

Teachers Edition to **Diabetes Carbohydrate counting Placemats**

This is **NOT** a patient hand out

Controlling the sugar

The first important information about diet and diabetes is how to control the patient's carbohydrate or sugar load. The exchange system divides all of the foods into serving sizes and provides lists of all the foods in each group that represent a unit of that food. An example of one exchange from the milk group has about 8 grams of protein, 12 grams of carbohydrate and 0-8 grams of fat, depending on the percent milk fat. These exchanges or units of food are then distributed into meals and snacks in a way that gives the insulin or oral hypoglycemic the right amount of sugar to act on. The sugar comes from the fruit, starch and milk groups. The meat, fat and vegetable groups help to regulate the rise of sugar by slowing its absorption time into the blood stream. This is an important principle as the patient should limit having any food from the bread, starch or fruit groups by itself, but try to combine them with a fat or some fiber for example: peanut butter with fruit or crackers or salad dressing on a salad.

Carbohydrate counting

The simplest way to teach someone to control their blood sugar is by carbohydrate counting. This is where only the foods that contain carbohydrate or sugar are divided into portions that provide about 15 grams of carbohydrate each. **The only groups that contain carbohydrates are the starch, fruit and milk groups.** If you remember the other principle of combining carbohydrates with fat or fiber you can provide a freer diabetic diet that can adjust to be a lighter or heavier meal depending on how much additional protein, fat and fiber is provided by the other foods. This is an important principle to follow when discussing weight loss which we will cover a little later.

Concentrated Sweets

Not all carbohydrates are created equal. There are some foods that are considered "concentrated sweets" These are all of the fruit juices, drained fruit that has been canned in sugar or corn syrup, sweet potatoes, yams, foods sweetened with fruit juices or with a high percentage of dried fruit in it.

The first survival skill in eating with diabetes is to learn what makes a serving in the high carbohydrate groups and how many servings to have at each meal or snack. The division of carbohydrate through the day is most important when insulin is being given. If it is given in divided doses the bulk of the carbohydrate is given to act with the peak of the regular insulin.

Hidden Carbohydrates

Carbohydrates can be increased considerably when cooking by the addition of the following foods and should be discussed to make sure the patient “counts them” as additional carbohydrate exchanges.

1. Starches:

Breeding.

Bread crumbs or croutons	½ cup
Cornmeal (dry)	3 T
Flour (dry)	3 Tbs
Oats	½ cup
Wheat germ	3 Tbs

2. Milk

Dry milk (non fat)	1/3 cup
Evaporated skim milk	½ cup

3. Fruit

Dried fruit	2 Tbs
Fruit spreads, 100 % fruit	1 Tbs
Fruit juice	1/3 cup

4. Others

Honey	1 Tbs
Jelly or Jam	1 Tbs
Sugar	1 Tbs
Syrup , light	2 Tbs
Syrup , regular	1 Tbs

5. Fat-free or reduced-fat foods.

Cream cheese, fat free	1 Tbs
Creamers, non dairy, liquid	1 Tbs
Creamers, non dairy, powdered	2 tsp
Mayonnaise, fat-free	1 Tbs
Mayonnaise, reduced-fat	1 tsp
Margarine, fat-free	4 Tbs
Margarine, reduced-fat	1 tsp
Miracle Whip nonfat	1 Tbs

Fat-free or reduced-fat foods continued

Miracle Whip reduced-fat	1 tsp
Nonstick cooking spray	Free
Salad dressing, fat-free	1 Tbs
Salad dressing, Italian	2 Tbs
Salsa	¼ cup
Sour cream, fat-free, reduced-fat	1 Tbs
Whipped topping, regular or light	2 Tbs

6. Condiments

Catsup	1 Tbs
Spaghetti sauce	½ cup
Taco Sauce	1 Tbs

Other foods that may not be remembered in the diet are:

Sweetened, pickled foods like sweetened beets and sweet pickles
Sauces like cranberry, sweet and sour, honey mustard dressing, poppy-seed dressing.

