORIES.** One portion of fat contains little or no grams of carbohydrate and does not raise blood sugar. High fat meals typically will delay a rise in blood sugar by 2-4 hours. While most animal fats (except fish fat) and trans fats are unhealthy and raise "bad cholesterol", most plant fats have healthy benefits in eaten in small amounts.

## Plant Fats (Monounsaturated & Polyunsaturated) 0-5 grams Carb

Avocado, medium
Oil (olive, peanut, canola) Monounsaturated
Oil (corn, safflower, soybean {vegetable})Polyunsaturated
Olives: ripe (black) green, stuffed
Mayonnaise
Nuts: Almonds, cashews
Mixed (50% peanuts)
Peanuts
Pecans
Walnuts
Peanut butter, smooth or chunky
Salad dressing: Olive Oil based
Sesame seeds
Sunflower Seeds
Pumpkin Seeds

## Trans Fats (hydrogenated oils)

Coffee Creamers
Margarine: stick, tub or squeeze
Reduced fat (30% to 50% vegetable oil)
Shortening

## Saturated Fats

Bacon
Butter
Coconut
Cream
Cream cheese
Lard
Sour cream

## MY MEAL PLAN

| Meal Time | Carb Goal | Example #1 | Example #2 |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

**REMEMBER**: the GOAL is to eat healthy balanced meals with fairly consistent amounts of carbohydrate intake so that you can better determine whether or not the medication (insulin or pills) you are taking is adequate.

# ARTIFICIAL SWEETENERS

Artificial sweeteners are substances that are sweeter than sugar, and do not provide calories, carbohydrates or sugar to the body. They range from 150 times to 3,000 times as sweet as sugar. Because of this, manufacturers use them in very small amounts when sweetening products. Eaten in moderation they are considered safe except for Saccharin. The most common artificial sweeteners in alphabetical order are:

**ACESULFAME – K** (generic name)

Brand names: Sweet One, Swiss Sweet, Sunett

*This sweetener is 200 times as sweet as sugar. It is heat stable, so is used in cooking and baking. It is made from vinegar acids, and extends the shelf life of sweetened foods. It works particularly well blended with other sweeteners. Acesulfame is mostly found in blends of sweeteners combined with aspartame or sucralose. Most diet sodas are now blends of artificial sweeteners containing Acefulfame.*

**ASPARTAME** (generic name)

Brand names: Equal, Nutrasweet, Nutramate, Spoonful (blue packages)

*This is a sweetener made from two amino acids linked together. It is 180 times as sweet as sugar. Since it is protein-like it loses its sweetness when used for cooking or heated. It is often found in products that are kept cool.*

**SACCHARIN** (generic name)

Brand names: Sweet & Low, Sugar Twin, Sugar Twin Plus (pink packages)

*This was the original artificial sweetener. It is about 300 times sweeter than sugar. It is the only sweetener to have scientific studies linking it to cancers. Most people find it has a strong after taste. It is made from coal tar.*

**SUCRALOSE** (generic name)

Brand name: Splenda (yellow packages)

*This is the newest sweetener approved for use in the United States. It is about 600 times sweeter than sugar. McNeil Laboratories makes it from sugar by replacing three of the hydroxyl ions on the sugar molecule with chlorine. Since they make sucralose from sugar, you can cook, bake or do anything else with it you can with sugar. It is not absorbed into the body. Since it is the newest, has very little aftertaste, and has many advantages over the other sweeteners, it is often more expensive.*

**SUGAR ALCOHOLS:** Sugar alcohols are similar to sugars and are used like sugar in many “sugar free” products. They are carbohydrates, but do not need insulin to get into your cells. However, the liver converts sugar alcohols to sugars at a varying rate. They are included in the Total Carbohydrates on the food label. They are not included in net carbohydrate. It is recommended you start by subtracting half the sugar alcohol grams from the total carbohydrate on the food label when calculating carbohydrates. If your blood sugars are high you should count all the sugar alcohols as regular carbohydrates. Different sugar alcohols also have different absorption rates.

