

# Thursday, November 01, 2007

## [GI News—November Beta 2007](#)



In this issue of *GI News*

- IDF targets post-meal blood glucose and endorses GI.
- Keeping blood glucose in check all day.
- Break through weight loss plateaus
- Does eating late at night make you fat?
- Jennie Brand-Miller responds to the Tufts research on GI variability

Diabetes is one of the fastest growing diseases in the world. In fact, it's one of the largest epidemics humanity has ever faced. November 14 is World Diabetes Day and the focus is children and adolescents with diabetes. Read more about it in Food for Thought. Also this month Dr David alerts us to a potential epidemic – as many as one in three overweight children now have signs of fatty livers. There are also three delicious recipes from our chef Kate Hemphill (do try the Tuna, Bean, Olive & Fennel Salad); our pick of the crop for food for the month – mushrooms and how they can help you trim your waistline; new GI values for jarred sour pitted cherries; and of course our answers to your questions.

Good eating, good health and good reading.

GI News Editor: Philippa Sandall

Web Design and Management: Scott Dickinson, PhD

*“The obesity rates in many developing countries now rival those in the US and other high income nations ... the combination of lifestyle and dietary changes has paved the way for a public health catastrophe, with obesity leading to an explosive upsurge in diabetes, heart disease and other illnesses.”*

— Prof Barry Popkin, “The World is Fat”, *Scientific American*, September 2007 —

**GI News Editor: Philippa Sandall**

**Web Design and Management: Scott Dickinson, PhD**

Posted by GI Group at [8:14 AM](#) \_\_

## **Food for Thought**

### **Let's make sure kids with diabetes reach their full growth potential**

Diabetes is one of the most common chronic diseases of childhood but often those closest to the child – family, friends, teachers – are unaware of the signs. Did you know that:

- Diabetes can strike children at any age.
- It is often diagnosed late, or it is misdiagnosed completely.



### **Don't miss the signs!**

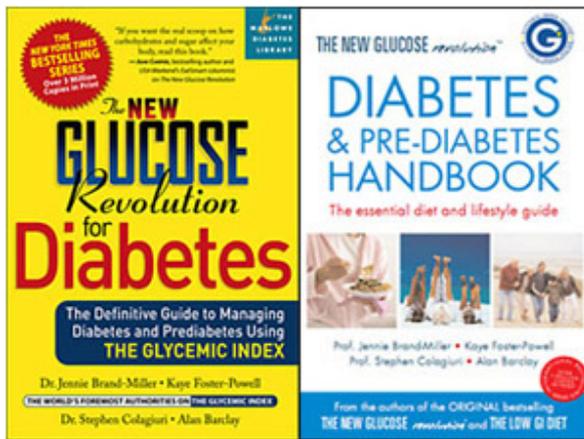
- Excessive thirst
- Frequent urination
- Tiredness
- Blurred vision
- Leg cramps
- Always hungry
- Unexplained weight loss
- Skin infections, itching, cuts that won't heal

To reduce the risk of complications and make sure kids with grow and thrive, early diagnosis and education are crucial. Here's what diabetes dietitian Kaye Foster-Powell says: 'It is absolutely essential to do everything possible to achieve and maintain optimal blood glucose levels in children from tiny tots to teenagers with type 1. This is because they are still growing and developing. Remember, you don't get the chance to go back and try again. Poorly managed

diabetes, particularly before puberty, can mean that a child doesn't reach full growth potential.'

To do their bit for World Diabetes Day on November 16, publishers Hachette Livre Australia and Da Capo Lifelong Books are each giving away 6 copies of *The New Glucose Revolution for Diabetes* (*The Diabetes and Pre-diabetes Handbook* in Australia). This practical diet and lifestyle guide to living well with diabetes and pre-diabetes includes chapters on managing diabetes in children and adolescents including daily food guides and recipes, handling hypos and avoiding food battles. Specific sections cover:

- Managing type 1 diabetes in infants and toddlers
- Managing type 1 diabetes in school age children
- Type 1 diabetes and teenagers
- Type 2 diabetes in children



## WE HAVE 12 COPIES TO GIVE AWAY

GI News has 6 copies of *The New Glucose Revolution for Diabetes* published by Da Capo Lifetime Books to give away to residents of the **US or Canada only**. The first six people to email will receive a free copy. Enter your name and address in the subject line of the email to be in the draw by clicking [HERE](#).

