

# CARBOHYDRATES

## THE MOST POPULAR MACRONUTRIENT

Carbohydrates are essential macronutrients that provide energy to the body. However, it is important to consume them with caution as excess carbohydrate consumption, excluding dietary fiber, can lead to obesity or weight gain. According to guidelines, after individual consideration of protein and fat intake, the proportion of carbohydrates in your diet should be at least 50%.



### The Four Types of Carbohydrates

1. Sugars: Monosaccharides (e.g., glucose, fructose, and galactose) and disaccharides (e.g., sucrose and lactose)
2. Polysaccharides: Starch (e.g., in grains, legumes, potatoes, and nuts)
3. Dietary Fibers: Indigestible by the body, but essential for colon bacteria to produce fatty acids that can be used as an energy source for intestinal wall cells and as a regeneration aid for the intestinal mucosa.
4. Sugar Alcohols: Xylitol, sorbitol, and mannitol, which are almost as sweet as sugar but have half the calories and cause less insulin. However, they should be consumed moderately to avoid digestive problems.

### Whole vs. Refined Carbohydrates

Whole (good) carbohydrates are unprocessed foods that still contain all their fiber content, such as vegetables, fruits, legumes, potatoes, and whole grains. They have a low glycemic load and lead to improved metabolic health and reduced risk of disease. Examples of very high-quality whole carbohydrates are oats, quinoa, millet, buckwheat, peas, chickpeas, and nuts. Refined (bad) carbohydrates are processed industrially, resulting in the removal of dietary fiber and vital substances. Examples include white flour, polished rice, and retail sugar, which lead to severe blood sugar fluctuations, food cravings, and an increased risk of obesity and type 2 diabetes.



### Good and Bad Carbohydrates:

**Good Carbohydrates:** All vegetables, fruits (unprocessed), legumes, nuts, seeds, whole grains (including pseudo grains), and potatoes/sweet potatoes. **Bad Carbohydrates:** Sugar, syrup, white flour, starch flour, white bread or bread that contains white flour, white/polished rice, fruit juices, sweetened drinks, and other products that contain these bad carbohydrates.

Remember to consume carbohydrates in moderation and to opt for whole carbohydrates as much as possible to ensure a healthy and balanced diet.



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