

Carbohydrate Counting Handbook

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Introduction

The eating regimen for someone with diabetes is a healthy way of eating from which the entire family can benefit. This handbook will provide you with the basic survival skills to count carbohydrates while eating a healthy diet.

Why Count Carbohydrates???

Food is made up of many different nutrients:

- Carbohydrate
- Protein
- Fat
- Vitamins and minerals
- Water
- Fiber

Our bodies need a little bit of each of these nutrients. But, when someone has diabetes they need to pay close attention to the amount of carbohydrate that they consume. **Carbohydrate is the nutrient that breaks down to sugar in our bodies as we digest it.** Our bodies use carbohydrate for energy. In order to utilize that energy, however, insulin must be available to carry sugar (glucose) into cells. Because people with diabetes have impaired insulin production and/or utilization, sugar can build up in their blood, causing hyperglycemia, if they take in too much carbohydrate at one time. This is why it is very important to count the grams of carbohydrate in the foods that you eat. It will allow you to control your diabetes better by eating the correct amount of carbohydrates for the amount of insulin that your doctor prescribes. Carbohydrates and insulin are a balancing act.

Healthy Eating Guidelines

Guidelines for meal planning:

- Eat a variety of foods to make sure your diet is well balanced.
- Limit intake of sweets, fats, and salt to make your diet healthier.
- Increase intake of fiber.
- Eat meals and snacks at the same time each day.
- Eat the same amount of carbohydrates at meals and snacks.

Is this food a carbohydrate, protein, or fat?

Now that you will be counting carbohydrates, you will need to determine if the food that you are eating contains carbohydrates. If any food contains more than 5 grams of carbohydrate per serving you will need to include it in your meal plan. Foods can be a combination of “carbohydrate, protein, and/or fat”. You can use the food guide pyramid to help you determine if a food is a carbohydrate, protein, or fat, or a combination.

Carbohydrate Group:

- Grains, dried beans, starchy vegetables
- Fruit
- Milk & yogurt

Protein Group:

- Beef, pork, poultry, fish
- Eggs, cheese
- Nuts
- Tofu

Fat Group:

- Butter
- Margarine
- Oils
- Lard
- Sour cream
- Mayonnaise
- Salad dressings* (see page 9)

Diabetic Food Guide Pyramid

Reading Food Labels

There are two steps to follow when reading food labels to count carbohydrates:

1. Look at the **servicing size** for the food. This is located at the top of the label.
2. Look at the **total carbohydrate** amount. This is located towards the middle of the label.

These two parts of the label tell you what you need to know. The amount of total carbohydrates listed is for the particular serving size listed. Also keep the following information in mind when reading food labels:

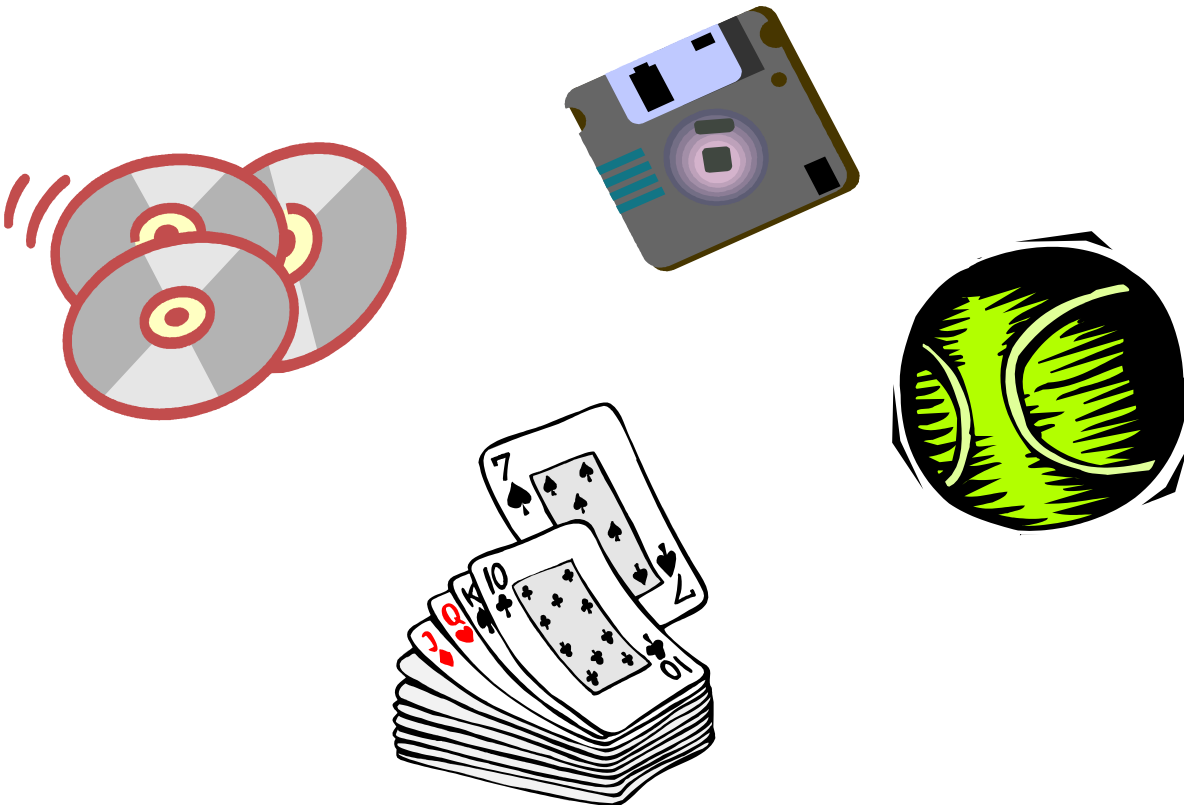
- ◆ “Sugars” reflect both added sugars and those that naturally occur in foods. It is important to look at the total amount of carbohydrate rather than the source.
- ◆ If sugar alcohols are listed on the food label, divide that number by 2 and subtract it from the total carbohydrate. (Sugar alcohols only provide half the calories as sugar.)
- ◆ If dietary fiber is listed on the food label, you can subtract the full amount of fiber from the total carbohydrate. (Fiber is not digested as sugar and therefore, will not have an effect on our blood sugar.)

