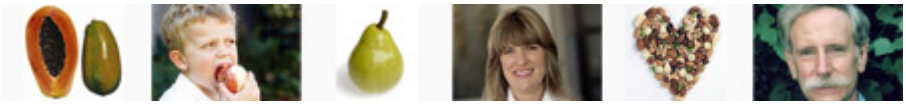
GI News—June 2010



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- GI value of soccer ball-sized 'king of the fruits' durian

Fruit and veggies play a central role in a low GI diet with studies showing that people who eat 3–4 serves of fruit a day, particularly apples and oranges, have the lowest overall GI and the best blood glucose levels. So, when you want a little sweetness in your life, reach for the fruit bowl for a snack that is widely available, portable, and easy to eat – just like other sweet snacks, but without any added fat and sugar. In *GI News* this month the focus is on fruit and you'll find the GI values of many of your favourites throughout this issue. Dietitian Emma Stirling joins us this month too with the scoop on tropical fruit, including the soccer ball-sized 'king of the fruits' durian.

Good eating, good health and good reading.

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Food for Thought

Why supplements are not a substitute for fruits and vegetables

'There is no way that taking a pill can replace eating fruits and vegetables,' writes Prof Walter Willett Chairman, Department of Nutrition, Harvard School of Public Health in *Eat Drink and Be Healthy*. 'So far, no one has found a magic bullet that works against heart disease, cancer and a host of other chronic diseases as well as fruits and vegetables seem to do. In theory, one could cram all the good things that plants make – essential elements, fiber, vitamins, antioxidants, plant hormones, and

so on – into a pill. But it would have to be a very large pill, and no one can honestly say what should go into such a pill. Or in what proportions. The benefits of eating fruits and vegetables probably come from combinations of compounds that work together.

Take the antioxidant pigments known as carotenoids, for example. When you eat a tomato or carrot, the different carotenoids it contains eventually get into different types of cells and different parts of each cell. This offers antioxidant protection throughout the cell and to a wide variety of cell types. When eaten in the proportions usually found in foods, carotenoids and other phytochemicals probably work together and protect cells at different levels. But when delivered in unnatural proportions – say via a poorly designed supplement – an oversupply of one carotenoid or phytochemical could block the activity of others. This isn't to say vitamin and mineral supplements are worthless ... [they] are excellent insurance. But they aren't a substitute for a healthy diet.

Health issues aside, the biggest drawback is that a pill would always taste like a pill. It can't give you the earthy smell and taste of a fresh ear of corn, the sweetness of a juicy tomato still warm from the afternoon sun, the crunch of an apple, the festive green of a snap pea or broccoli floret, or the smooth nutty taste of an avocado. Stick with real fruits and vegetables – they taste better and contain a bounty of phytochemicals that don't come in capsules.
– *Eat Drink and Be Healthy* is available from major bookstores and Amazon

How much fruit do you need a day?
This depends on your energy (calorie/kilojoule) needs, which is of course determined by age, sex and activity level. Check out Fruits and Veggies: More Matters to find out what you should be tucking into (www.fruitsandveggiesmorematters.org/?page_id=58).

News Briefs

Whole fruit not juice does the trick
The health benefits of eating plenty of fruit and vegetables are already well known but a study published in *Diabetes Care* (http://care.diabetesjournals.org/content/31/7/1311.abstract) reports that you need to be a bit choosy if your goal is to reduce your diabetes risk. When researchers from the Harvard Medical School looked at the diets of more than 71,000 women to see if

there was a link between developing type 2 diabetes and fruit and vegetable consumption they found:

- An increase of 3 servings a day of whole fruit was associated with an 18% reduced risk of type 2 diabetes.
- An increase of 1 serve of green leafy vegetables a day was associated with a 9% reduced risk of diabetes.
- An extra serving of fruit juice a day was associated with an 18% increase in diabetes risk.

The take home message to reduce your diabetes risk, they say is to eat whole fruit not juiced and plenty of green leafy vegetables.

Bitter melon (also called bitter gourd and balsam pear) is a cousin of squash, watermelon and cucumber and is long associated with treating diabetes in Asia where it's widely cultivated for its 'bubble-wrap' textured, green, immature fruit (12–30 cm long) that's stuffed, pickled, and sliced into various dishes, hot and cold.

