

# CARBOHYDRATES



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Often times as consumers, we let our buying habits dictate the things we purchase. Like the instances where you find yourself in the grocery aisle contemplating over which brand of cornflakes you should buy – and the brand with the better TV advertisement would end up being the best choice of cornflakes, to you. Making quality choices of carbohydrate goes beyond the product's brand name. One has to look out for the product's Glycemic index.

## How should we make quality choices of carbohydrates?

So, what is a Glycemic index? The Glycemic index (GI) was initially calculated for diabetic patients to aid in keeping their blood sugar levels under control. Though not all of us are diabetic, the GI remains to be a useful tool when making food choices and staying healthy.

As explored in our prior Carbohydrate series, Glucose is the primary source of energy required by every cell in the body. The GI ranks carbohydrate foods from 0 to

100 based on the rate at which they are broken down into glucose. In other words, their Glycemic index indicates the effects of carbohydrate-rich foods and fluid on our blood glucose and insulin levels. Thus, foods are classified as having either a high, moderate or low glycemic index. Foods that contain a GI of 55 or less is considered a Low GI Carbohydrates whereas foods with a GI of 70 or more is considered a High GI Carbohydrates.



High GI foods are those which are quickly digested, absorbed, metabolized and result in notable fluctuations in blood sugar (glucose) levels. Prolonged consumption of High GI foods will lead to insulin resistance, resulting in glucose not being effectively cleared from the blood after eating. The loose glucose and insulin in the bloodstream is a major cause of inflammation.

In a recent Harvard study, researchers concluded that high-GI carbohydrate foods increase heart disease risk by intensifying the pro-inflammatory process, in this case, insulin resistance. Consuming big quantities of rapidly digested and absorbed high-GI carbohydrates also increases the risk of other heart diseases, particularly in overweight women who are already prone to insulin resistance.

Moderate and Low GI carbohydrates – the ones that produce smaller fluctuations in your blood glucose and insulin levels – is one of the secrets to long-term health, reducing your risk of Type 2 diabetes and heart diseases. Low glycemic index foods take a longer time to enter the bloodstream and may be

preferred for endurance exercise to promote sustained carbohydrate availability. They provide you with energy for a much longer period and stave off hunger and cravings, making them one of the keys to maintaining an ideal body weight. Low GI foods also help in decreasing the need of the body for insulin, thus keeping blood sugar levels in check.

The Glycemic Index (GI) categorizes carbohydrate foods by how they affect your blood glucose levels. Using the Glycemic index, we can make better food choices. So the next time you find yourself in a supermarket aisle, try looking at a product's GI, it should be labelled on the packaging. If it is not listed, try referring to the table below and avoid foods that contain High GI ingredients.

# Tables of Glycemic Index Values

Low GI  
(Choose most often)

Medium GI  
(Choose more often)

High GI  
(Choose less often)

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## Breads

100% stone ground whole  
wheat

Whole wheat

White bread

Heavy mixed grains

Rye

Kaiser roll

Pumpernickel

Pita

Bagel, white

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## Cereals

All Bran™

Grapenuts™

Bran flakes

Bran Buds with Psyllium™

Puffed wheat

Corn flakes

Oat Bran™

Oatmeal

Rice Krispies™

Quick Oats

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## Grains

Barley

Basmati rice

Short-grain rice

Bulgar

Brown rice

Pasta/noodles

Couscous

Parboiled or converted rice

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## Others

Sweet potato

Potato

Potato, baking (Russet)

Yam

Sweet corn

French fries

Legumes

Popcorn

Pretzels

Lentils

Stoned Wheat Thins™

Rice cakes

## References

- Canadian Diabetes Association. (2012). Paving Your Path to Diabetes Management: Basic Carbohydrate Counting and Glycemic Index. Retrieved from <http://www.diabetesgps.ca/en/paving-your-path/choosing-the-right-types-of-carbohydrates>
- Asif, H. M., Akram, M., Saeed, T., Khan, M. I., Akhtar, N., Rehman, R. U., Shah, S. M. A., Ahmed, K. & Shaheen, G. (2011). Carbohydrates. *International Research Journal of Biochemistry and Bioinformatics*, 1(1), 001-5.
- Stanfield, P. S. (2010). *Nutrition and Diet Therapy: Self-Instructional Approaches*. Jones & Bartlett Publishers, 47-52.
- Bonci, L. (2009). Sport Nutrition for Coaches. *Human Kinetics*, 11-17.
- Englyst, K. N., Liu, S. & Englyst, H. N. (2007). Nutritional characterization and measurement of dietary carbohydrates. *European Journal of Clinical Nutrition*, 61(1), S19-39. Doi:10.1038/sj.ejcn.1602937.
- Brown, A. (2007). *Understanding Food: Principles and Preparation*. Cengage Learning, 31-5.