Measuring Serving Sizes

Measuring the serving size of the items that you are choosing to eat is very important. The total amount of carbohydrates depends on the serving size. Therefore, it is very important that you have measuring cups, spoons, and/or a food scale. The following is a list of descriptions to help you visualize what a serving size might look like, in case measuring cups are not available.

Easy Ways to Estimate Portion Size

- 3 oz boneless meat = deck of cards
- 1 oz slice cheese = 3 ½" computer disk
- Medium piece of fruit = baseball or tennis ball
- 2 Tbsp peanut butter = golf ball
- ¼ cup dried fruit = golf ball
- 1 pancake = compact disk (CD)
- 1 serving of chips (1 oz) = 1 small cupped hand



Sources of Carbohydrate

Each item listed with its accompanying serving size contains about **15 grams of carbohydrate** or 1 serving(exchange) of carbohydrate.

Breads

- 1 slice bread
- 2 slices reduced-calorie bread
- 1 1oz. dinner roll
- ½ hamburger/hot dog bun
- ½ bagel
- ½ English muffin
- 1 2 ½ -inch biscuit
- 1 2-inch cube cornbread
- ½ 6-inch pita
- 1 6-inch tortilla
- 2 6-inch taco shells
- 1 4 ½ -inch waffle
- 2 4-inch pancakes
- 1 slice French toast
- 1 cup croutons
- 1/3 cup stuffing, bread (prepared)

Cereals and Grains

- ½ cereal bar
- ½ unfrosted poptart or toaster pastry
- ½ cup bran cereal
- ¾ cup unsweetened cereal
- ½ cup sugar-frosted cereal
- 1 ½ cup puffed cereal
- ½ cup Shredded Wheat®
- ¼ cup Grape-Nuts®
- ½ cup oats
- ½ cup cooked cereal (grits, oatmeal)
- 1/3 cup couscous
- 3 Tbsp flour (dry)
- 3 Tbsp cornmeal (dry)
- 3 Tbsp wheat germ
- ½ cup pasta (cooked)
- 1/3 cup rice (white or brown) (cooked)
- ½ cup rice milk

Starchy Vegetables

- ½ cup corn
- 1 corn on cob, 6-inch
- ½ cup peas
- 1 3oz potato, plain (baked or boiled)
- ½ cup mashed potatoes
- ½ cup yam, sweet potato, plain
- 1 cup squash, winter (acorn, butternut)
- 1/3 – 1/2 cup tomato or spaghetti sauce
- 1 ½ cup vegetable juice

Beans, Peas, and Lentils

- 1/3 cup baked beans
- ½ cup beans/peas, cooked (garbanzo, pinto, kidney, white, split, black-eyed)
- 2/3 cup lima beans
- ½ cup lentils, cooked

Crackers and Snacks

- 7 saltine crackers
- 15-20 tortilla or potato chips
- 24 oyster crackers
- 8 animal crackers
- 3 2-½ -inch square graham crackers
- ¾ oz pretzels
- ¼ - ½ soft pretzel
- 3 cups popped popcorn
- 2 4-inch rice cakes
- ½ cup chow mein noodles
- 3 cheese or peanut butter crackers
- 43 Goldfish® crackers
- 21 Cheese Nips®

Milk and Yogurt

- 1 cup (8 oz) milk (skim, 1%, 2%, whole)
- ½ cup (4 oz) chocolate milk
- ¾ cup (6 oz) plain, low-fat yogurt
- ½ cup evaporated milk
- 1/3 cup nonfat dry milk
- 1 cup goat's milk

More Sources of Carbohydrate

Each item listed with its accompanying serving size contains about **15 grams of carbohydrate** or 1 serving(exchange) of carbohydrate.