Writing in *Chemistry and Biology* (www.cell.com/chemistry-biology/abstract/S1074-5521%2808%2900082-3) a team from Australia's Garvan Institute of Medical Research along with the Shanghai Institute of Materia Medica, report that it has bioactive compounds that appear to activate the enzyme AMPK, a protein that regulates the body's metabolism and affects glucose uptake. While there are well known diabetes drugs on the market that also activate AMPK, they can have side effects. 'The advantage of bitter melon is that there are no known side effects. Practitioners of Chinese medicine have used it for hundreds of years to good effect,' said Drs Jiming Ye and Nigel Turner, the Garvan scientists involved in the project.

GI Group: Bitter melon comes under the 'vegetable fruits' umbrella. Yes, anything with a seed is a fruit (botanically speaking) including avocado, eggplant/aubergine, capsicum/pepper, cucumber, pumpkin (GI 65), butternut pumpkin/squash (GI 51) and tomatoes along with all those lovely legumes – beans and peas and other members of the legume family where the seed is enclosed within a pod.

Get a boost from a banana

'You may have seen cyclists eating bananas one-handed as they speed down the road or a tennis pro eat a banana between sets,' says *Gold Medal Nutrition* author and dietitian. 'That's because they are very good for energy. The average banana (GI 52) provides around 20g carbohydrate, which is then digested and converted to muscle

fuel (glucose). A banana is also a source of some resistant starch that works like dietary fibre in the large intestine. Many athletes also eat bananas to re-fuel their body after sport as their muscle stores of glucose will be low. That's why they are very popular in the change rooms after a game of football or netball. But you don't have to be an athlete to get a boost from a banana. It works for the deskbound too. Consider eating a banana to help get you out of the mid-afternoon slump at work. It will perk you up far better than any cake, biscuit or pastry.

So grab a banana and get even more benefits. It:

- provides around 350mg of potassium (about 10% of your daily needs). Our Dietary Guidelines say: "Because plant foods contribute significantly to the intake of potassium and magnesium – both of which have been proposed to be associated with a lower blood pressure – diets high in fruits and vegetables will increase the daily intake of both minerals and may help prevent and control hypertension." (my emphasis says Glenn).
- helps you maintain a healthy weight as a medium banana has less than 100 cals (420kJ), about a third of what you get from a 50g pack of potato crisps and half of what is in a couple of chocolate biscuits.
- helps to keep you regular and healthy on the inside. The average banana provides around 3g of fibre plus some resistant starch, so called because it is resistant to digestion and therefore acts like fibre.'

Glenn Cardwell is an Accredited Practising Dietitian who also consults with industry (including Australian Banana Growers). Check out Glenn's website www.glenncardwell.com

More nuts, less cholesterol

Consuming more nuts appears to be associated with improvements in blood cholesterol levels, according to a pooled analysis of data from 25 trials reported in *Archives of Internal Medicine* (http://archinte.ama-assn.org/cgi/content/short/170/9/821). When Dr Joan Sabaté and colleagues pooled data from 25 nut consumption trials (yes, such thing exist) they found that eating around 67 grams (about 2.4 ounces) of nuts a day was associated with an average 5% reduction in cholesterol levels. And if a participant also had high triglyceride levels it dropped too by around 10%. '... different types of nuts had similar effects on blood lipid levels,' the authors write. 'Nuts are a whole food that has been consumed by humans throughout history. Increasing the consumption of nuts as part of an

otherwise prudent diet can be expected to favorably affect blood lipid levels (at least in the short term) and have the potential to lower coronary heart disease risk.'

GI Group: What's a nut? It's the seed of a fruit with a thick hard shell (pericarp). But there are several types of nuts. 'True nuts' (the ones with a cap at the stem) are oak acorns, chestnuts (GI), hickory and hazel. Almonds, coconuts, pecan and walnuts are drupe 'fruits' like peaches, plums and cherries. Other nuts are 'seeds' – Brazil nuts cashews (GI 22) and pine nuts. Peanuts (GI 14) aren't actually nuts, they are a legume. (Source *Edible*, Cameron House 2008)

'Deli' meats and diabetes risk

Eating processed meats (preserved by smoking, curing or salting, or with the addition of chemical preservatives), such as bacon, sausages, hot dogs or processed deli meats but not unprocessed red meats, may raise risk of diabetes and heart disease according to a systematic review and meta-analysis published in *Circulation* (http://circ.ahajournals.org/cgi/content/abstract/CIRCULATIONAHA.109.924977v1) that included 20 studies and 1,218,380 individuals.

Researchers from the Harvard School of Public Health found that, on average, each 50 gram (1.8 oz) daily serving of processed meat (about 1–2 slices of deli meats or 1 hot dog) was associated with a whopping 42% higher risk of developing heart disease and a 19% higher risk of developing diabetes.

