

Macronutrients

Macronutrients are the nutrients we need an abundance of every single day. They are categorized as proteins, carbohydrates, and fats. Each of these play major roles in fueling and constructing the human body. As we start to understand which foods fall under which category, it's important to know the classification is based on the primary molecule in that food.

Your body breaks down the macronutrients you eat into compounds used to help create energy, build body structures, create chemical reactions, and stimulate the release of hormones. Which means they can impact how you feel, perform, and even behave.

Carbohydrates

Carbohydrates are made of carbon and water. Hence, the two parts of the word: carbo - and hydrate. Carbs are a major source of energy and in fact the human brain runs exclusively on carbohydrates. They are stored in our muscles and organs as glycogen. In the form of fiber, carbohydrates help provide fuel for our microbiome.

Not all carbs are created equal. When following a healthy nutrition plan you want to stick with healthy sources of carbohydrates. You want to pay attention to the glycemic index of the carbohydrate source and stick to the lower-glycemic options. High-glycemic foods spike blood sugar and elevate insulin levels.

Carbohydrates are found in vegetables, fruits, tubers, legumes, grains and sweeteners.

Carbohydrates Whole Food Sources: *Plantains, Banana, Grapes, Nectarines, Apples, Berries, Black Bean pasta, Lentil pasta, Quinoa, Parsnips, Winter Squashes, Carrots, Green zucchini, Yellow squash, Kale, Spinach, Brussel sprouts, Broccoli, Cauliflower, Rice, Rolled oats, White potato, Sweet potato, Japanese yams*

Proteins

Proteins are made of amino acids and are the building blocks for tissues, organs, nerves, muscles and more. There are two main categories of amino acids in the body. First, we've got essential amino acids – those that the body can't manufacture, and we must consume in our diets and nonessential amino acids – those that the body can usually make for itself.

Protein does more than create tissue. It is also an essential component for enzymes, antibodies, hemoglobin and peptide hormones. It repairs broken down muscle fibers post exercise, makes sure you have the right cofactors for metabolic processes, and contributes to your adaptive immune system. Protein is the primary nutrient for animal meats, seafood, and some legumes.

Protein Sources: *Chicken breasts, Chicken thighs, Ground turkey, Ground bison, Ground beef, 0% Greek yogurt, Mahi mahi, Shrimp, Sea scallops, Protein powder, Egg whites, Atlantic salmon, Steak, Whole eggs, Plant-based protein powder, Whey protein powder*

Fats

Contrary to popular belief, dietary fat is not the villain it's made out to be. Fat is essential for optimal health and performance. Fats are organic molecules made up of carbon and hydrogen elements joined together in long chains called hydrocarbons. These molecules can be constructed in different ways, which creates different types of fat. The molecular configuration also determines whether fats will be healthy or unhealthy.

They play numerous important roles in the body: Energy source, cell building blocks for cells, hormones, and increase fullness. They regulate inflammation too!

There are 3 main types of dietary fat: saturated, monounsaturated, and polyunsaturated.

- **Saturated** fats are highly stable, don't rancify easily, and are solid at room temperature. These are great to use for cooking!
- **Monounsaturated** fats are relatively stable, don't rancify easily, and are liquid at room temperature.
- **Polyunsaturated** fats are relatively unstable, go rancid easily, and always liquid. Never heat or use polyunsaturated fats in cooking!

What is a "healthy fat"?

In popular terminology, the monounsaturated and polyunsaturated fats are what most people refer to as "healthy fats." A better definition of "healthy fat" might be "relatively unprocessed fats from whole foods".

"Unhealthy fats" are typically those that are industrially produced and designed to be nonperishable, such as: trans- fatty acids that appear in processed foods hydrogenated fats such as margarine (hydrogen is added to the fat chain to make a normally liquid and perishable fat into a solid and shelf-stable fat) most shelf-stable cooking oils (e.g. safflower, soybean, corn oil, etc.) These fats are toxic and interfere with the essential roles fatty acids play within a healthy body. Avoid vegetable oils, fried fats, canola oil, margarine, and vegetable shortening.

Best Sources Saturated: *Duck fat, Pork fat, Ghee, Coconut oil*

Best Sources Monounsaturated: *Olive oil, Avocado oil, Cashew oil, Almond oil, Pecan oil*

Best Sources Polyunsaturated: *Flaxseed oil, Fish oil*

Best sources pre & post workout: *NONE. Keep these meals low in fats.*

References

Nutritional Therapy Association. (2019). Basics of Nutrition Student Guide

Precision Nutrition

<https://www.precisionnutrition.com/all-about-healthy-fats>

What Are Macronutrients (macros) & Why Should You Care?

<https://www.signumcrossfit.com/what-are-macronutrients/>