

Macronutrients Briefly Explained – Part One



Our bodies need energy to fuel life. This energy is measured in calories and come from Macronutrients. These Macronutrients are: **Carbohydrates**, **Proteins** and **Fats**.

- **Carbohydrates (*one gram of carbohydrate will supply your body 4 calories*):** The body's preferred energy source. Carbohydrates are made up of chains of sugar molecules. If a person consumes more carbohydrates than the body can use or store, the body will convert the sugar into fat for long-term storage.

- **What's important to know about eating Carbohydrates?**

Carbohydrates consumed in the diet that are not immediately used for energy are stored in the liver and muscle as glycogen. Because Glycogen contains many water molecules, it is large and bulky and therefore unsuitable for long term energy storage. Thus, if a person continues to consume more carbohydrates than the body can use or store, the body will convert the excess carbohydrates into fat for long term storage. If dieters who severely restrict carbohydrates lose large amounts of weight shortly after starting the diet, the majority of this weight loss comes from loss of water since glycogen requires water for storage. In the long term, there is no difference in sustained weight loss in dieters on low-carbohydrate diets versus high-carbohydrate diets. (Sports Nutrition for Health Professionals, 2015, pp. 8-12).

- **Carbohydrates and Exercise?**

When exercising, our bodies need the right types and amounts of food before, during and after physical exertion and in order to maximize the energy available to support the activity. Carbohydrates are readily and efficiently broken down by the body to the monosaccharide glucose (the body's preferred energy source). During exercise, when energy is needed, glucose that is stored in the muscle, floating in the bloodstream, and/or stored in the liver is used as energy. If glucose of glycogen is limited, then the conversion of a non-glucose substance (i.e. protein) to glucose takes place to sustain the activity. (Sports Nutrition for Health Professionals, 2015, pp. 8-12).

- **What Carbohydrates to eat?**

Things to consider, complex carbohydrates take longer to digest than simple carbohydrates, so it makes sense to suggest that complex carbohydrates take longer to be converted into fat than simple ones. Also consider that the consumption of lower glycemic index carbohydrates such as non-starchy vegetables, whole fruits, whole grains and legumes have been associated with health benefits i.e. healthy hearts, decreased risk for diabetes and more. Furthermore, research studies support that foods with lower glycemic loads, commonly provide more nutrients per calorie (Sports Nutrition for Health Professionals, 2015, pp. 8-12).

Eat More	Eat Less
Whole Wheat Bread	White Bread
Brown Rice	White Rice
Vegetables and Whole Fruits	Processed foods/Candy Bars
Whole wheat pasta	White pasta
Oatmeal	Cereals

➤ **Conclusions**

- Do not be afraid of eating carbohydrates, your body needs them for fuel.
- Once you fuel up, use the fuel. Do not let it be converted into fat.
- Eat low glycemic index carbohydrates and reduce the risk of diabetes.