Some common names for different types of sugar alcohols are: mannitol, sorbitol, maltitol, xylitol, lactitol, erythritol, isomalt, and hydrogenated starch hydrolysates.

Sugar alcohols are mild laxatives and may cause gas and/or diarrhea.

# Diabetes Resources

## Carbohydrate Counting Resources

| | |
|---|---|
| Exchange Lists for Meal Planning: | American Diabetes Association |
| Food Values of Portions Commonly Used: | JT Pennington - JB Lippincott Co. |
| Handbook of the nutritional Contents of Foods: | Dover Publications |
| Diabetes Carbohydrate & Fat Counting Guide: | American Diabetes Association |
| Doctors Pocket Calorie, Fat & Carbohydrate counter: The Calorie King | Allan Borushek |
| The Carbohydrate Counting Cookbook: | Tami Ross |
| Nutrition in the Fast Lane | Franklin Publishing Inc. |

## Calorie Counter/Food Diaries

www.caloriecount.com
www.fitday.com
www.dailyplate.com
www.fatsecret.com
www.livestrong.com/myplate/
www.myfitnesspal.com
www.mypyramidtracker.gov

## Diabetes Resources

www.childrenwithdiabetes.com
www.diabetes.org
www.diabetes.org/youthzone/youthzone.jsp
www.diabetes-exercise.com
www.dlife.com
www.insulin-pumpers.org
www.ispad.org
www.jdrf.org
www.joslin.harvard.edu
www.kidshealth.org/kid/health_problems/gland/type2.html
www.nutritiondata.com
www.sparkrecipes.com

## Diabetes Magazines

Diabetic Living www.DiabeticLivingOnline.com
Diabetes Forecast www.forecast.diabetes.org

## Nutritional Information for Restaurants

www.calorieking.com
www.fastfoodfacts.com
www.sparkpeople.com/resource/sparkdining.asp

## Medical IDs and Accessories

www.americanmedical-id.com
www.coolmedid.com
www.identifyYourself.com
www.lifetag-alert.stores.yahoo.net
www.medicalidstore.com
www.medicharms.com
www.measureupbowl.com
www.my-medical-id.com
www.quickfixkeychain.com
www.roadid.com
www.xtremesportsid.com

## Diabetes Phone Apps

Bant*
Blood Sugar Tracker*
Calorie Counter
Calorie King
Carb Master Free*
Diabetes Buddy List*
Diabetes Companion*
Diabetes Log*
GluCoMo*
Glucose Buddy*
Gomeals
Mynetdiary
Myfitnesspal
Shroomies-Nutrition menu
Vree for Diabetes*
WaveSense Diabetes Manager*

*Apps compatible with iPhone, refer to http://www.eatright.org/appreviews/ for reviews

## Recipe Analysis

www.caloriecount.about.com
www.nutritiondata.com
www.sparkpeople.com

# Celiac Disease Resources

**Reputable Organizations/websites**
www.celiac.ca
www.celiac.com
www.celiac.org
www.celiaccentral.org
www.celiacdiseasecenter.org
www.celiacdisease.net
www.celiachealth.org
www.csaceliacs.org
www.gluten.net
www.glutenfreedietitian.com
www.surefoodsliving.com
www.twincitiesrock.org

**Gluten-Free Diet Information**
www.glutenfreediet.ca
www.glutenfreedietitian.com

**Restaurant Locators/Dining Out Guides**
www.glutenfreerestaurants.com
www.Triumphdining.com

**Product Information & Coupons**
www.celiac.org
www.celiac.com
www.glutenfreely.com
www.glutenfreewatchdog.org

**Magazines/Books**
www.glutenfreeliving.com
www.livingwithout.com
www.savoryplate.com

**iPhone Apps**

AllergyEatsMobile
CeliacFeed
Eating Out G-Free
Find Me Gluten Free
Food Additives 2: Free
FoodWiz
Gluten Free Daily
Gluten Free Restaurant Cards from CeliacTravel.com
Gluten Freed-Gluten Free Dining for Health and Celiac
iGlutenfree

zThe Gluten Detective

refer to http://www.eatright.org/appreviews/ for reviews on above iPhone apps