Fruit

½ cup canned fruit (unsweetened, in its own juice)
½ cup applesauce (unsweetened)
1 small banana (4½ inch)
1 small apple, orange
15 small grapes
1 ¼ cup strawberries, whole
1 ¼ cup watermelon (cubed)
1 cup cantaloupe, honeydew, papaya (cubed)
2 Tbsp raisins
¼ cup dried fruit
½ cup juice (apple, orange, grapefruit, pineapple)
1/3 cup juice (grape, cranberry, prune, blends)

Combination/Other Food

½ cup Ice cream
½ cup Ice cream, no added sugar
1/3 - 1/2 cup frozen yogurt
¼ cup sherbet
½ cup pudding, sugar-free
1- inch square cake, frosted
2- inch square cake, unfrosted
½ Doughnut, plain cake
1 Tbsp honey
1 Tbsp sugar
1 Tbsp regular syrup
1 Tbsp light syrup
1 Tbsp jam, jelly
3 Tbsp ketchup
½ cup jello, regular
1/3 – 1/2 slice, medium pizza

Fibrous Vegetables

Each item listed contains about **5 grams of carbohydrate per serving**.
What is a serving of fibrous vegetables? **½ cup cooked OR 1 cup raw**

Artichoke/artichoke hearts
Asparagus
Beans (green, wax, Italian)
Bean sprouts
Beets
Broccoli
Brussels sprouts
Cabbage
Carrots
Cauliflower
Celery
Cucumber
Eggplant
Greens (collard, kale, mustard, turnip)
Kohlrabi
Leeks
Lettuce

Mixed vegetables, without corn, peas, pasta
Mushrooms
Okra
Onions (white, green, scallions)
Pea pods
Peppers, all varieties
Radishes
Salad greens
Sauerkraut
Spinach
Summer squash
Tomato
Turnips
Water chestnuts
Watercress
Zucchini

Protein/Fat (0 grams carbohydrate)

Each item listed is considered a protein and/or fat, unless you add carbohydrate to it

Beef	Cream cheese
Poultry	Creamer, non-dairy
Fish/Seafood	Mayonnaise
Pork	Margarine
Veal	Butter
Meat sticks	Oil
Luncheon/deli meats	Lard
Eggs	Salad dressings: ***ranch, oil and vinegar,
Cheese	Caesar
Nuts	Sour cream

***The following are salad dressings that can be high in carbohydrate per serving. Please read the food label to determine the amount of carbohydrate:

Catalina	Russian
French	Red wine vinaigrette
Honey Dijon	Raspberry vinaigrette
Honey mustard	Thousand island
Poppy seed	

***Items that are “fat-free,” “low-fat”, “lite”, or “reduced-fat” may actually have sugar/carbohydrate added to them to make them taste better, since the fat was taken out. Therefore, you should always read the food label for the total carbohydrate.

Sugar-free versus Carbohydrate-free

Just because a food is labeled “Sugar-Free” or “No Sugar Added” doesn’t necessarily make it a “free food,” it may contain carbohydrate. The carbohydrate may come from other ingredients in the food, such as flour. You still need to read the label for the total carbohydrate and include it in your meal plan. The reason that an item can be labeled “Sugar-Free” or “No Sugar Added” is because the manufacturer is not adding “table sugar.” Sugar comes in many forms other than “table sugar.” All types of sugar contain carbohydrate that will affect your blood sugar.

“Sugar-free” means less than 0.5 grams of “table sugar” per serving.

“No added sugar” means that no sugar was added, but it may be found naturally in the food.

The following is a list of different types of sugar:

Nutritive (caloric) sweeteners:

Glucose	Raw sugar
Fructose	Corn sweetener
Sucrose- table sugar (white sugar)	Dextrose
Lactose	Honey
Galactose	Molasses
Brown sugar	High fructose corn syrup
Dextrin	Corn syrup
Maple syrup	Sugar
Maltose	Sugar alcohols- sorbitol, mannitol, xylitol

Non-nutritive (low-calorie) sweeteners: The use of these products will help limit sugar intake.

Saccharine- Sweet-N-Low®

Aspartame- NutraSweet®, Equal®

Acesulfame K- SweetOne®

Sucralose- Splenda®

***All are approved by the Food and Drug Administration (FDA).

***People with phenylketonuria should not use aspartame.

Snacks

Snacks are a very important part of your meal plan. For good blood sugar control, you should eat the same amount of carbohydrate for each snack. When you count carbohydrates, you are given the flexibility to eat what you want at snacks, as long as it fits into your carbohydrate meal plan. Snacks can contain 15-30 grams of carbohydrate. Your dietitian will tell you how much to have. You can refer to the lists of sources of carbohydrate to help you pick and choose what to have or simply read the food label of the item that you want. Bedtime snacks should contain both carbohydrate and protein.