'When we looked at average nutrients in unprocessed red and processed meats eaten in the United States, we found that they contained similar average amounts of saturated fat and cholesterol. In contrast, processed meats contained, on average, 4 times more sodium and 50% more nitrate preservatives,' said lead researcher Renata Micha PhD. 'This suggests that differences in salt and preservatives, rather than fats, might explain the higher risk of heart disease and diabetes seen with processed meats, but not with unprocessed red meats,' she said. 'Based on our findings, eating one serving per week or less [of processed meats] would be associated with relatively small risk.'

Get the Scoop on Nutrition with Emma Stirling

The scoop on tropical fruit

You don't need a nutrition science degree to know that fruit is naturally nutrient rich. At least two serves a day will help boost your vitamin, mineral, dietary fibre and

protective antioxidant intakes. But fruit is one food group that's the cause of GI confusion. Why? Well even though all fresh fruits are labelled healthy, many tropical fruits are stamped with a moderate to high GI. But does this mean that you should bypass a juicy pineapple? Let's explore. And before you GI pros jump ahead, read on as we have a new GI value to share (durian!).

Feeling fruity Now as you know it's really tricky to predict the GI values of any food without laboratory testing. Right? But with fresh fruit, there are some factors that can guide us:

- Type of carbohydrate: fruits with a higher ratio of fructose to glucose will have a lower GI.
- Acid levels: the more acidic a fruit, the lower the GI value.
- Dietary fibre content: fruits higher in soluble and insoluble dietary fibre (keep the skins on where possible please) help slow digestion and promote a lower GI.

Going troppo It's true that temperate climate (often referred to as orchard) fruits tend to have a low GI. So you can snack with confidence on apples (GI 38), pears (GI 38), citrus like oranges (GI 42) and grapefruit (GI 25) and stone fruits like peaches (GI 42)and plums (GI 39). But when it comes to tropical fruit, things go a little troppo:

Mangoes (GI 51) and bananas (GI 52) are two of the few tropical fruits with a low GI. Pineapple (GI 59), paw paw (GI 56), rock melon/cantaloupe (GI 68) and watermelon (GI 76) tend to have moderate to high GI values. But remember it's worthwhile to consider the glycemic load (GL) in these few instances. We touched on the type of carbohydrate above, but the amount of carbohydrate you eat at any meal or snack is also key to effective blood glucose control. The glycemic load of these tropical fruits is in fact low, because they are low in total carbohydrate content and high in water. That's what makes them their juicy best. So isn't that great news? You can still cool down with a slice of watermelon in the heat of summer – just watch your portion size.

Thanks to new data published in the *Asia Pacific Journal of Clinical Nutrition* (http://apjcn.nhri.org.tw/server/APJCN/Volume17/vol17.1/abstracts.php#Glycemic_index) we now know that one very tropical fruit, durian, has a low GI (49). Durian you ask? Well this is one fruit that you need to smell it to believe it. This heavy, soccer ball-sized, spiky fruit has a very pungent odour. And in my opinion I'm yet to

meet anyone that eats enough durian to remotely worry about its GI. Revered in Southeast Asia as the “king of fruits” and described as “fragrant”, it remains very much an acquired taste elsewhere. Ripe durians are eaten fresh but have a short shelf life. In cooking they are used for preserves (jams and pickles), milk-based desserts and ice-creams, cakes, and confectionery; in some parts of Asia unripe durians are used as a vegetable. But in some South East Asian hotels durian are banned as the odour is so off-putting to foreign guests.

Mix it up Whatever your likes or dislikes, feel confident with all fruit. Mix up your fruit bowl for plenty of variety including other luscious, bright pigmented, tropical faves like guava and dragon fruit. And favour your local seasonal, regional produce. Research shows people who eat three or four serves of fruit a day, particularly apples and oranges, have the lowest overall GI and the best blood glucose control around town (or tropical jungle).

Emma Stirling is an Accredited Practising Dietitian, health writer and editor of The Scoop on Nutrition (www.scoopnutrition.com) – a blog by dietitian experts. Check it out or subscribe for hot news bites and a healthy serve of what’s in flavour.

GI Group: Are any engineers listening? Prof Jennie Brand-Miller would love to buy a fruit bowl that kept fruit on the bench or table cool and in the line of sight of hungry children.

