

# SODIUM

Disclaimer: Consult your health care provider for medical advice related to your carb intake goal and modifications to your carb intake. The information in this pamphlet is for education purposes only. Please ask your health care provider for more information.







## WHAT IS SODIUM?

Sodium is a mineral naturally found in many foods. It is commonly found in table salt and MSG, which is used often in restaurants and processed foods. Dietary guidelines recommend and intake of under **2,300 mg** of sodium a day.

## HOW MUCH SODIUM IS IN TABLE SALT?

$\frac{1}{4}$	Teaspoon	=	575 mg sodium
$\frac{1}{2}$	Teaspoon	=	1,150 mg sodium
$\frac{3}{4}$	Teaspoon	=	1,725 mg sodium
1	Teaspoon	=	2,300 mg sodium

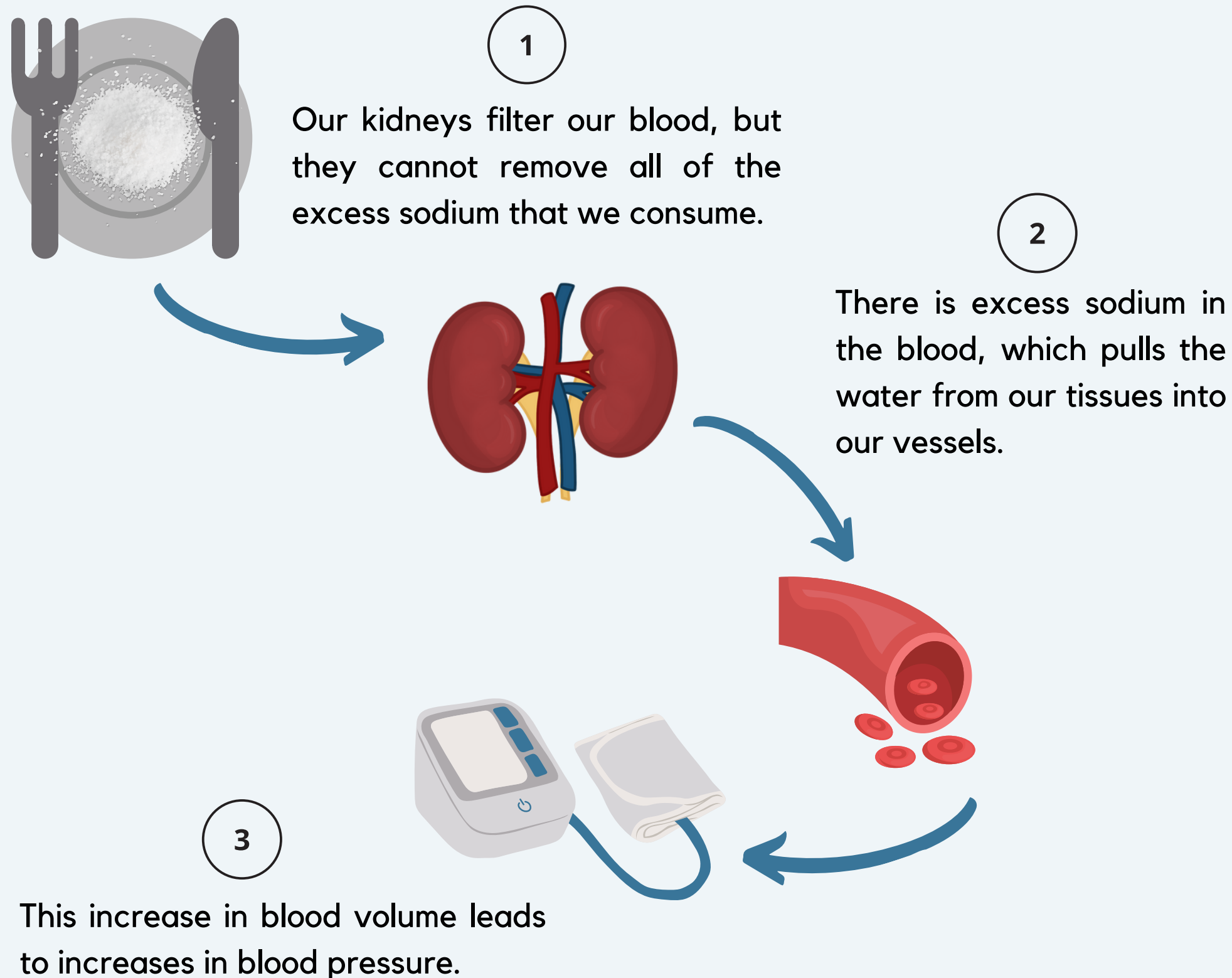
## HIGH-SODIUM FOODS

-  Cold cuts and cured meats
-  Pizza
-  Soups
-  Burritos and tacos
-  Chips, popcorn, pretzels
-  Canned/frozen foods

## WHAT DOES SODIUM HAVE TO DO WITH BLOOD PRESSURE?

Sodium is a normal mineral in our blood. It is essential and important. It keeps our blood pressure normal by pulling water into our blood vessels. Without sodium in our blood, our blood pressure would drop and we would feel dizzy or weak.

## WHY ARE HIGH SODIUM DIETS ASSOCIATED WITH HIGH BLOOD PRESSURE?

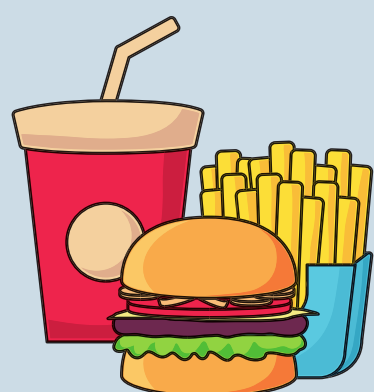