We also have 6 copies of *The New Glucose Revolution for Diabetes and Pre-diabetes* published by Hachette Livre Australia to give away to residents of **Australia only**. The first six people to email will receive a free copy. Enter your name and address in the subject line of the email to be in the draw by clicking [HERE](#).

Posted by GI Group at [8:13 AM](#) \_

## [GI News Briefs](#)

### Keeping blood glucose in check all day

In June *GI News* Prof Jennie Brand-Miller reminded us that breakfast is a great opportunity to 'go for gold' by selecting a low GI breakfast cereal or bread to reduce the GI of your diet overall.

The findings of Anne Nilsson's PhD dissertation presented at Lund University takes that low GI brekkie to platinum by adding some extra indigestible carbs. She found that 'low GI in combination with the right amount of so-called indigestible carbohydrates, that is, dietary fiber and resistant starch, can keep the blood-sugar level low for up to ten hours, which means until after dinner.' They can make it easier to concentrate for the rest of the morning too her research findings showed. Barley produced the best results of the four grains she tested and the whole grains were more effective in bread than in porridge.



What role do the indigestible carbs play? Because insoluble fibre and resistant starch are not broken down in the small intestine, they reach the large intestine where they provide nourishment for the intestinal bacteria. This triggers a fermentation process that produces various components such as short-chain fatty acids that can enter the blood and favorably affect the regulation of blood glucose and the feeling of satiety. They can also help alleviate inflammatory conditions in the body reducing risk of diabetes and cardiovascular disease.

We'll bet there's big demand from food manufacturers for Anne's bread recipes!

– Lund University Dissertations [Abstract](#)  
Eur J Clin Nutr. 2006 Sep;60(9):1092-9  
Eur J Clin Nutr. Online publication 12 September 2007

For more information, please contact: Anne.Nilsson@appliednutrition.lth.se or Prof. Inger Björck: Inger.Bjorck@appliednutrition.lth.se

### **IDF targets post-meal blood glucose**

Managing blood glucose is a numbers game. Until now, if you have diabetes you had two blood glucose (blood sugar) numbers to worry about: your A1c and your fasting glucose level. The first should be 6.5% or below and the second 5.6 mmol/l (100 mg/dl) or below according to IDF guidelines. They have now added a third target to the tally: to keep your post-meal blood glucose levels under 7.8 mmol/l (140 mg/dl) two hours following a meal. Why? Because mounting evidence is showing that reducing your post-meal glucose rises is at least as important as hitting your target A1c's when it comes to avoiding complications. The two-hour time frame for measuring glucose conforms to guidelines published by most leading diabetes organisations and medical associations.



In fact it's not possible to go too low to reduce complications according to the IDF. What should you do? Use your meters to get the information you need to help you achieve all three targets they say and focus on healthy eating, physical activity and weight control to manage your diabetes. But, they add, using the 'GI can provide an additional benefit for diabetes control beyond that of carbohydrate counting' because (their words):

- 'Diets with a lower GI are associated with modest improvements in HbA1c.'
- 'Nutritional plans based on the judicious use of the GI positively affect post-meal plasma glucose excursions and reduce cardiovascular risk factors.'
- 'Diets with a high GI are independently associated with increased risk of type 2 diabetes, gestational diabetes and cardiovascular disease.'

– IDF Guideline for Management of Post-meal Glucose report and press release  
Download the IDF report [HERE](#).

### **GI values – getting the difference**

The glycemic index is too variable a tool to be useful for people with diabetes according to researchers from the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University published in *Diabetes Care* (30:1412-1417, 2007). 'Using glucose as the control food, previous studies indicate that white bread has a glycemic index of about 70,' said corresponding author Alice Lichtenstein in reporting the results of their small study (only 14 healthy adults). 'In our study the combined average was 71, virtually identical to the published value. However, quite strikingly, individual values ranged from 44 to 132. What is critical is to determine why there is such a wide range of responses among individuals.'



