**What Types of Foods Supply Carbohydrates, Proteins & Lipids?** | By Erica Wickham, M.S., R.D., C.D.N.



Biomolecules such as carbohydrates, protein and lipids provide the body with energy.

Carbohydrates, proteins and lipids are macronutrients that provide the body with calories. Nutrients are required for proper growth, metabolism and most body functions. While both macro and micronutrients are important for good health, macronutrients are necessary in large amounts. Carbohydrates and protein provide 4 kcal/g while fat provides the most energy, with 9 kcal/g. All foods fall into these three major categories of nutrients. It is important to understand how the body utilizes each nutrient, including their dietary sources and their functions within the body, in order to make healthy food choices as part of a well-balanced diet.

**Carbohydrates**

According to the Dietary Reference Intakes established by the U.S. Department of Agriculture, you should consume between 45 to 65 percent of your calories in the form of carbohydrates. Carbohydrates are converted into glucose in your body and carried through your bloodstream to your tissues and organs for energy. Glucose is stored as glycogen in the liver and muscles for later use. There are three types of carbohydrates. Simple sugar is the most basic carbohydrate found in fruits, vegetables and dairy products. Starch is made up of more than one sugar unit bound together and is found in whole grains, vegetables and beans. Dietary fiber is the carbohydrate found in plants that passes through the intestines undigested. It is present in fruits, vegetables, legumes, nuts, seeds and whole grains.

Protein is an essential component of every cell, tissue and organ in your body. They undergo a constant process of being broken down and replaced. The protein in your diet is digested into amino acids that are utilized in this process to rebuilt proteins. The U. S. Department of Agriculture recommends that you consume between 10 to 35 percent of your total calories from protein. Protein is found in varying amounts in meat, poultry, fish, dairy, eggs, legumes, vegetables, tofu, nuts, seeds and some grains. Protein from animal sources is known as complete protein because it contains all 20 essential amino acids, while protein from plant sources is called incomplete protein because it lacks one or more of the essential amino acids. Protein is responsible for growth and development, tissue repair, immune function, production of essential hormones and enzymes, energy and preserving lean muscle mass.