**Sodium is a modifiable risk factor; decreasing dietary sodium intake to healthy levels can help blood pressure control and decrease risk of hypertension.**

## WAYS TO LOWER YOUR SODIUM INTAKE

1

Limit/avoid prepackaged, processed and prepared foods.



2

Flavor foods with herbs, spices, lemon, or lime instead of table salt.



3

Look for lower-sodium foods or low-sodium versions at the grocery store.



4

Discuss diet and lifestyle changes with your health care provider.



Reviewed and edited by: Maianh Nguyen, Iris Ham, Sachi Kamble, Mindy Chokpapone, Amadeus Ramirez, Dr. Nathan Holland Ph.D.

U.S. Department of Agriculture and U.S. Department of Health and Human Services. Dietary Guidelines for Americans, 2020-2025. 9th Edition. December 2020. Available at [DietaryGuidelines.gov](https://www.dietaryguidelines.gov).

Anon. Shaking the salt habit to lower high blood pressure. [www.heart.org](https://www.heart.org). 2022.

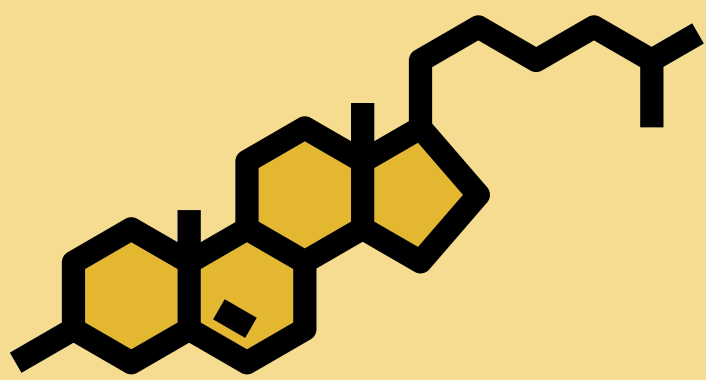


# CHOLESTEROL

Disclaimer: Consult your health care provider for medical advice related to your carb intake goal and modifications to your carb intake. The information in this pamphlet is for education purposes only. Please ask your health care provider for more information.

## WHAT IS CHOLESTEROL?

A waxy, fat-like substance consumed through animal products and produced by our liver.