Jennie Brand-Miller

Professor Jennie Brand-Miller explains: The take-home message from the Tufts study is that the

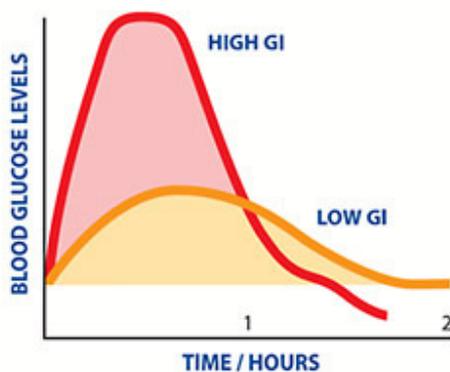
GI value of white bread is 70. That's nothing new: The same value has been found in dozens of other studies around the world.

What does a GI value of 70 mean? It means that on any given day, an exchange of white bread will have approximately 70 percent of the glycemic impact of an exchange of glucose sugar; that is, it will send sugar into the bloodstream 70 percent as fast as glucose sugar.

The authors of the Tufts study erroneously concluded that the GI value of the very same bread varied from 44 to 132. That's not correct. The bread didn't vary: Its GI value remained 70. The GI is a property of the food; the person is simply the instrument of measurement.

The Tufts researchers did not follow GI testing protocol, which is carefully designed to compensate for the variability inherent in using a person as a test instrument. As a result, all the Tufts study measured was the natural variation in individual responses to food at different times. Unfortunately, they mistook that for variation in the bread itself.

It's true that any one person's glycemic response varies from day to day and that glycemic response also varies from person to person. Nevertheless, the relative glycemic differences between foods are maintained. A person with diabetes can be confident that a high GI food (GI value of 70 or more) will produce a significantly higher glycemic response than a low GI food (GI value of 55 or less) 95 percent of the time. Just as the height of high tide and low tide varies from day to day and place to place, we still know that high tide will be higher than low tide on any one day at any one place. It's not the absolute level, but the difference, that's important.



Any one person's glucose tolerance may vary from day to day by as much as two-fold. (In people with diabetes, this variability is actually less than in normal subjects.) Why this occurs is not clear, but we can point to varying beta-cell responsiveness and insulin sensitivity, factors that are beyond anyone's control. The beta cells just work better on some days than on others. This variability among and within people must be managed carefully in order to detect true differences in the glycemic potential of the carbohydrates in different foods.

That's why GI testing has such a strict protocol. Ten subjects are used, each of whom is given the reference food (glucose) on three separate days. Each time, the overall fluctuation in their blood sugar is determined by testing their blood glucose eight times over a period of two hours. The

findings from those three days of testing are averaged to find each person's usual response to the reference food, glucose. Next, his or her glycemic response to the test food is measured once, using the same two-hour testing protocol. Then each person's response to the test food is expressed as a percentage of their average response to the reference food. Finally, the relative responses of all ten subjects to the test food are averaged. This is the published GI value. The GI value of bread (70) means that the overall fluctuation in blood glucose after eating an exchange of white bread will be about 70 per cent of the effect of pure glucose (GI value of 100).

When it's done properly, there's nothing crude about GI testing. By taking the average of ten subjects, each of whom has undergone this painstaking process, we are simultaneously compensating for both within-subject and between-subject variability. If we were to test white bread over and over again using this protocol, we'd get the same result: a GI of 70.

The Tufts researchers did not satisfy the strict GI testing protocol. They repeatedly compared one test of the reference food (glucose) with one test of the test food (white bread). Inexplicably, they did this three times with three different groups of people. In a small sub-group of subjects who participated in all three groups (that is, who received the reference food on three occasions), the Tufts authors were able to calculate the GI according to the standard protocol. And lo and behold, they arrived at 70!

The Tufts study's within-subject variability was also heightened by the fact that it used venous sampling, not fingertip capillary sampling. Capillary testing is associated with much less variability than venous testing. We insist on capillary testing in the Australian Standard for GI testing (which is under review by the International Standards Organization).

The Tufts study uses the variability inherent in individual glycemic responses to criticise the GI. Were that a legitimate criticism, then that same variability could be used to denigrate carbohydrate counting as well. Can we be sure that 15 grams of carbohydrate in white bread will always give half the glycemic response of 30 grams? No, we can't. It will also vary for the same reason: day-to-day within-subject variability. Yet carb counting is considered a cornerstone of good diabetes self-care.

Meta-analyses show that a diet based on low GI carbohydrate foods (compared to a conventional low fat diet) will reduce A1c's by an average of 0.6 of a point, about the same amount as a serious exercise program. Other meta-analyses show that low GI diets improve blood lipids and weight control. Longer studies are still required, but long term prospective cohort studies indicate that diets with a low GI are likely to reduce the risk of chronic disease.