**Lipids**

Lipids, or fat, are needed by the body for normal growth and development, energy, cushioning for the organs, absorption of fat-soluble vitamins, maintenance of cell membranes and to provide taste, consistency and stability to food. According to the U. S. Department of Agriculture, you should consume 20 to 35 percent of your total calories from lipids. Fats are broken down into three main categories, saturated, unsaturated and trans fats. Saturated fats include foods such as meat, butter, lard and cream and are known to raise LDL, or bad cholesterol, levels. Unsaturated or healthy fats help to lower blood cholesterol. There are two types of unsaturated fats, mono and poly. Monounsaturated fats are found in olive and canola oil while polyunsaturated fats are found in sunflower, safflower, corn and soybean oils as well as in avocados, nuts and fatty fish such as salmon, herring and trout. Trans fats are found primarily in fried foods, snack foods and commercial baked goods. These fats have been found to increase your risk of developing heart disease.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Food (Per 100g) | Protein | Carbs | Fat | Calories |
| [Almond Nuts](http://www.howmuchprotein.com/foods/almonds/) | 21.1g | 6.9g | 55.8g | 614 kcal |
| [Anchovies](http://www.howmuchprotein.com/foods/anchovies/) | 14.5g | 0.1g | 2.8g | 85 kcal |
| [Asparagus](http://www.howmuchprotein.com/foods/asparagus/) | 2.9g | 2.0g | 0.6g | 25 kcal |
| [Avocado](http://www.howmuchprotein.com/foods/avocado/) | 1.9g | 1.9g | 19.5g | 195 kcal |
| [Bacon](http://www.howmuchprotein.com/foods/bacon/) | 15.9g |  | 19.8g | 245 kcal |
| [Baked Beans](http://www.howmuchprotein.com/foods/baked-beans/) | 9.5g | 22.1g | 0.4g | 130 kcal |
| [Bananas](http://www.howmuchprotein.com/foods/bananas/) | 1.2g | 23.2g | 0.3g | 100 kcal |
| [Beef Fillet Steak](http://www.howmuchprotein.com/foods/steak/) | 20.9g | 0g | 7.9g | 155 kcal |
| [Bread (wholemeal)](http://www.howmuchprotein.com/foods/bread/) | 11.0g | 39.1g | 2.2g | 220 kcal |
| [Broccoli](http://www.howmuchprotein.com/foods/broccoli/) | 4.2g | 3.2g | 0.2g | 31 kcal |
| [Carrots](http://www.howmuchprotein.com/foods/carrots/) | 0.6g | 7.9g | 0.3g | 37 kcal |
| [Cheese](http://www.howmuchprotein.com/foods/cheese/) | 30.9g | 0.1g | 15.0g | 260 kcal |
| [Chicken Breast (Skinless)](http://www.howmuchprotein.com/foods/chicken/) | 23.5g | 0g | 1.7g | 109 kcal |
| [Coconut](http://www.howmuchprotein.com/foods/coconut/) | 3.33g | 15.23g | 33.49g | 354 kcal |
| [Cod fish](http://www.howmuchprotein.com/foods/cod-fish/) | 17.9g | 0g | 0.9g | 80 kcal |
| [Cottage Cheese](http://www.howmuchprotein.com/foods/cottage-cheese/) | 12.2g | 4.5g | 1.5g | 80 kcal |
| [Couscous](http://www.howmuchprotein.com/foods/couscous/) | 15.1g | 73.1g | 1.1g | 365 kcal |
| [Crab meat](http://www.howmuchprotein.com/foods/crab-meat/) | 18.1g | trace | 0.5g | 80 kcal |
| [eggs](http://www.howmuchprotein.com/foods/eggs/) | 12.5g | Trace | 3.2g | 151 kcal |
| [Goji Berries](http://www.howmuchprotein.com/foods/goji-berries/) | 12.3g | 57.7g | 0.3g | 285 kcal |
| [Haddock Fish](http://www.howmuchprotein.com/foods/haddock/) | 16.4g | 0g | 1.2g | 80 kcal |
| [Hummus](http://www.howmuchprotein.com/foods/humus/) | 7.4g | 9.8g | 26.8g | 310 kcal |
| [Lamb (Steak)](http://www.howmuchprotein.com/foods/lamb/) | 19.9g | 0.8g | 3.2g | 115 kcal |
| [Lobster](http://www.howmuchprotein.com/foods/lobster/) | 26.41 | 3.12 | 1.94 | 143 kcal |
| [Milk (Semi Skimmed)](http://www.howmuchprotein.com/foods/milk/) | 3.6g | 4.8g | 1.8g | 50 kcal |
| [Milk (Whole)](http://www.howmuchprotein.com/foods/whole-milk/) | 3.3g | 4.7g | 3.6g | 64 kcal |
| [Monkfish](http://www.howmuchprotein.com/foods/monkfish/) | 24g |  | 1.7g | 76 kcal |
| [Orange](http://www.howmuchprotein.com/foods/orange/) | 1.1g | 8.5g | 0.1g | 39 kcal |
| [Orange Roughy Fish](http://www.howmuchprotein.com/foods/orange-roughy/) | 22.64g | 0g | 0.034g | 105 kcal |
| [Pasta](http://www.howmuchprotein.com/foods/pasta/) | 12.5g | 73.0g | 1.4g | 355 kcal |
| [Peanut Butter (Crunchy)](http://www.howmuchprotein.com/foods/peanut-butter/) | 24.9g | 10.1g | 50.2g | 586 kcal |
| [Peas](http://www.howmuchprotein.com/foods/peas/) | 5.9g | 9.0g | 0.9g | 70 kcal |
| [Pizza (Pepperoni)](http://www.howmuchprotein.com/foods/pizza/) | 11.4g | 28.0g | 11.1g | 260 kcal |
| [Pork Chops](http://www.howmuchprotein.com/foods/pork/) | 19.3g |  | 20.3g | 260 kcal |
| [Porridge oats](http://www.howmuchprotein.com/foods/porridge-oats/) | 11.0g | 60g | 8.0g | 356 kcal |
| [Potatoes](http://www.howmuchprotein.com/foods/potato/) | 2.1g | 17.2g | 0.2g | 80 kcal |
| [Prawns](http://www.howmuchprotein.com/foods/prawns/) | 17.0g | 0.3g | 0.9g | 80 kcal |
| [Pumpkin Seeds](http://www.howmuchprotein.com/foods/pumpkinseeds/) | 28.8g | 15.2g | 45.6g | 586 kcal |
| [Rice (brown)](http://www.howmuchprotein.com/foods/rice/) | 6.9g | 74.0g | 2.8g | 350 kcal |
| [Salmon Fish Fillets (Boneless)](http://www.howmuchprotein.com/foods/salmon/) | 21.6g | 0g | 14.0g | 215 kcal |
| [Sardines (Fish)](http://www.howmuchprotein.com/foods/sardines/) | 21.5g | trace | 9.6g | 172 kcal |
| [Sausages (pork)](http://www.howmuchprotein.com/foods/sausages/) | 13.9g | 11.9g | 17.0g | 255 kcal |
| [soya beans](http://www.howmuchprotein.com/foods/soya-beans/) | 35.9g | 14.8g | 18.6g | 375 kcal |
| [Spaghetti](http://www.howmuchprotein.com/foods/spaghetti/) | 5.1g | 33.0g | 1.3g | 165 kcal |
| [Spinach](http://www.howmuchprotein.com/foods/spinach/) | 2.8g | 1.5g | 0.8g | 24 kcal |
| [Sunflower Seeds](http://www.howmuchprotein.com/foods/sunflowerseeds/) | 23.4g | 18.6g | 47.5g | 600 kcal |
| [Sushi](http://www.howmuchprotein.com/foods/sushi/) |  |  |  |  |
| [Tilapia Fish](http://www.howmuchprotein.com/foods/tilapia/) | 24g | 0 | 4g | 105 kcal |
| [Tofu](http://www.howmuchprotein.com/foods/tofu/) | 12.1g | 0.6g | 6.0g | 105 kcal |
| [Tuna Fish (Steak)](http://www.howmuchprotein.com/foods/tuna-steaks/) | 25.6g | 0g | 0.5g | 110 kcal |
| [Tuna Fish (Tinned)](http://www.howmuchprotein.com/foods/tuna/) | 26.3g | 0.0g | 10.7g | 202 kcal |
| [Turkey Breast (Skinless)](http://www.howmuchprotein.com/foods/turkey/) | 22.3g | 0g | 1.2g | 100 kcal |
| [Venison (Deer meat)](http://www.howmuchprotein.com/foods/venison-deer-meat/) | 30.21 |  | 3.19 | 158 kcal |
| [Yogurt](http://www.howmuchprotein.com/foods/yogurt/) | 4.5g | 6.6g | 11.0g | 145 kcal |