★ Here are some examples of snacks that contain about **15 grams of carbohydrate**:

- 1 small piece fresh fruit
- 3 cups popcorn
- 6 oz light yogurt
- 7 saltine crackers w/ cheese
- ½ cup ice cream
- ½ cup unsweetened applesauce
- 2 rice cakes
- ½ cup sugar-free pudding
- ½ sandwich

★ Here are some examples of snacks that contain about **30 grams of carbohydrate**:

- 1 granola bar
- 1 cereal bar
- 6 pk crackers
- 6 cups popcorn
- 1 small bagel w/ cream cheese
- 1 sandwich (meat and cheese)
- 1 cup milk w/ a small piece of fresh fruit

Free Foods

Some foods are free only if you consume a minimal amount. The following guidelines will help you determine if a food is “free”:

- **Contains less than 5 grams carbohydrate**
- **Contains less than 20 calories**

Free Foods- The following foods contain little to no carbohydrate and/or calories and will not affect your blood sugar. Remember...just because a food is labeled “sugar-free” doesn’t necessarily mean that it is “carbohydrate-free.”

Diet soda
Crystal Light
Sugar-free Kool-aid
Sugar-free or unsweetened iced tea
(sweetened with sugar substitute)
Coffee
Bouillon
Broth

Sugar-free jello
Sugar-free gum
Sugar-free popsicles (not made with fruit
juice)
Dill pickles
Mustard
Herbs/spices
Cooking spray
Soy sauce
Vinegar

Low-Carbohydrate Foods- These foods contain less than 5 grams of carbohydrate per serving, but may have more than 20 calories per serving. They may affect your blood sugar therefore it is very important to eat them in moderation. You can find these foods in the protein, fat, and fibrous vegetable sections of the book on pages 8, 9 and 13 .

Low Carb Foods

Deli meat slices

-turkey, ham, roast beef, bologna,
chicken, pepperoni, salami, pastrami

Meat sticks/Beef jerky

Tofu

Cheese

-American, Cheddar, Colby, Monterey
Jack, Mozzarella, Muenster, Provolone,
Swiss

Cottage cheese ½ cup

Ricotta cheese

Eggs- boiled, scrambled, deviled

Nuts (½ ounce – 1 ounce)

-almonds, cashews, brazilnuts,
macadamia, pecans, pistachio,
sunflower

Seafood salad*

Egg salad*

Chicken salad*

Soup (broth- or cream-based)***read food
label for carb content

Broth- chicken, beef, vegetable

Veggies (½ cup cooked – 1 cup raw)

-asparagus, artichoke hearts, green
beans/wax beans, broccoli, cabbage,
carrots, cauliflower, celery, collard
greens, cucumber, eggplant, lettuce(3
cups chopped), mushrooms, bell
peppers, radishes, sauerkraut, spinach,
spaghetti squash, summer squash,
tomatoes, zucchini

Vegetable/tomato juice (V8) ½ cup

Popcorn (1 cup)

Pickles

Olives

Sugar free Jell-O

Whipped topping (2 Tbsp)

Fun Ideas:

☺ Ricotta cheese- mix with almond or vanilla extract and a packet of sugar substitute

☺ Stir-fry ½ cup veggies with soy sauce

☺ Mix ½ cup green beans & wax beans with 1-2 Tbsp Italian dressing

☺ Raw veggies with ranch dip

☺ Make kabobs with meat, cheese cubes, and veggies, enjoy cooked or cold

☺ Make seafood salad, egg salad, or chicken salad with mayo & seasonings and use it to dip
veggies or eat plain

Please note:

*The way that you prepare an item may add more carbohydrate. Be careful when preparing,
not to use extra ingredients that will add carbohydrate.

*Most low-carb foods are low-carb because of the **servings size**. If you have more than one
serving, you may need to count the carbs as part of your meal or snack.

*Remember that even though these foods may be low in carbohydrate, they may not be low in
fat and/or calories. It is still important that you monitor your intake of these items and try to
choose the low-fat, fat-free, or low-calorie version of the product.

Guidelines for Dining Out

When you eat out, somewhere other than home, it is still very important to follow your carbohydrate meal plan. Here are a couple of tips to help you control your diabetes while dining out.

- Wait until you arrive at the restaurant to give insulin, there may be unexpected delays. You may need to change the time you take your insulin or have a small snack to prevent low blood sugar.
- Plan ahead. Memorize your carbohydrate meal plan. Think about what it is that you might be eating.
- Practice measuring out serving sizes. It is good to know what a serving size might look like displayed on a plate.
- Obtain a copy of the establishment's nutritional analysis of foods. Most restaurants have the nutrition information on their website.
- Take charge and ask questions. Make sure you understand how foods are prepared because some foods can contain hidden carbohydrates.

Other Healthy Tips for Dining Out:

- Ask for a doggie bag to put half of the entrée away before you begin to eat.
- Ask your server to only bring out half the portion of the entrée.
- Order the child-size portion.
- Order an appetizer and/or salad as a meal.
- Share the entrée with someone that you are with.