– also [published online](#) in Diabetes 3.health October 18, 2007

## The world is fat – some food for thought from Prof. Barry Popkin



Prof Barry Popkin

- ‘The long-held philosophy of agricultural experts is that once a country produces enough grains and tubers, it should massively subsidise its livestock, poultry and fish industries. The result has been a major reduction in the prices of animal-source foods.’
- ‘The drop in the cost of vegetable oils and animal-source foods combined with the recent increases in personal incomes in China, India and other developing nations, has led to a consumer revolution. People are rapidly abandoning their traditional low-fat high fibre diets and switching to meals of calorie-rich fats, sweeteners and refined carbohydrates.’
- ‘The world is getting fatter, and the annual rates of increase are higher today than they were 15 years ago. Representatives of the food industry have long insisted that governments should not restrict an individual’s dietary choices. Their solution is to teach people how to control their diets and become more physically active.’
- ‘This strategy ignores the vast social, technological and structural changes that are pushing millions of people into debilitating lives of obesity. If left unchecked, the nutrition transition will cause horrendous increases in illness and devastating reductions in life expectancy.’

– *Scientific American* September 2007

Barry Popkin’s book, *The World Is Fat* is in press and due for publication May 2008 (Penguin Press).

### **Are we sleepwalking towards obesity**

The technological revolution of the 20th century has led to weight gain becoming inevitable for most people, because our bodies and biological make-up are out of step with our surroundings, says the latest report from Foresight, the UK Government's futures think-tank.

‘Foresight has for the first time drawn together complex evidence to show that we must fight the notion that the current obesity epidemic arises from individual over-indulgence or laziness alone,’ said Sir David King, the Government's Chief Scientific Adviser and head of the Foresight Programme. ‘Personal responsibility is important, but our study shows the problem is much more complicated. It is a wake-up call for the nation, showing that only change across many elements of our society will help us tackle obesity. Stocking up on food was key to survival in prehistoric

times, but now with energy-dense, cheap foods, labour-saving devices, motorised transport and sedentary work, obesity is rapidly becoming a consequence of modern life.'

The Foresight project was an in-depth two-year study by almost 250 experts and scientists to examine the causes of obesity and map future trends to help the UK Government plan effective policies both now and in the future.

– Department For Innovation, Universities And Skills News Release

[Download the report](#): 'Tackling Obesities: Future Choices'

Posted by GI Group at [8:11 AM](#) \_

## **Low GI Food of the Month**

### **Mushrooms**

Mushrooms (which are fungi not veggies) have more going for them than you can imagine such as antioxidants (they up there with red capsicum and spinach), minerals like selenium and B vitamins including folate. They also have more protein than most vegetables. The GI isn't relevant because they have almost no carbs although they are a very good source of fibre. Their big selling point is that they are one of the tastiest, nutrient-rich, low energy-dense foods around (providing you don't serve them with butter and cream) with some 100 kJ/24 calories in a 100 g/3½ oz serving of button mushrooms. These are the sorts of foods you need to make a bigger part of your life and your plate to lose weight and keep it off or simply to stay a healthy weight in the first place. Remember, it's having excess weight, particularly that fat around your middle, that can make your blood glucose levels more difficult to manage because it contributes to insulin resistance.



### **What mushroom is that?**

- Button mushrooms are perfect to use raw in salads or as finger food with dips, skewered on a kebab or tossed into stir fries and pastas.
- Cups can be used whole, halved, quartered or sliced in soups, stews and stir fries.
- Flats are almost a meal in themselves. Try topping them to make a 'mushroom pizza', use a patty in a burger or pan fry in olive oil with fresh herbs.
- Oysters are best cooked quickly (add at the end of a stir-fry) and partner perfectly with seafood, chicken, veal and noodles.

- Shiitake are ideal for braises, stir-fries, soups and sauces – or simply tossed on the barbecue or char grilled.
- Swiss brown have a rich, earthy flavour. Add to risottos, casseroles and pasta or marinate and pop on an antipasto platter.
- Portobellos are big (a larger flat version of Swiss browns) and ideal for grilling or roasting or served as part of a meatless burger.
- Enoki are best enjoyed raw in salads or sandwiches or used in soups, clear broths and stir fries and Japanese dishes such as shabu shabu or sukiyaki used in Asian cooking. Great for salads.