In the GI News Kitchen

American dietitian and author of *Good Carbs, Bad Carbs,* **Johanna Burani**, shares favourite recipes with a low or moderate GI from her Italian kitchen. For more information, check out Johanna's website (www.eatgoodcarbs.com). The photographs are by Sergio Burani. His food, travel and wine photography website is photosbysergio.com.

Sauteed Cauliflower with Currants and Pinoli

Currants are tiny dark dried grapes that hale originally from Corinth in Greece. The subtle sweetness of this fruit blends perfectly with the astringent qualities of the cauliflower, giving the combination of these ordinary ingredients a unique flavourful character. Italians love their ‘cavolfiore’ and this is one version of what they might do with it. Makes about 7 x ½ cup servings.

2 tbsp olive oil
1 cup chopped onion
3 cloves garlic, minced
6 cups tiny cauliflower florets
2 tsp freshly ground sea salt
¼ teaspoon freshly ground pepper
¼ cup toasted pinoli (pine nuts)
2 tbsp orange zest
2 tbsp currants

- Heat the oil in a large heavy fry pan. Add the onion and sauté for 2–3 minutes or until it becomes soft and translucent.
- Add the garlic, cauliflower, salt and pepper. Lower the heat to medium and continue cooking for 10 minutes, stirring frequently to allow for even cooking. Add the pinoli nuts and cook for another 5 minutes, raising the heat slightly. Remove from heat. Add the zest and the currants, mix well and serve.

Per serving
Energy: 420kJ/100cals; Protein: 3g; Fat 6g (includes <1g saturated fat); Carbs: 10g; Fibre 3g

Stuffed spiced apples
Many dried fruits have low GI values – apple (GI 29), apricots (GI 31), dates (GI 45) and prunes (GI 29). Dried figs have a moderate GI of 61. While intensifying the flavour and sweetness, drying also concentrates the carbs and calories which is why a little goes a long way. Think of it like this – eating 4–5 dried apple rings will give you the same number of calories as eating a medium fresh apple. Spice merchant and author Ian Hemphill has been a regular contributor to *GI News* over the years. His new book, *Just Add Spice* (with Lyndey Milan published by Penguin/Lantern) shows how spices are nature's gift helping us transform simple meals into special occasions.
Serves 8

4 large granny smith apples, halved, cores removed
2 tsp butter
Stuffing
6 soft dried figs
6 pitted prunes (dried plums)
1 tbsp sultanas
1 vanilla pod, halved and seeds scraped

2 tbsp dry sherry
2 tsp sweet spice mix (made with 1 tsp ground cinnamon, ¼ tsp ground nutmeg, ¼ tsp ground ginger, ¼ tsp ground cloves, ¼ tsp ground cardamom seeds)

- Preheat the oven to 150°C/325°F (130°C/275°F fan forced)
- To make the stuffing, chop the fruit into small pieces and place in a bowl. Add the vanilla seeds, sherry and spice and mix well.
- Pile some stuffing into the core cavity of each apple half, pressing down well and filling as generously as possible. Top with a small dot (1/4 tsp) of butter and place on a baking tray.
- Bake for about 30 minutes until the apples are soft but not falling apart – cooking time will vary depending on the size of the apples you used. Serve on their own or with a dollop of a good quality low fat yoghurt.

Per serving
Energy: 393kJ/94cals; Protein less than1g; Fat 1g (includes 0.5g saturated fat and 3mg cholesterol); Carbs 18g; Fibre 4g

Busting Food Myths with Nicole Senior

Why you can't believe everything you read or hear in the media about nutrition and health

Misinformation, misunderstanding, misinterpretation and conspiracy theories abound about food, nutrition and health. You really need to maintain a critical eye to sort the wheat from the chaff. And it's not just well-meaning friends, health food store employees, neighbours and websites you need to worry about. The media often get it wrong. Or they misconstrue a scientific study's message because they love a catchy headline. Or they just published the press release. Or the editor gave the story to a news reporter not the health and science writer.

For example, if you see a headline that shouts out: 'Study shows Amazon Jungle Juice will help you lose up to 50 pounds in 90 days'. Pause before you open your purse and fork out for a six-pack. Here's why. In nutrition research terms a study which finds an association between eating a food or nutrient (say, Amazon Jungle Juice) and a health indicator (say, weight loss) in a particular group of people (say, Amazonian Indians) does not mean Amazon Jungle juice will help you lose weight. An epidemiological study like this (that's a study of the relationship between diseases and contributing factors in populations) can't prove cause and effect – it merely is saying, hello, here's an association that's worth more research. Epidemiological

studies can have problems with the way they were carried out too (these are called methodological problems). For example:

- Was it a big enough population to properly power the study (i.e. were there enough people in it)?
- Was the Jungle Juice the only thing that was different in the group that lost weight?
- How was the intake of Amazonian Jungle Juice assessed within the population studied
- Did it rely on people's memories of past consumption (memories fade)?
- Was a tool used with proven validity in this population (for example do Amazonian Indians think about food in the quantitative way that the researchers do)?
- Was the population's level of physical activity properly factored in (this would also help weight loss)?

