

Calculating Carbohydrates by Food Weight

Why Should I Weigh my Foods?

Many foods come in different shapes and sizes. Knowing the amount of carbohydrate by food weight can be a helpful tool to improve your carbohydrate counting accuracy. Calculate the amount of carbohydrate by food weight for items you are unsure about.

How Do I Count Carbohydrates based on the Food Weight?

To calculate carbohydrate by food weight, you have to know how many grams of carbohydrate are in a given weight of the food. To help take the confusion out of food weights, it helps to know how many grams of carbohydrate are in one unit of food weight – this is referred to as the FACTOR. A unit of food weight can be expressed in either ounces or grams of a food item.

To calculate your carbohydrate count by food weight, use this basic equation:

$$\text{Your Food Weight} \times \text{Food FACTOR} = \text{Grams of Carbohydrate in that Food}$$

These convenient tables give you the grams of carbohydrate per food weight for common carbohydrate containing foods. If you are weighing your food in ounces, use the "Factor for Ounces." If you are weighing your food in grams, use the "Factor for Grams".

Sample Calculation

To calculate the grams of carbohydrate for a slice of bread:

1. Weigh your bread (in ounces) using a food scale – the weight is 2 ounces.
2. Look up the FACTOR for bread (in ounces). The bread FACTOR is 15 grams of carbohydrate per one ounce.
3. Multiply the weight of your slice of bread times the FACTOR.
2 ounces of Bread x 15 grams of carbohydrate per ounce equals 30 grams of carbohydrate.
4. So that means your bread slice is 30 grams of carbohydrate.

Abbreviations

oz = ounces

g = grams

CHO = carbohydrate

Starch		
Food Item	Grams of CHO per oz	Grams of CHO per g
Bread	15	0.53
Bagel	15	0.53
Potato, baked or boiled	5	0.18
Rice, white or brown ²	7.5	0.27
Pasta, Spaghetti ²	7.5	0.27
Beans and peas ² , garbanzo, pinto, kidney, white, split, black-eyed	3 to 5	0.11 to 0.18

Yogurt		
Food Item	Grams of CHO per oz	Grams of CHO per g
Yogurt, Fat-free, flavored, sweetened with nonnutritive sweetener	2	0.07
Yogurt, Fat-free, plain	2	0.07

Whole Fruit List¹		
<i>Fruit weight includes skin, core, seeds, and rind.</i>		
Food Item	Grams of CHO per oz	Grams of CHO per g
Apple	3.75	0.13
Apricots	2.73	0.10
Banana	3.75	0.13
Cherries, fresh	5	0.18
Figs	4.29	0.15
Grapefruit	1.36	0.05
Grapes	5	0.18
Kiwi	4.29	0.15
Mango	2.73	0.10
Nectarine	3	0.11
Orange	2.3	0.08
Peach	2.5	0.09
Pear	3.75	0.13
Plums	3	0.11
Tangerines	1.88	0.07

¹Values for whole fruit obtained from Choose Your Foods: Exchange Lists for Diabetes

Sliced Fruit (edible portion)¹		
Fruit	Grams of CHO per oz	Grams of CHO per g
Apple,with skin	3.91	0.14
Apple,without skin	3.61	0.13
Apple, cooked no skin	3.86	0.14
Banana	6.46	0.23
Blackberries ²	1.22	0.04
Blueberries	4.10	0.15
Cantaloupe Melon	2.30	0.08
Fruit Cocktail, in light syrup	4.23	0.15
Grapes, seedless	5.12	0.18
Honeydew Melon	2.57	0.09
Kiwi	4.15	0.15
Mango	4.81	0.17
Nectarine	2.99	0.11
Orange, Navel	3.55	0.13
Orange, Valencia	3.36	0.12
Papaya	2.78	0.10
Peach	2.70	0.10
Pear	4.38	0.15
Pineapple	3.71	0.13
Plum	3.23	0.11
Prickly Pear	2.71	0.10
Raspberries ²	1.54	0.05
Strawberries	2.17	0.08
Tangerine	3.78	0.13
Watermelon	2.14	0.08

¹Values for sliced fruit (edible portion) obtained from USDA Nutrient Database.

²Dietary fiber is greater than 5 grams per standard fruit serving. Dietary fiber has been subtracted from the total carbohydrate.

Sweets, Desserts and Other Carbohydrate		
Food Item	Grams of CHO per oz	Grams of CHO per g
Brownie, unfrosted	15	0.53
Cake, frosted	15	0.53
Cookie or sandwich cookie with crème filling	22	0.78
Doughnut, glazed	15	0.53
Sweet roll or Danish	15	0.53

Combination Foods		
Food Item	Grams of CHO per oz	Grams of CHO per g
Tuna noodle casserole Lasagna Spaghetti and meatballs Chili with beans Macaroni and cheese	3.75	0.13
Pizza, Cheese, thin crust	6	0.21
Pizza, Meat topping, thin crust	6	0.21
Soup, Vegetable beef Chicken noodle	1.88	0.07

References

Nutrient information compiled from the following sources:
 Choose Your Foods: Exchange Lists for Meal Planning
 USDA Nutrient Database

UCSF Medical Center 02/2008

DTC - UCSF