For more on mushrooms, check out the Australian Mushroom Growers cookbook: Quick Recipes for Fresh Mushrooms. You can order a copy from: [www.oz-mushrooms.com.au](http://www.oz-mushrooms.com.au)

Posted by GI Group at [8:09 AM](#) \_

## **[Busting Food Myths with Nicole Senior](#)**

### **Eating late at night makes you fat**

In this day and age when everyone is busy, it's difficult to live by the old adage 'breakfast like a King, lunch like a prince, and dinner like a pauper'. The reality is many of us enjoy our main meal in the evening when the travails of the day are behind us. Is this making us fat? Looking at the science overall, the answer is no. When it comes to weight, the overarching principle is the balance between the kilojoules (calories) consumed versus the amount of energy used through physical activity. There are no studies to suggest that eating late at night causes weight gain, however there are possible reasons why big dinners and late night snacks might encourage it.

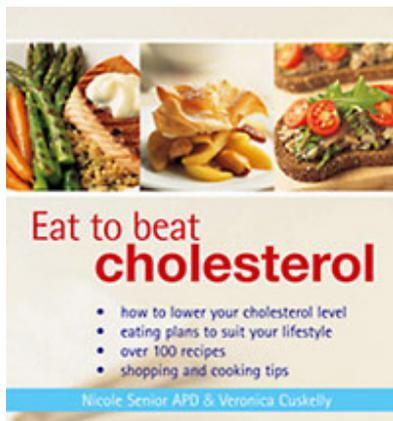


Nicole Senior

We know that our natural circadian rhythm prefers night for sleeping and not eating. Shift workers who turn their body clocks upside down tend to be heavier and at higher risk for cardiovascular disease. Studies in shift workers suggest that insulin levels are higher in the evenings and the effect of insulin in encouraging body fat storage is well known. While this may be a plausible mechanism for the idea that eating at night makes you fat, we just don't have the studies to provide a conclusive answer just yet. But do we really need them? Many people find they sleep better and feel fresher the morning after a lighter evening meal – try it for yourself and see.

Practically speaking, eating less at night may help you eat less overall, and perhaps curb that late night TV and chocolate/biscuit/ice cream habit. Choosing the right foods at night can also help control blood glucose levels. Low GI foods at the evening meal can reduce the glycemic response to breakfast the next day, a phenomenon known as the ‘second-meal effect’. Eating less at night may also create a new desire for breakfast, considered the most important meal of the day. It’s a good thing to wake up hungry. Stoke your metabolic furnace with a low GI breakfast such as traditional rolled oats, natural muesli, grainy toast, or a fruit smoothie and you’ll experience better blood glucose levels and less hunger through the morning.

When it comes to your dinner, don’t get too tied up with timetables but rather, focus on eating lots of vegetables or salad, low GI carbs, and modest portions of lean protein (eg meat/fish/chicken). And ask yourself: do I really need dessert? Perhaps finish off with a piece of fruit or cup of herb tea. And remember humans are marvellously adaptable. Culture, tradition and lifestyle are powerful influencers on our eating habits – just ask the Spanish who frequently dine late at night and sleep in the afternoon!



Click on the cover to purchase

Dietitian Nicole Senior is Nutrition Editor for Super Food Ideas and author of Eat to Beat Cholesterol. Check out: [www.eattobeatcholesterol.com.au](http://www.eattobeatcholesterol.com.au)

Posted by GI Group at [8:08 AM](#) \_\_

### **[Low GI Recipes of the Month](#)**

Our chef Kate Hemphill develops deliciously simple recipes for *GI News* that showcase seasonal ingredients and make it easy for you to cook healthy, low GI meals and snacks. For more of Kate’s fabulous fare, check out: [www.lovetocook.co.uk](http://www.lovetocook.co.uk). For now, prepare and share good food with family and friends.



Kate Hemphill

### **Tuna, Bean, Olive & Fennel Salad**

This is a lovely, nutritious meal, ideal for lunch or a light dinner – it's even easy to pack in a container and carry to work. You can make the tuna 'mash' and serve as a dip, or just spread on toast. If you want to use fresh tuna, just sear it in olive oil, and continue with the recipe. The fats are mostly good fats, but if you want to cut back, halve the amount of oil you use in cooking the tuna and in the salad.