Further research might include basic science about how could the Jungle Juice actually work and ideally, intervention studies.

The gold standard intervention study is a double blind, placebo controlled trial in which both the subjects and researchers have no idea which group received what. This type of study also determines whether the intervention works statistically better than a placebo. And not just one of these studies but many to ensure the results are robust and repeatable. Alas, these issues are not considered by journalists working on the basis of one study, racing toward deadline.

I often receive feedback from readers urging me to read a book in order to educate myself about an alternative view. But books aren't always trustworthy sources of information either. You don't actually need qualifications to publish a book – anyone can do it if they have a marketable concept. I critically assess nutrition books very carefully. The best ones are usually (but not always) written by nutrition academics and registered dietitians who are experts on the topic and draw on scientifically sound research and evidence-based content. To help them get the message across in a clear and simple way, they may work in conjunction with experienced and qualified health writers.

In a world where we are bombarded with nutrition information how can you sort the wheat from the chaff? Here's my 3-point checklist. Check out:

- The writer's qualifications – top marks go to books, articles and websites written or co-written by nutrition experts
- Positive reviews by people who can form an educated opinion, such as registered/accredited dietitians, nutritionists or nutrition academics, and
- Does it overturn accepted nutrition wisdom? Strange or unusual ideas are often wrong and won't provide any real and practical help for you.

Nicole Senior MSc (Nut&Diet) BSc (Nut) is an Accredited Practising Dietitian and Nutritionist and author of *Eat to Beat Cholesterol* and *Heart Food* containing evidence-based, trustworthy advice about eating well for your heart. Check out her website (www.eattobeatcholesterol.com).

GI Symbol News with Dr Alan Barclay

Fructose – 10 things you need to know

1. Fructose is a monosaccharide or single sugar unit. It's abundant in nature. It's the main sugar in fruit, berries, honey and there are even small amounts in vegetables and grains. It has provided energy for humans, birds, and mammals for millions of years and usually comes with a bonus – nutritional goodies like vitamins, minerals, fibre and antioxidants.

2. It's abundant in the supermarket, too. When you throw normal soft drinks and sweetened foods such as yoghurt, dairy and frozen desserts, breads, cookies (biscuits), cake mixes, salad dressings and mayonnaise, sauces (tomato for example) and some soups (tomato again) into your trolley, chances are you will be adding fructose to your diet in the form of sucrose (50% fructose and 50% glucose from sugar cane) or high-fructose corn syrup (regular corn syrup does not contain fructose).

3. Fructose has a low GI (19) because it is absorbed and taken directly to the liver where it is immediately metabolised and only a small proportion is converted to glucose. Remember, the GI is a measure of the effect of the **available carbohydrate** on your blood glucose levels.

4. Adding fructose to foods and drinks has been a controversial topic in nutrition for many years. There are concerns it is doing something else in our bodies besides adding kilojoules (calories). A 2008 study in *the American Journal of Clinical Nutrition* (www.ajcn.org/cgi/content/abstract/88/5/1419) reported that consuming more than 50g of pure fructose in a single hit raised post-meal triglycerides (blood

fats) – a known risk factor for cardiovascular disease.

5. It's worth keeping in mind that studies where people (or rats) are given high doses of fructose don't actually reflect what happens out here in the real world. People rarely consume pure crystalline fructose just for fun, let alone 10 teaspoons (50g) of it in single sitting.

6. Corn syrups are often found on the labels of American foods and beverages. They are the most common form of sweetener in North America because they are cheaper than cane sugar. Some of them contain fructose. The two main types are:

- HFCS 55 – mostly used in beverages like soft drinks. It contains on average 55% fructose and 45% glucose.
- HFCS 42 – used in many solid foods and baked goods. It contains on average 42% fructose and 58% glucose.

Small quantities of HFCS-90 (90% fructose) and crystalline fructose (+99.5%) are also produced for 'specialty applications'.

