

New measurement important complement to GI

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Many people are careful to follow a low glycemic index (GI) diet. However, the glycemic index concept has some shortcomings, in the view of one young researcher, who has developed a complementary method, "glycemic profile," or GP. The findings were recently published in *Nutrition Journal*.

"White [pasta](#) is one example of a product which in some cases has received a bad reputation because of a high GI. However, white pasta produces just as good a blood glucose response as wholewheat pasta", says Liza Rosén, doctor in applied nutrition at Lund University in Sweden.

The reason why wheat pasta has sometimes been assigned a confusingly high value is that GI only considers the entire area under the blood sugar curve. In contrast to what many believe, GI does not take fluctuations in blood sugar into account. This puts foods with a long and fairly low curve at a disadvantage.

Not only pasta, but also many rye bread products have this type of curve.

"White pasta has just as dense a structure as wholewheat pasta and therefore takes a long time to digest. The structure of a food is actually the most important parameter for the glucose response", says Liza Rosén.

Liza Rosén stresses that fibre is always good, but that it is not always present in high enough levels to have a significant effect on the blood

glucose response. In addition, not all types of fibre are the same.

"There are a lot of high-fibre bread products in the supermarkets which gives the same blood glucose response as white wheat bread", she says.

However, the GP measuring system which Dr Rosén has developed provides a more accurate picture of the [blood glucose](#) response because it takes the curve's appearance into account. The flatter the curve the better the GP. Food which produces an even and reasonably low curve scores the best values.

In order to calculate the GP, the glucose levels in the blood are measured for three hours after a meal. GI is also a measure of the blood sugar response, but only over two hours.

"A food with a high GP indicates that the energy lasts longer. The absolute best situation is if the product has a low GI and high GP. This means it's a really good product! One example is boiled rye kernels, which have a GI of 73 (where 100 is the GI of white wheat bread) and a GP of 94. In the same study, boiled wheat kernels had a GI of 68 but a GP of 51. The results suggest that the rye kernels produce a more stable blood sugar profile", says Liza Rosén.

She stresses that the GP measurement is new and more research is needed. For example, sugary products have to be studied.

Research is also needed to test whether products with a high GP also have beneficial effects on blood sugar regulation in the longer term. Dr Rosén believes this is the case, but so far it is only a hypothesis. She has just landed a job in industry, but her former research colleagues have taken up the mantle.

"We are using the concept and will relate it to other parameters. For

example, we suspect that products with a high GP keep you fuller longer, and that products with a high GP could improve [blood sugar](#) regulation not only in direct connection with a meal, but also at a later meal", says Elin Östman, associate professor in applied nutrition and Liza Rosén's supervisor.

Provided by Lund University

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