## SOURCES OF DIETARY CHOLESTEROL

Only animal products contain cholesterol.

- Egg yolk
- Shrimp and sardines
- Meat (beef, chicken, pork, lamb)
- Full-fat dairy (cheese, milk)
- Animal fats (ghee, butter)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6024687/>

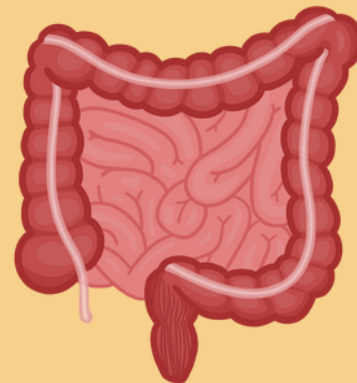
## HEALTHY CHOLESTEROL LEVELS

TYPE OF FATS	GOAL
Total Cholesterol	~200 mg/dL
LDL (Bad) Cholesterol	~100 mg/dL
HDL (Good) Cholesterol	For men: at least 40 mg/dL For women: at least 50 mg/dL
Triglycerides	Less than 150 mg/dL

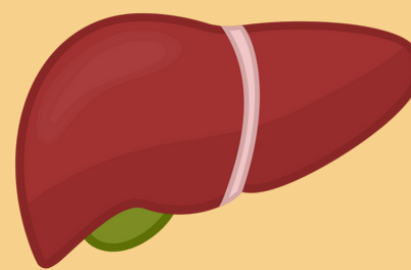
[https://www.uptodate.com/contents/high-cholesterol-and-lipids-beyond-the-basics?search=cholesterol%20&topicRef=3433&source=see\\_link#H4](https://www.uptodate.com/contents/high-cholesterol-and-lipids-beyond-the-basics?search=cholesterol%20&topicRef=3433&source=see_link#H4)

## WHERE DO WE GET CHOLESTEROL AND WHY IS IT IMPORTANT?

Cholesterol is absorbed from our diet



Most of our cholesterol is made in our liver



Helps vitamin D production

Helps bile acid production for the digestion of fats

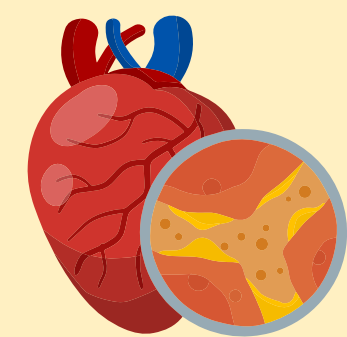
Hormone production

## DANGERS OF HIGH CHOLESTEROL

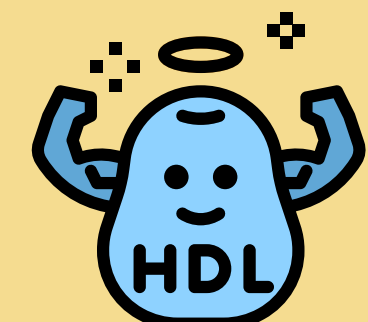
Leads to plaque buildup in the arteries, which causes them to narrow



Narrowing blood flow to the heart and other organs increases risk for heart attack, stroke, and peripheral disease



## LDL VS HDL



- Is made up primarily of cholesterol
- Increases risk for heart diseases (atherosclerosis aka plaque buildup, heart disease and stroke)

- 25-33% of cholesterol is carried by HDL
- Absorbs cholesterol in the blood and tissues and transports back into the liver to be broken down
- Lowers risk of heart disease and stroke

## WAYS YOU CAN LOWER YOUR CHOLESTEROL

1

Choose foods lower in saturated and trans fats.



2

Incorporate some exercise into your routine.



3

Discuss diet and lifestyle changes with your healthcare provider.



Reviewed and edited by: Maianh Nguyen, Iris Ham, Sachi Kamble, Mindy Chokpapone, Amadeus Ramirez, Dr. Nathan Holland Ph.D.

