

Processing fruit may lower glycaemic index

There are mixed views about how the juicing of fruit can affect blood glucose levels and indeed disease risk. To better understand this, researchers looked at how blending fruit can influence postprandial glucose levels.

An independent laboratory study at Plymouth University, UK, recruited 28 adults aged 20 to 27 years and tested their blood glucose response to blended and whole fruits. Contrary to expectations, blending fruits in a Nutribullet machine produced a significantly lower glycaemic index (GI; 32.7) than when people ate the whole fruits (GI 66.2). Even for fresh mango, which has a high GI, no differences were found between the blended and whole fruit. The GI is a value assigned to foods based on how quickly they raise blood glucose levels¹. For context, the GI figures for white bread, white spaghetti, raw banana and orange are 72, 49, 51 and 43 respectively².

The authors noted that other studies have also shown that blending can alter GI responses. It was proposed that the presence of amylase in saliva may accelerate starch hydrolysis during/after mastication of whole fruit leading to a greater availability of glucose and a more rapid rate of absorption. Ongoing research is needed to confirm this.

While this study didn't consider fruit juice, it adds to the evidence that processing fruits does not impact negatively on blood glucose levels. For example, the International GI tables report that 100% apple juice has a GI of 41 while 100% orange juice has a GI of 50; both would be categorised as a source of free sugars. In contrast, and to provide whole diet context, wholewheat bread has a GI of 69 while cooked oatmeal has a GI of 55. Both of these would be considered as healthy starchy carbohydrates yet their GIs are higher than fruit juice.

For more information, see:

Redfern KM et al. (2017) Nutrient-extraction blender preparation reduces postprandial glucose responses from fruit juice consumption. *Nutr Diabetes* 7(10): e288. Available at:
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5678208/>

¹ <https://www.health.harvard.edu/diseases-and-conditions/glycemic-index-and-glycemic-load-for-100-foods>

² <http://care.diabetesjournals.org/content/31/12/2281.full>