GLYCAEMIC INDEX OF FOODS CONTAINING SUGAR

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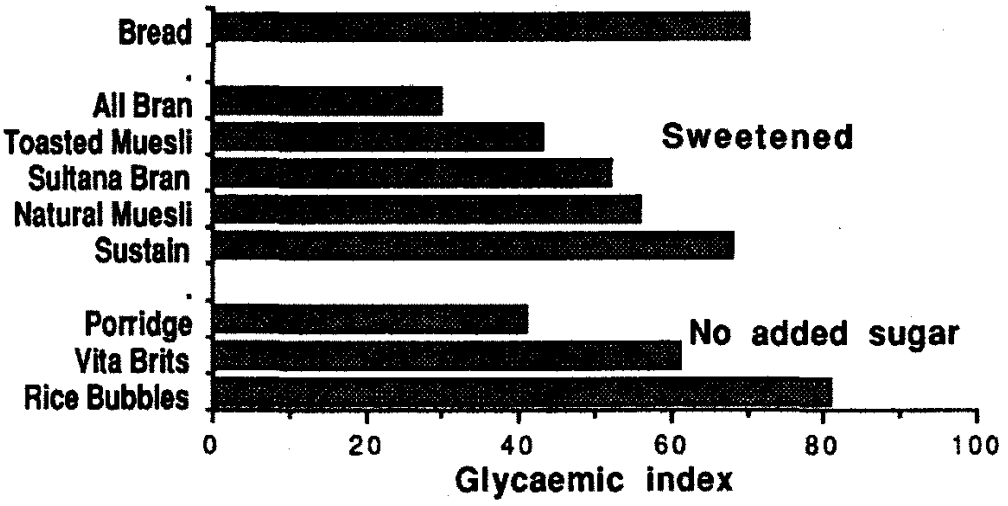
As part of studies on the glycaemic index of foods, we determined the glycaemic and insulin responses to 26 foods containing sugar, including both natural and refined sources: six tropical fruits, six biscuits, five confectionery items, three beverages, three ready-to-eat breakfast cereals, two dried fruits and Glucodin™ tablets.

Eight healthy volunteers took 50g carbohydrate portions of the foods (except 25g portions of the fruits) in random order on separate mornings after an overnight fast. Capillary blood was drawn by finger prick at timed intervals for 2h after the start of the meal and analysed for plasma glucose and insulin. The glycaemic index was calculated using the response to an equivalent carbohydrate portion of white bread as the reference food. All values were then multiplied by 0.7 in order to express the results with glucose as the standard (ie GI of glucose = 100).). On this scale, bread has a GI of 70.

The GIs of the foods ranged in the tropical fruits from 51 (mango) to 72 (watermelon), in the biscuits from 55 (Jatz™) to 79 (Morning Coffee™), in the breakfast cereals from 43 (toasted muesli) to 56 (natural muesli) (Figure), in the beverage group from 53 (orange juice) to 68 (Fanta™) and in the dried fruits from 30 (apricots) to 61 (sultanas). Glucodin™ tablets had a GI of 102.

The mean (± SE) GI of the foods containing sugar was 62 ± 14 and the mean insulin index was 59 ± 19. Glycaemic and insulin responses were correlated ($r = 0.8$, $P < 0.05$). This compares favourably with the GI of many starchy foods such as bread (73) and cereal products that do not contain sugar. Fat is known to reduce the glycaemic response to foods, but many of the foods tested contained negligible fat. There was no evidence of re-bound hypoglycaemia after foods containing sugar. These findings suggest that many 'sugary' foods produce no more rapid rises and falls in blood glucose than starchy foods and should not compromise glycaemic control.



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