Fast Food Facts

Burger King®

Croissan'wich® (1)	21-23 grams
Biscuit (1)	35-37 grams
French Toast Sticks (5)	51 grams
Hash Brown Rounds (sm)	25 grams
Whopper® Sandwich (1)	47 grams
Whopper Jr® Sandwich (1)	28 grams
Hamburger (1)	27 grams
Cheeseburger (1)	27 grams
BK Big Fish® Sand (1)	59 grams
Chicken Sandwich (1)	54 grams
Chicken Tenders® (4 pc)	9 grams
French Fries (sm)	32 grams
Onion Rings (med)	46 grams
Dutch Apple Pie (1)	39 grams

Chick-Fil-A®

Chicken Sandwich (1)	29-31 grams
Grilled Chicken Sand (1)	36-38 grams
Chick-n-Strips® (4 pc)	10 grams
Chick-Fil-A® nuggets (8pc)	12 grams
Tossed Salad (1)	13 grams
Carrot-Raisin Salad (sm)	28 grams
Cole Slaw (sm)	11 grams
Waffle Potato Fries (sm)	49 grams

Domino's® Pizza

12"(m) Hand Tossed (2/8 slices)	55-57 grams
12"(m) Thin Crust (2/8 slices)	31-33 grams
12"(m) Deep Dish (2/8 slices)	56-59 grams
6" Deep Dish Pizza (1 pizza)	68-70 grams
Breadstick (1)	18 grams
Wings (1)	1-2 grams

Papa John's® Pizza

14" Original Crust (1/8 slices)	37-39 grams
14" Thin Crust (1/8 slices)	22-24 grams
Cheesesticks (1/7 order)	20 grams
Breadsticks (1)	26 grams

Pizza Hut®

Medium Stuffed Crust (1/8 slices)	45-48 grams
Medium Thin 'N Crispy® (1/8 slices)	27-30 grams
Medium Hand-Tossed (1/8 slices)	43-45 grams
Medium Pan Pizza (1/8 slices)	44-46 grams
Medium Sicilian (1/8 slices)	30-32 grams
The BIG New Yorker® (1/8 slices)	42-44 grams
Medium The Edge® (1/8 slices)	15-17 grams
Person Pan Pizza® (1)	110-111 grams

KFC®

Original Recipe®	breast	16 grams
	leg	4 grams
	thigh	6 grams
	wing	5 grams
Extra Crispy™	breast	17grams
	leg	7grams
	thigh	14 grams
	wing	10 grams
Hot & Spicy	breast	23 grams
	leg	9 grams
	thigh	13 grams
	wing	9 grams
Chunky Chicken Pot Pie(1)		69 grams
Hot Wings® (6 pc)		18 grams
Honey BBQ Wings (6 pc)		33 grams
Crispy Strips (3 pc)		18-23 grams
Popcorn Chicken (6 oz)		36 grams
BBQ Baked Beans (5 ½ oz)		33 grams
Biscuit (1)		20 grams
Cole Slaw (5 oz)		26 grams
Corn on the Cob (1)		35 grams
Macaroni & Cheese (5 ½ oz)		21 grams
Potato Salad (5 ½ oz)		23 grams
Potatoes w/ Gravy (5 oz)		17 grams
Potato Wedges (5 oz)		28 grams

McDonald's®

Hamburger/cheeseburger (1)	35-38 grams
Big Mac® (1)	45 grams
Filet-O-Fish® (1)	45 grams
French Fries (sm)	26 grams
French Fries (med)	57 grams
French Fries (lg)	68 grams
French Fries (super size®)	77 grams
Chicken McNuggets® (4 pc)	13 grams
McMuffin® (1)	25-27 grams
Biscuit (1)	34-36 grams
Bagel (1)	57-59 grams
Hot Cakes, plain (1 order)	58 grams
Vanilla Cone (1)	23 grams
Sundae (1)	50-61 grams
McFlurry® (1)	82-90 grams
Apple Pie (1)	34 grams
McDonaldland® Cookies (1 pkg)	32 grams
Milkshake (sm)	59-60 grams

More Fast Food Facts

Subway®

6-inch cold subs (1)	44-46 grams
6-inch hot subs (1)	46-51 grams
Salads (1)	11-16 grams
Cookies (1)	31-33 grams

Wendy's®

Hamburger/Cheeseburger (1)	33-36 grams
Breaded Chicken sandwich (1)	43-44 grams
Pitas (1)	48-52 grams
Baked Potato (1)	71-83 grams
French Fries (sm)	35 grams
French Fries (Biggie®)	61 grams
Chicken Nuggets (5 pc)	11 grams
Frosty™ (12 oz)	56 grams

Taco Bell®

Soft taco (1)	20 grams
Hard taco (1)	12 grams
7-layer burrito (1)	65 grams
Bean burrito (1)	54 grams
Big Beef burrito® (1)	43-52 grams
Quesadilla (1)	31-33 grams
Mexican pizza	39-42 grams
Taco salad (salsa & shell)	69 grams
Taco salad (w/o shell)	36 grams
Gorditas (1)	27-31 grams
Chalupas (1)	27-31 grams

Exercise Guidelines

Exercise plays a very important role in managing your diabetes. Everyone should include exercise as a normal part of life.

