


Macro Series

**CARBOHYDRATES
& FIBER**





"Our food should be our medicine, our medicine should be our food."

Hippocrates

What Are Carbohydrates?

Carbohydrates are one of three macronutrients (protein, carbs, and fats) your body needs to survive.

Most people probably think of pasta and rice as the primary sources of carbohydrates, but carbs may also be found in other food sources, such as fruit, dairy, grains, and starchy vegetables.

While many diets encourage the restriction of carbohydrates, they are often a significant source of energy (i.e., glucose) that the body uses to function.

Depending on their molecular structure, glucose derived from carbohydrates may be absorbed directly into the bloodstream or stored in the liver for later use. For this reason, most nutritionists divide good and bad carbs based on their molecular structure.

Complex Carbs vs. Simple Carbs

Carbohydrates can be broken down into two simple categories based on their molecular structure: simple and complex.

Out of this, we find three naturally occurring forms of carbohydrates in most foods:

Sugars (Simple carbs)

Sugars consist of simple molecular chains that are quickly absorbed in the bloodstream to create glucose. Examples include fructose, corn syrup, and raw sugar.

Fiber (Complex carbs)

Fiber consists of complex molecules that are difficult to break down and help people feel satiated faster. Examples include lentils, beans, whole grains, and fruits.

Starches (Complex carbs)

Starches are complex molecules composed of several simple sugars broken down into glucose over time. Examples include most cereals, pasta, and bread.

Complex Carbs vs. Simple Carbs (Cont.)

Simple carbohydrates are often responsible for spikes in blood sugar and may contribute to the development of Type-2 diabetes. Simple carbohydrates are often responsible for spikes in blood sugar and may contribute to the development of Type-2 diabetes. processed foods with additives and artificial sweeteners have lots of simple carbs that may contribute to weight gain, fatigue, inflammation, and other health related diseases.



Benefits of Complex Carbs

On the other hand, complex carbs are considered good carbs for the following reasons.

- Steady source of fuel: Complex carbs are absorbed into the bloodstream steadily over time, allowing blood sugar levels to stabilize and your body to absorb fuel more slowly over time throughout the day, so you don't feel burnt out.
- Rich source of nutrients. Thanks to their complex molecular structures, complex carbs are often a great source of vitamins and antioxidants that help fight inflammation and give your body energy.
- Feel fuller longer: Since complex carbs generally have a significant amount of fiber, they takes longer to digest and are bulkier, they often leave you feeling fuller for much longer.
- Lowers LDL: Complex carbs rich in soluble fiber are great at lowering LDL–bad cholesterol–to promote better health.

Examples of Complex Carbs

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| • Sweet potatoes | • Buckwheat | • Brown rice |
| • Potatoes | • Oatmeal | • Wild rice |
| • Corn | • Pomegranate | • Millet |
| • Blueberries | • Chickpeas | • Butternut squash |
| • Raspberries | • Whole grain bread and pasta | • Barley |
| • Quinoa | | • Kiwi Fruit |
| • Popcorn | | |



How Many Carbs Should I Eat a Day?

The Dietary Guidelines for Americans recommends people derive 45% to 65% of their daily calories from carbohydrates. For the average diet of around 2,000 calories per day, this can translate to roughly 300 grams of carbohydrates per day. These are loose guidelines with no specific established perfect percentage or grams to consume. Remember that if you are following the S3 Steps to Weight Loss and Wellness you will not need to track specific percentages of these macronutrients in order to lose weight and be healthy. However, there are times that we may need to increase or decrease a "macro" such as carbohydrates for specific purposes such as medical issues.

The Benefits of Fiber

In many ways, fiber is considered the gold standard of complex carbs, especially for weight loss. For example, adding fiber to meals will help you feel fuller faster and for longer, so you eat less.

Additionally, diets rich in high fiber have been found to:

- Lower your risk of Type 2 Diabetes
- Lower bad LDL cholesterol
- Regulate proper bowel movements
- Encourage the growth of healthy gut bacteria
- Increase the bioavailability of certain vitamins and minerals, such as calcium
- Reduce the number of toxins in the body formed by estrogen and saturated fats



Foods high in fiber:

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| • Pears | • Beets | • Split peas |
| • Strawberries | • Broccoli | • Chickpeas |
| • Avocado (also a healthy fat) | • Brussels sprouts | • Quinoa |
| • Apples | • Artichokes | • Oats |
| • Raspberries | • Kale | • Almonds |
| • Bananas | • Spinach | • Chia seeds |
| • Blueberries | • Lentils | • Sweet potatoes |
| • Carrots | • Beans | • Dark chocolate
(70-95% cocoa content) |