DEAR DIETITIAN Q&A

Dear Dietitian,

Some of the fruit juices in supermarkets claim that they have no sugar added. Does that mean that these juices will not affect my blood sugar levels and weight since they have no sugar?

Dear Reader,

For packaged fruit juice drinks, nutrient claims such as "no added sugar" often refers to no added glucose or sucrose or other sugars to the product during processing. All fruit juices however, still contain fructose, which is a sugar that occurs naturally in all fruits. Fructose, glucose and sucrose are just different types of sugar and will all affect your blood sugar levels. Your body cannot distinguish between natural fruit sugar and added sugar; it uses both in similar ways.

Rather than the type of sugar, what mainly affects blood sugar levels is the total amount of sugar (or total amount of carbohydrate), in a serving of juice. The overall energy and carbohydrate content per 100ml of original and "no added sugar" varieties of fruit juice at the supermarkets are almost similar, with the original varieties usually slightly higher. These small differences may become significant though if your juice intake is high. Be careful not to drink excessive amounts of juices even if they are the "no added sugar" variety.

The Health Promotion Board has recommended two servings of fruit to be consumed daily with no more than one serving coming from fruit juice (one serving is equivalent to one cup (250ml) of pure fruit juice). If you have diabetes, you may want to further limit this to only half a cup per day. Much of the valuable fibre in fruit is removed in the process of making juices; therefore it is best to eat fresh fruit instead of drinking juice[2]. If you are watching your weight, do also bear in mind that one cup of fruit juice may require two or more servings of fruit to produce and will provide you with more calories than just having one serving of fruit.

Dear Dietitian,

How are packaged fruit juices from the supermarket different from homemade (squeezed/juiced) juices? Are they a better choice since they are fortified with vitamins and minerals?

This issue's resident dietitian is Ms. Ong Fangyi, Dietitian at National Healthcare Group Polyclinics (NHGP). Email your questions for Dear Dietitian to editor@diabetes.org.sg or fax the questions addressed to the Editor, Diabetes Singapore, Diabetic Society of Singapore. Fax: 6553 1801

Fast Facts >>>>>>>>>>>>>>>>

In type 2 diabetes the problem lies in the increasing resistance of your body's cells to the effects of insulin.

Dear Reader,

To be marketed as a "fruit juice" the product must contain at least 90% natural juice. A quick survey of major supermarkets revealed that the majority of packaged juices sold are reconstituted "fruit juice drinks", which have been concentrated and then diluted prior to sale and may have sugars or sweeteners added.

True fresh squeezed juice such as those from home is harder to market commercially due to issues of shelf life. By reading the ingredients list found on the packaged drink, you will sometimes be able to tell if a juice is reconstituted, as "juice concentrates" will be listed there. Concentration of juices is achieved by heating the juice to evaporate water, and the concentrate is eventually refrigerated until it is ready to be reconstituted. This process is useful by extending the shelf life of the juice and making storage and shipping more economical. An apple and cranberry juice drink may be made by blending apple, cranberry and other concentrates together with water to achieve the desired sugar to acid ratio, colour and flavour, before the juice is packaged for sale.

Additives such as permitted flavouring, preservatives and antioxidants are also added to improve shelf life. Fortification of juices with Vitamins A & E, beta-carotene and calcium is increasingly common but does not make packaged juices a better choice, as the extent of stability and absorption of these added vitamins and minerals is uncertain.

Freshly juiced or squeezed juice at home is free of additives and also high in vitamins and minerals if consumed soon after juicing. Remember to consume the pulp together with the juice for valuable fibre!

Dear Dietitian,

I am currently drinking bittergourd juice every morning. Does this help lower my blood sugar levels?

Dear Reader,

Studies on bittergourd's blood sugar lowering effects in humans are still inconclusive currently. Two published scientific reviews[2-3] concluded that although bittergourd may have blood sugar lowering effects, better-designed human studies are necessary to properly assess its safety and efficacy before a dietary recommendation can be given. Some adverse effects such as hypoglycaemia coma, convulsions and headaches after intake of bittergourd tea and seeds have also been reported[3].

It is therefore important to inform your healthcare professional caring for your diabetes that you are having bittergourd juice and monitor for any adverse effects. Do not forget, however, that bittergourd is a highly nutritious vegetable and can be considered as one of your options when having at least two servings of vegetables a day!

[1] Health Promotion Board (HPB) 2006, ABCs of Healthy Eating, Health Promotion Board, Singapore

[2] Basch E., Gabardi S. & Ulbricht C. 2003, 'Bitter melon (Momordica charantia): A review of efficacy and safety', Am J Health-Syst Pharm, Vol.60, pp.356-359.

[3] Krawinkel MB & Gudrun BK. 2006, 'Bitter Gourd (Momordica charantia): A Dietary Approach to Hyperglycemia', Nutrition Reviews, Vol.64 (7), pp.331-337.

In the early years of type 2 diabetes, the body compensates for this insulin resistance by increasing the output of insulin from the pancreas gland. Later on, the pancreas is unable to cope.

Fast Facts >>>>>>>>>>>>>>>>