Soliman GA. Dietary Cholesterol and the Lack of Evidence in Cardiovascular Disease. *Nutrients*. 2018 Jun 16;10(6):780. doi: 10.3390/nu10060780. PMID: 29914176; PMCID: PMC6024687.

Centers for Disease Control and Prevention. (2014). *Treat and Manage High Cholesterol*. U.S. Department of Health and Human Services. <https://www.cdc.gov/cholesterol/managing-cholesterol.htm>

U.S. Department of Agriculture and U.S. Department of Health and Human Services. *Dietary Guidelines for Americans, 2020-2025*. 9th Edition. December 2020. Available at [DietaryGuidelines.gov](https://www.dietaryguidelines.gov).

Anon. HDL (good), LDL (bad) cholesterol and triglycerides. [www.heart.org](https://www.heart.org). 2022.

TTUHSC EL PASO  
Texas Tech University Health Sciences Center El Paso



# PROTEINS

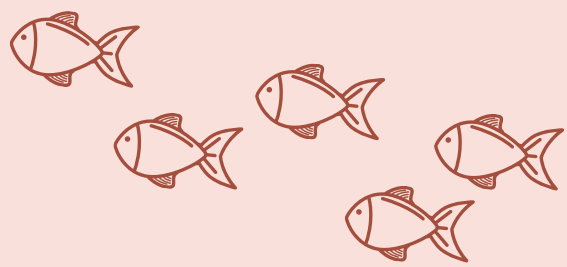
Disclaimer: Consult your health care provider for medical advice related to your carb intake goal and modifications to your carb intake. The information in this pamphlet is for education purposes only. Please ask your health care provider for more information.

## WHAT ARE PROTEINS?

Proteins are made up of building blocks called amino acids. Proteins help grow and maintain bones and body tissues such as muscle. They are also important because they make most hormones in our body, contribute to immune function, and provide a source of energy.

## WHY EAT PROTEINS?

Proteins are important for:



- Growth
- Fighting infection
- Carrying fats, vitamins, minerals, and oxygen around the body
- Clotting blood
- Keeping fluids in balance
- Providing energy

Because we don't naturally produce some amino acids, they need to be consumed through foods.

## TYPES OF PROTEINS

- **Meat, Poultry and Eggs:**
  - Lean cuts of beef, lamb, goat, chicken, turkey
- **Fish and Seafood:**
  - Salmon, tuna, shrimp, and crab
- **Low-Fat or Fat-Free Dairy Foods:**
  - Yogurt, milk, and cheese
- **Legumes:**
  - Beans, peas, lentils, and soy
- **Nuts and Seeds:**
  - Walnuts and almonds

## SO HOW MUCH?

The Recommended Dietary Allowance (RDA) for protein intake for most healthy adults is 0.8g of protein per kg weight of the adult per day (0.8g/kg/day). Consumption of protein should include a variety of foods. With all food intake, take into consideration all of the nutrients in the food, including, but not limited to protein, carbs, fats, sodium, and fiber content. A balanced diet consists of variety and moderation.