Why is exercise important for someone with diabetes?

- Helps control blood sugar by burning excess sugar.
- Helps you feel better.
- Helps keep your body in good shape.
- Helps keep your heart healthy by lowering your heart rate and blood pressure.
- Helps lower blood cholesterol and triglycerides.
- Helps your body be more sensitive to insulin.
- Helps ease blood circulation throughout the body.

When should I be careful about exercising?

- If your blood sugar is >300 mg/dl, you should check for urine ketones.
- **If you have urine ketones, you should avoid exercise.**

Things to remember when exercising:

- Be aware of peak times of insulin and remember that these times may cause your blood sugar to drop even more than at other times.
- Carry fast-acting carbohydrates (juice, glucose tablets, etc...) in case of hypoglycemia.
- Always have extra snacks available.
- Everyone reacts differently to exercise, so you have to learn how your body reacts by monitoring your blood sugars often.
- It may be a good idea to check your blood sugar before, during, and after exercise.

Heart Healthy Low Fat Diet Guidelines

Especially if you have Type 2 diabetes, it is very important to follow low-fat diet guidelines to help achieve and maintain a healthy weight. The low-fat diet guidelines will help you make low-fat choices when purchasing and preparing foods.

Tips to reduce fat intake:

- Recognize hidden sources of fat: convenience items, fast food, easy-to-prepare foods
- Read food labels: choose foods that have **less than 3 grams of total fat per 100 calories per serving** (less than 30% of calories should come from fat)
- Know your definitions, they can be very misleading:
 - Fat Free**- less than 0.5 grams fat per serving
 - Low Fat**- 3 grams or less per serving
 - Reduced Fat**- at least 25% less fat per serving (these foods could still be high in fat)
- Know that low-fat, fat-free, or reduced-fat foods may be high in sugar, salt, and calories, therefore portion sizes should be limited
- Even though you may be watching fat intake, you need to also watch calorie intake because excessive calories may lead to weight gain

	GOOD CHOICES	POOR CHOICES
DAIRY PRODUCTS	Skim or low-fat milk Skim milk cheese (part skim mozzarella and ricotta, other nonfat/low-fat cheeses) Low-fat/nonfat cottage cheese Low-fat/nonfat yogurt Ice milk/low-fat ice cream	Whole milk Cream Whole milk cheese (cheddar, colby, american) Whole milk cottage cheese Regular yogurt Ice cream
FRUITS & VEGETABLES	All fresh, frozen, or canned fruits & vegetables	Vegetables in cream sauce, white sauce, butter Vegetables made with fatback or other meat fat Breaded or deep-fried fruits or vegetables Coconuts
BREADS, CEREALS, STARCHES	Low-fat/nonfat baked goods Animal crackers, graham crackers, fig newtons, vanilla wafers, ginger snaps Pasta, rice, potatoes White, wheat, rye or french breads Plain rolls or bagels Cereal Pretzels, saltine crackers or low-fat snack crackers Air-popped popcorn, plain or low-fat popcorn Low-fat/fat free cookies	Most commercial baked goods Biscuits, muffins, cornbread, croissants Granola Potato chips, most snack crackers, buttered popcorn Most cookies, danishes, pastries French fries

Heart Healthy - Low Fat Diet Guidelines- cont'd

	GOOD CHOICES	POOR CHOICES
MEAT & MEAT SUBSTITUTES	Meats should be prepared by: baking, broiling, roasting, grilling, stewing Lean beef (round, loin cuts) Pork (loin, leg) Lamb, veal, venison Skinless turkey, chicken, or other game 90-100% fat free luncheon meats Low-fat hot dogs Egg whites Fish and shellfish Tuna (packed in water)	Deep-fat frying & pan frying meats High fat (marbled) red meats Chicken & turkey with skin Hot dogs Regular luncheon meats Sausage, bacon, Spam, canned meats Egg yolks (limit to 3 per week)
DESSERTS	Low-fat/fat free frozen yogurt Low-fat/fat free ice cream/ice milk Angel food cake Fat free pudding	Ice cream Most baked goods Regular pudding
FATS & OILS/ CONDIMENTS	Diet margarine Low-fat/nonfat cream cheese Low-fat/nonfat salad dressings Low-fat/nonfat mayonnaise Low-fat/nonfat sour cream Low-fat/nonfat cooking spray	Butter or margarine Regular salad dressing Non-dairy creamer, cream Sour cream Mayonnaise Gravy Cream or cheese sauces Oils, lard

Sick Day Guidelines

If you are sick:

- Drink 8 ounces calorie-free fluid every hour while awake to prevent dehydration (water, diet soda, broth, sugar-free Kool Aid). Fluids should be caffeine-free.
- Increase frequency of blood glucose monitoring to every 2-4 hours.
- Monitor for ketones every 4 hours.
- Record your results from monitoring.
- You still may need to take your insulin and/or oral medications even if you are not eating, but you may need to make a change in the amount that you are taking, therefore you should call your doctor.
- Extra doses of rapid- or short-acting insulin may be needed.