Drinks like chocolate milk, sodas, lemonades and flavored drinks

Inquiring carefully about snacks and late-night or mid-night eating is important.

A more extensive fruits list is provided for your information. It was not included on the placemat in effort to simplify information for patients.

Fruits

Apple, unpeeled, small	1
Applesauce, unsweetened	½ cup
Apples, dried	4 rings
Apricots, fresh	4 whole
Apricots, dried	8 halves
Apricots, canned	½ cup
Banana, small	1
Blackberries	¾ cup
Blueberries	¾ cup
Cantaloupe, small	1/3 melon
Cherries, fresh	12
Cherries, canned	½ cup
Dates	3
Figs, fresh	1 ½ large or 2 medium
Figs, dried	1 ½
Fruit cocktail	½ cup
Grapefruit, large	½
Grapes, small	17

Fruits list continued

Honeydew melon	1 slice or 1 cup cubed
Mandarin oranges	¾ cup
Mango, small	½ fruit
Papaya	½ fruit
Peach, medium	1
Peaches, canned	½ cup
Pear, large	½ cup
Pineapple, fresh	¾ cup
Pineapple, canned	½ cup
Plums, small	2
Prunes, dried	3
Raisins	2 Tbs
Raspberries	1 cup
Strawberries	1 ¼ cup whole berries
Tangerines, small	2
Watermelon	1 slice or 1 ¼ cup cubes.

Fruit juices are NOT encouraged as they fall under the concentrated sweets list.

Free Foods

Free foods are those that have less than 5 grams of carbohydrate per serving. Most are able to be eaten in unlimited amounts; some with a serving size should be limited to 3 times a day, and distributed though out the day.

Drinks

Bouillon or broth
Bouillon, low-sodium
Carbonated or mineral water
Club soda
Cocoa powder, unsweetened, 1 Tbs
Coffee
Diet soft drinks, sugar-free
Drink mixes, sugar-free
Tea
Tonic water, sugar-free
Sugar-free or Low-sugar
Candy, hard, sugar-free, 1
Gelatin, dessert, sugar-free
Gelatin, unflavored
Gum, sugar-free
Jam/jelly, low-sugar or light, 2 tsp
Sugar substitutes
Syrup, sugar-free, 2 Tbs

Weight Loss and Diabetes

Decreases in weight can eliminate the need for insulin or may make the diet be adequate to manage diabetes. Ideally, a person losing weight rather than over-restricting which generally leads to over eating, should learn to identify hunger and satisfied cues, eat regularly **without** skipping meals, and learn how to moderate the excessive fat in their diet. Stressing 5 fruits and vegetables a day will ensure adequate fiber and provide health benefits. Exercise goals should be set and maintained until they are habitual. All these things together provide flexibility and regularity for weight loss to occur. The carbohydrate counting method presented here is ideal for type II diabetics on oral agents or one-shot insulin regimens. The freedom to interchange the milk, fruit and starches and to add or subtract other foods as hunger dictates, provides the framework to establish good body awareness of hunger and satisfaction cues without forcing non-hunger eating or overeating and maintaining a regular carbohydrate intake.

Heart Health and Diabetes

All people who have diabetes are at risk for heart disease therefore all of them need to get heart healthy information, however, salt restriction only applies to hypertensive patients. Fat free items need to be checked carefully as in place of the fat sometimes sugar or starchy fillers are added (see the fat free servings list). The leanness and total amount of meat is important in reducing saturated fat sources; Use 3 ounce meat portions, eaten 2-3 times a day. Liquid and very soft fats like oil and squeeze margarine are recommended over solid fats like stick margarine, lard, butter, Crisco or drippings. One fat serving is 5 grams of fat. A diabetic should strive to have no more than 1-2 servings each meal including fat used in preparation of the meal

A serving of fat is:

- 1 teaspoon of oil, margarine
- 1 Tablespoon of salad dressing or diet margarine
- 20 peanuts
- 10 olives
- 1/8 of an avocado
- 1 slice of bacon * no more than once a week.