### FINDING YOUR DAILY PROTEIN INTAKE

**Step 1:** Convert your weight in pounds (lb) to kilograms (kg)

$$\frac{\text{YOUR WEIGHT (in lb)}}{2.2} = \text{YOUR WEIGHT (in kg)}$$

**Step 2:**

$$\text{YOUR WEIGHT (in kg)} \times 0.8 = \text{DAILY PROTEIN (in g)}$$

### EXAMPLE BASED OFF OF A 160 LBS ADULT

**Step 1:**

$$\frac{160 \text{ (in lb)}}{2.2} = 72.7 \text{ (in kg)}$$

**Step 2:**

$$72.7 \text{ (in kg)} \times 0.8 = 58 \text{ (in g) protein per day}$$

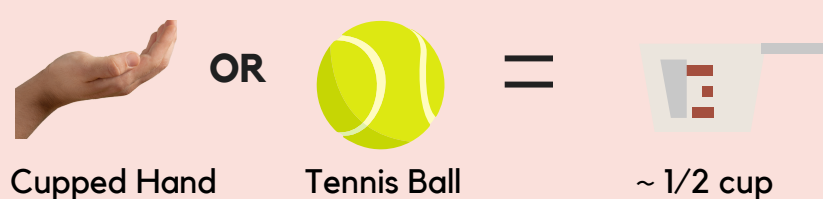
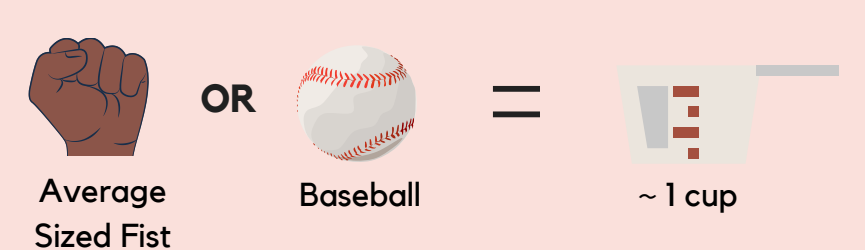
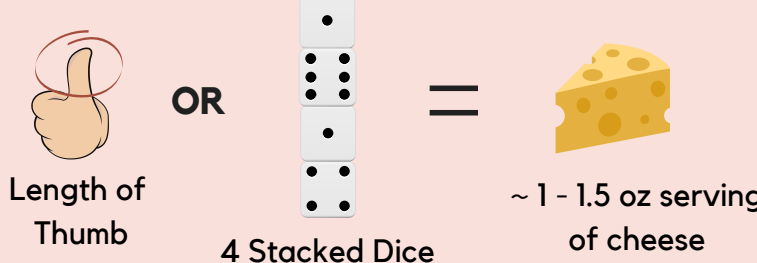
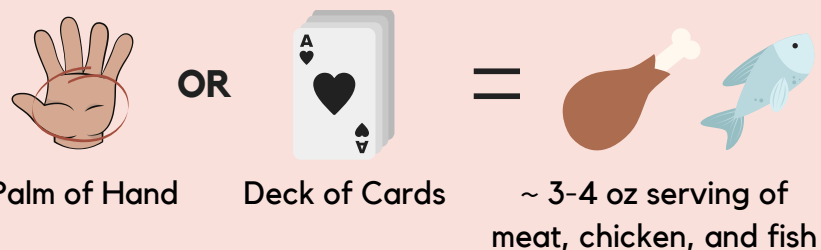
## ESTIMATED PROTEIN CONTENT

The amount of protein in each food listed below is an average. Protein content of foods may vary slightly depending on the manufacturer. Refer to the food label when available.

ITEM	PORTION SIZE	PROTEIN CONTENT
Raw Vegetables	1 cup	2 g
Cooked Vegetables	1/2 cup	2 g
Hummus	2 tbsp	2 g
Tofu	1 oz	3 g
Egg	1 egg	6 g
Cooked Fish, Chicken, & Meat	1 oz	7 g
Shellfish (shrimp, scallops...)	1 oz	7 g
Canned Tuna	1 oz	7 g
Peanut or Almond Butter	2 tbsp	7 g
Soy Milk	8 oz	7 g
Regular Cheese (ex: muenster)	1 oz	7 g
Beans (kidney, black, pinto...)	1/2 cup	8 g
Cow Milk (full, 1%, 2%)	8 oz	8 g
Lentils	1/2 cup	9 g

## ESTIMATING PORTION SIZE \*

\*If measuring spoons and scale are available, use them for better accuracy, instead of estimating portion size.



Reviewed and edited by: Maianh Nguyen, Iris Ham, Damaris Rosado, M.S., PA-C

U.S. Department of Agriculture and U.S. Department of Health and Human Services. Dietary Guidelines for Americans, 2020-2025. 9th Edition. December 2020. Available at DietaryGuidelines.gov.

Ellis, E., Msora-Kasago, C., Derocha, G., Al Bochi, R., Escobar, S., and Sheth, V. eatright. (2020). *How Much Protein Should I Eat?* Academy of Nutrition and Dietetics.