If you cannot eat because of nausea or cannot keep food down and your blood sugar is less than 180 mg/dl:

- Sip on carbohydrate containing beverages/soft foods to prevent hypoglycemia (regular soda, juices, soups, ice cream)
- Acceptable foods that contain 15 grams of carbohydrate:
 - ½ cup (4 oz) apple juice
 - ½ cup (4 oz) regular soda
 - 1 cup Gatorade
 - 1 regular Popsicle stick
 - 5 lifesavers candies
 - 1 slice dry toast
 - 6 saltines
 - ½ cup regular ice cream
 - ¼ cup sherbet
 - ¼ cup regular pudding
 - ½ cup regular jello

When to call your doctor:

- Vomiting more than once
- Diarrhea more than 5 times or more than 6 hours
- Difficulty breathing
- Change in mental status
- 2 consecutive blood sugars greater than 300mg/dl even after giving extra insulin
- Moderate or large urine ketones
- If you ever have any questions or concerns

Sources of Carbohydrate Quiz

Please fill in the chart by checking if the following foods are considered to be a carbohydrate, protein, or fat, or a combination. Some examples have been done for you.

FOOD LIST	CARBOHYDRATE	PROTEIN	FAT
Apple	✓		
Hot dog w/ bun	✓	✓	✓
Cheese			
Butter			
Baked beans			
Pizza			
Baked potato			
Grilled chicken			
Burger King Whopper®			
Low fat milk			
Corn			
Peanut butter			
Ranch salad dressing			
Peas			
French fries			
Ice cream			
Popcorn			
Garden salad			
French salad dressing			
Bean Burrito			

★★★ Answers on next page

Sources of Carbohydrate Quiz (Answer Key)

FOOD LIST	CARBOHYDRATE	PROTEIN	FAT
Apple	✓		
Hot dog w/ bun	✓	✓	✓
Cheese		✓	✓
Butter			✓
Baked beans	✓	✓	
Pizza	✓	✓	✓
Baked potato	✓		
Grilled chicken		✓	✓
Burger King Whopper®	✓	✓	✓
Low fat milk	✓	✓	✓
Corn	✓		
Peanut butter	✓	✓	✓
Ranch salad dressing			✓
Peas	✓		
French fries	✓		✓
Ice cream	✓	✓	✓
Popcorn	✓		
Garden salad	✓		
French salad dressing	✓		✓
Bean Burrito	✓	✓	

Meal Planning Quiz

Here are some example meal plans, please fill in the accompanying carbohydrate counts:

Breakfast

- 2 cups Cheerios
- 1 cup (8 oz) milk
- 1 scrambled egg
- 2 sausage links
- ½ banana

Carbohydrate grams

TOTAL= _____

Lunch

- 1 turkey sandwich
- 1 oz potato chips
- 1 cup (8 oz) milk
- 1 cup carrot sticks
- 2 Tbsp ranch dressing
- Crystal Lite

TOTAL= _____

OR

- 1 chicken sandwich
- 15 French fries
- ½ cup applesauce
- 1 cup (8oz) milk

TOTAL= _____

Afternoon Snack

- 1 small apple
- 3 peanut butter crackers

TOTAL= _____

Dinner

- 1 cup pasta
- ½ cup spaghetti sauce
- 2 meatballs
- 1 garlic breadstick
- 2 cup salad (lettuce, tomato, cucumber)
- 2 Tbsp French salad dressing
- diet soda

TOTAL= _____

Bedtime Snack

- ½ cup (4 oz) milk
- ½ cup chex mix

TOTAL= _____

★★★ Answers on next page

Meal Planning Quiz (Answer Key)

Here are some example meal plans with accompanying carbohydrate counts:

<u>Breakfast</u>	<u>Carbohydrate grams</u>
2 cups Cheerios	48
1 cup (8 oz) milk	12
1 scrambled egg	0
2 sausage links	0
½ banana	15
	TOTAL=75
<u>Lunch</u>	
1 turkey sandwich	30
1 oz potato chips	15
1 cup (8 oz) milk	12
1 cup carrot sticks	5
2 Tbsp ranch dressing	0
Crystal Lite	0
	TOTAL=62
OR	
1 chicken sandwich	30
15 French fries	15
½ cup applesauce	15
1 cup (8oz) milk	12
	TOTAL=72
<u>Afternoon Snack</u>	
1 small apple	15
3 peanut butter crackers	13
	TOTAL=28
<u>Dinner</u>	
1 cup pasta	30
½ cup spaghetti sauce	15
2 meatballs	0
1 garlic breadstick	15
2 cup salad (lettuce, tomato, cucumber)	10
2 Tbsp French salad dressing	8
diet soda	0
	TOTAL=78
<u>Bedtime Snack</u>	
½ cup (4 oz) milk	6
½ cup chex mix	20
	TOTAL=26

Your Carbohydrate Meal Plan

Breakfast _____ grams carb

Snack _____ grams carb

Lunch _____ grams carb

Snack _____ grams carb

Dinner _____ grams carb

Snack _____ grams carb

Your dietitian will provide you with an individualized carbohydrate meal plan that is specific to your needs.