7. Fructose malabsorption can occur when fructose is eaten in the absence of glucose but we rarely eat it this way. The small intestine is impaired in its ability to absorb fructose alone, although we don't yet fully understand the actual mechanism. When fructose is not absorbed properly in the small intestine, it can travel through to the large intestine where bacterial fermentation can cause symptoms such as bloating, wind, pain, nausea, diarrhoea and/or constipation. Dietitian Dr Sue Shepherd has a handy fact sheet on fructose malabsorption (http://shepherdworks.com.au/disease-information/fructose-malabsorption).

8. Fructose and obesity. Consumption of HFCS has increased significantly in the US since the 1970s and this increase has run parallel to the increase in obesity in the US. However, while fructose may be one factor associated with the US obesity epidemic (think of all those extra calories for starters), it is unlikely that it is a major factor in the obesity epidemics elsewhere. For example Australians and Brits are getting fatter too while total and added fructose intakes have actually decreased in both those countries.

9. One theory why fructose may be less satiating than other carbohydrates, potentially increasing the risk of weight gain is that it stimulates insulin secretion

much less than other sugars like glucose. Because insulin increases leptin release, consuming fructose may inhibit appetite less than consumption of other carbohydrates and therefore may lead to increased energy (kilojoule/calorie) intake. Another possible theory why it may be less satiating is that unlike glucose, fructose bypasses the rate-limiting step of glycolysis and uses a rapid energy-requiring reaction that abruptly depletes our cells energy stores – potentially stimulating appetite.

10. However, despite numerous plausible theories, in our opinion, there is no convincing experimental evidence in humans that dietary fructose actually does increase food consumption in the long-term. We need more studies with realistic amounts of fructose to determine if it truly is a unique and dangerous form of energy. In nutrition, just about everything (including all the fat soluble vitamins and many minerals) are toxic when consumed to excess. That shouldn't be the basis of excluding them from the diet.

For more information about the GI Symbol Program
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GI Update

GI Q&A with Prof Jennie Brand-Miller

'Are you better off drinking a small glass of fruit juice than a non-diet soft drink, cordial or sports drink?'

Fruit juices have a low GI in most cases (40–50) and they contribute valuable micronutrients that you won't find in alternative beverages. Some fruit juices are not low GI, e.g. Ocean Spray cranberry juice/drinks, which are around 60. Most non-diet soft drinks are in the GI range of 60–70. Sports drinks can be 70–80. A small glass of fruit juice is probably better than no fruit at all, but best not to make it a daily habit.

'Does the high amount of fructose in juice have any effect on the release of glucose?'

When it comes to any sugary product (natural or otherwise), you have usually have a mixture of sucrose, glucose and fructose. Sucrose is digested quite quickly to glucose plus fructose before absorption. While glucose is generally absorbed rapidly, it can be slowed by acidic solutions (e.g. all fruits are acidic). Fructose absorption is a much slower process and doesn't raise glycemia anyway. The high proportion of fructose in fruit and fruit juice is one reason why they have a low GI. But it's not the only reason. Very large amounts of fructose (70g a day or more) from any source can have adverse effects on blood lipids (fats). The old adage applies: enjoy in moderation.

'Are there any advantages to drinking fruit juices, or should we opt for whole fruit?'

Opt for whole fruit if you want to feel fuller (satiated) for a longer time. But as long as people limit themselves to one small glass a day, 100% fruit juice can be part of a healthy diet. I can't think of any advantage of drinking fruit juices (I avoid them myself). It's much more satiating to eat the same portion as the whole fruit. But I'm pragmatic too ... if there's no fruit on hand, then fruit juice is better than no fruit, and superior to a soft drink.

Bear in mind that some researchers believe that sugars in solution (whether soft drinks or fruit juice) bypass the satiety centre in the brain, i.e. we don't register them properly and therefore don't take their calories into proper account. I'd like to see more research on this question. Mother's milk is a solution of 7% sugar (ie milk sugar = lactose) but babies seem to grow at the right rate

New GI values with Fiona Atkinson

Savoury snacks

Many of us like to nibble on a savoury snack occasionally. But these products (like potato crisps and burger rings etc) are usually high in fat and sodium and tend to have high GI values too. Here at SUGiRS we have just tested Arnott's 'baked not fried' Barbecue Shapes. They are a very popular range of savoury crackers here in Australia (about 44 million packets sold every year they say). Here's what we found.

- A 25 g serving (about 10 pieces) of Barbecue Shapes (GI 48) provides around 546kJ (130 calories), 6g fat (incl nearly 3g sat fat), 16g carbs and just under 1g fibre and 188mg sodium.