# CARBOHYDRATES

Disclaimer: Consult your health care provider for medical advice related to your carb intake goal and modifications to your carb intake. The information in this pamphlet is for education purposes only. Please ask your health care provider for more information.

## WHAT ARE CARBS?

Carbohydrates are one of our main macronutrients alongside proteins and fats. They serve as one of our sources of fuel.

## WHY EAT CARBS?

Carbohydrates are important for:



- Supplying energy for our body and brain.
- Maintaining our digestive health through fiber-rich foods.

## TYPES OF CARBS

There are three main groups of carbs:

### 1) STARCHES

- Whole grains (bread, tortillas, pasta, rice, etc.).
- Beans.
- Starchy vegetables (potatoes and corn, for example).

### 2) SUGAR

- Two main types of sugars exist:
  - Naturally occurring, such as in fruits and milk.
  - Added sugars, such as those found in cookies and sodas.

### 3) FIBER

- Fruits.
- Vegetables.
- Whole grains.
- Beans and legumes.

## SO HOW MUCH?

The Dietary Guidelines for Americans (DGA) recommends that carbs should make up about half of total daily calorie intake in adults. Carb intake is measured in daily grams of carbs.

Therefore, based off a **2,000 daily calorie intake**, about **250 grams of carbs** should be taken in daily. Your daily recommended intake may be higher or lower depending on your daily calorie intake need.

The above recommended daily carb intake is for the average adult; however, it may be different for everyone. **Please discuss with your health care provider what your daily calorie goal and carb intake goal should be, especially those with diabetes.** A balanced carb intake of different types of carbohydrates, focusing more on those that are found in natural foods, should be considered when eating carbs.



## FINDING YOUR DAILY CARB INTAKE



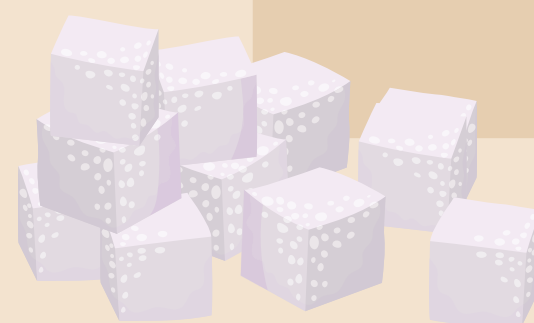
**STEP 1:** 
$$\frac{\text{TOTAL CARBS (IN CALORIES)}}{\text{TOTAL RECOMMENDED CALORIES}} = 2$$

**STEP 2:** 
$$\frac{\text{TOTAL CARBS (IN GRAMS)}}{\text{TOTAL CARBS (IN CALORIES)}} = 4$$

## BASED ON A 2,000 CALORIE DAILY INTAKE

**STEP 1:** 
$$\frac{\text{TOTAL CARBS (IN CALORIES)}}{\text{TOTAL RECOMMENDED CALORIES}} = \frac{2,000 \text{ cal}}{2} = 1,000 \text{ cal}$$

**STEP 2:** 
$$\frac{\text{TOTAL CARBS (IN GRAMS)}}{\text{TOTAL CARBS (IN CALORIES)}} = \frac{1,000 \text{ cal}}{4 \text{ cal/g}} = 250 \text{ g}$$
  
of carbs per day



Discuss with your health care provider how to know how many grams of carbs are found in each type of food.

Reviewed and edited by: Maianh Nguyen, Iris Ham, Damaris Rosado, M.S., PA-C

U.S. Department of Agriculture and U.S. Department of Health and Human Services. Dietary Guidelines for Americans, 2020-2025. 9th Edition. December 2020. Available at [DietaryGuidelines.gov](https://www.dietaryguidelines.gov).

Sollid, Kris. Nutrition 101 Video Series: Understanding Carbs and Sugars. 4 April 2018. [<https://foodinsight.org/nutrition-101-video-series-understanding-carbs-and-sugars/>]

U.S. Department of Agriculture. MyPlate.gov Website. Washington, DC. What is MyPlate?. <https://www.myplate.gov/eat-healthy/what-is-myplate>.