Keeping a Food Diary

Name: _____

Dr. _____

Date: _____

Please record **everything** that you eat or drink. Be as specific as possible.

Time/ Meal	Blood Sugar	Insulin Dose	Food/Beverage Intake & Amount	Amount of Carb	Comments
Breakfast					
Snack					
Lunch					
Snack					
Dinner					
Snack					
Other					

Important Phone Numbers

CHKD Main Phone Number	(757) 668-7000
Endocrine Department Dr. Reuben Rohn Dr. Marta Satin-Smith Dr. Eric Gyuricsko	(757) 668-7237
Robin Crecink, RN Specialty Programs Coordinator (Insurance Authorizations)	(757) 668-8571
Doctor on-call (toll free) (emergencies & after-hours needs)	(866) 883-9886
Life Threatening Emergencies	911
Blood Sugar Line	(757) 668-8654
Blood Sugar Fax	(757) 668-8215
Prescription Refills	(757) 668-8747
Diabetes Center Debi Warren Department Secretary	(757) 668-8609
Pamala Suter, MS, RD, CDE Diabetes Program Manager	
Liz Riedel, RD, CDE Dietitian/Diabetes Educator	
Renee Freeman, RN, CDE Diabetes Nurse Educator	
Ruth Compo, MSW Social Worker	

CARBOHYDRATE COUNTING RESOURCES

General Information on Carbohydrate Counting:

- ***The American Diabetes Association Complete Guide to Carb Counting***
Karmeen Kulkarni, and Hope Warshaw www.diabetes.org
- ***Carbohydrate Counting*** (2002)
International Diabetes Center Publishing www.idcpublishing.com
- ***Basic Carbohydrate Counting*** (2003)
- ***Advanced Carbohydrate Counting*** (2003)
American Dietetic Association 800-877-1600, Ext. 5000
www.eatright.org or American Diabetes Association 800-232-6733,
www.diabetes.org

Carbohydrate Value of Foods Without Nutrition Labels:

- ***The Doctor's Pocket Calorie, Fat & Carbohydrate Counter*** (2005)
(Allan Borushek) www.calorieking.com
- ***The Complete Book of Food Counts*** (2003)
Corinne Netzer, Dell Publishing www.amazon.com and major bookstores
- ***Calories and Carbohydrates***, 15th Edition (2003)
Barbara Kraus, Signet Publishing www.amazon.com and major bookstores
- ***The Diabetes Carbohydrate and Fat Gram Guide*** (2000)
Lea Ann Holzmeister, American Diabetes Association 800-232-6733 or
www.Diabetes.org
- **Webs sites for carbohydrate counts:**
www.calorieking.com (click on food database)
www.nal.usda.gov (nutrition information for 6,000 basic foods) Go to
"Publications and Databases". Click on "Databases". Go down to
"USDA Nutrient Databases for Standard Reference". Go to
"For More Information". Then go to "download" if you choose to print.

Carbohydrate Values for Restaurant Foods:

- **Extensions web site for Fast Foods**
nutrition information for 16 fast food restaurants:
www.fcs.uga.edu/extension/nut_pubs.php. Click on Dining Out.
- **Fast Food Web sites** such as www.mcdonalds.com or www.pizzahut.com
- ***Guide to Healthy Restaurants Eating***, 2nd ed. Hope Warshaw
American Diabetes Association- 800-232-6733 or www.diabetes.org
- ***Nutrition in the Fast Lane – The Fast Food Dining Guide***
(nutrition information for 54 popular chain restaurants)
Franklin Publishing, Inc. 800-634-1993 or www.fastfoodfacts.com

Software for Personal Digital Assistants (Palm Pilots) for Carb Counts/Diabetes Management

- Diabetes Tracker-www.calorieking.com
- GlucoPilot diabetes management software-www.healthetech.com
- EZManager from Animas Corporation-www.animascorp.com

ADDITIONAL RESOURCES TO HELP YOU

The American Diabetes Association
National Office
1701 North Beauregard Street
Alexandria, VA 22311
800-232-3472
www.diabetes.org

The American Dietetic Association
216 West Jackson Boulevard
Chicago, IL 60606
800-366-1655
www.eatright.org

Children With Diabetes
www.childrenwithdiabetes.com

Take the LEAD- Founded by Nicole Johnson, Miss America of 1999
<http://www.diabeteslead.org>

The Children with Diabetes Foundation
<http://www.cwdfoundation.org/>

The Juvenile Diabetes Research Foundation International
<http://www.jdrf.org/>

Diabetes-Kids.org
<http://www.diabetes-kids.org/>