Serves 2



110 g (4 oz) can good quality canned tuna in oil (Ortiz or Sirena)

1 x 400 g (14 oz) can butter beans, drained

1 lemon, juiced (to make 3 tablespoons juice)

1/4 teaspoon smoked paprika

toasted sourdough bread, to serve

### **Salad**

1 medium bulb fennel, shaved

1/4 butter or round lettuce, leaves torn

handful flat leaf parsley, roughly chopped

10 kalamata olives, pitted and halved

1 tablespoon extra virgin olive oil

- Put the tuna and oil from the can in a frying pan with half of the butter beans. Add 2 tablespoons lemon juice and the smoked paprika and heat gently, while mashing with a fork to bring together. Add salt and pepper to taste if you wish.
- In a bowl, mix the remaining butter beans with the fennel, lettuce, parsley and olives and toss with 1 tablespoon of lemon juice and 1 tablespoon extra virgin olive oil. Place the salad on plates, then spoon the warm tuna 'mash' on top, and serve with a slice of sourdough (to mop up the wonderful juices).

Nutritional analysis per serving without sourdough bread

1426 kJ/340 calories; 17 g protein; 23 g fat (includes 3 g saturated fat); 11 g carbohydrate; 8 g fibre

### **Vanilla Prunes**

These are a great accompaniment to the muesli recipe below. I always have a container of them in the fridge and every time I use a vanilla bean in any other recipes I add the pod to the container for extra flavour.

Makes 12 serves

500 g (1 lb 2 oz) prunes  
 300 ml (1¼ cups) water  
 1 tablespoon orange or lemon juice  
 1½ teaspoons pure vanilla extract  
 1 vanilla bean

- Place the prunes, water, juice and extract in a saucepan and scrape the seeds from the vanilla bean into the pan and add the pod too. Simmer on low heat for 20 minutes, or until the prunes are very soft and most of the water has evaporated and you are left with a lovely syrup. When cool, transfer to an airtight container and keep in the fridge.

Nutritional analysis per serving

209 kJ/50 calories; less than 1 g protein; less than 1 g fat; 10 g carbohydrate; 2 g fibre

### **Macadamia Muesli**

I keep seeing all these lovely, exotic mueslis in the shops and they cost a small fortune. It is so easy to make your own muesli, with all the bits and pieces you like. I don't add dried fruit to mine as I eat the muesli with fruit anyway. I also drizzle honey over it, so I don't like the muesli made too sweet. Play around with the recipe to suit your own taste and your family's (yes, even the kids will eat this) and if you want to make less, just make half the quantity. If you are adding dried fruit, do so after you toast the muesli.

A serving is 1/3 cup (about 35 g)



1 kg (2 lb 4 oz) thick milled organic rolled oats  
100 g (3½ oz) macadamia nuts, chopped  
100 g (3½ oz) sunflower seeds  
100 g (3½ oz) pumpkin seeds  
50 g (1¾ oz) linseeds (flaxseeds)

- Preheat oven to 170°C (325°F). Mix all the dry ingredients and spread on baking trays (you might need 2 or 3) so that the muesli is no more than 1 inch thick.
- Bake muesli, stirring every 10 minutes. The nuts have a high oil content so you have to watch they don't burn. After 30 minutes, when there is light colour on the muesli, turn the oven off and leave the trays in there overnight, or until cool. Transfer to an airtight container. Serve with yoghurt, honey if desired and fruit.

Nutritional analysis per serving (35 g or 1/3 cup)  
650 kJ/155 calories; 4.5 g protein; 7 g fat (includes 1 g saturated fat); 17 g carbohydrate; 2.5 g fibre

Posted by GI Group at [8:08 AM](#) \_\_

## [Your Success Stories](#)

### **'I have shared this website with my patients and the results have been amazing' – family doctor from Canada**

'When I first encountered the concept of glycemic index, I was very curious. The rigorous testing and evidence presented on this site along with the information has impressed and convinced me of its validity. I have shared this website and the information with several of my patients and the results have been amazing. In my 16 years of practice, this has been the most immediate benefit that has come from half an hour of discussion with a patient who is struggling with obesity, polycystic ovarian disease or diabetes. My patients have returned with reports of having increasing energy, better sleep, no further cravings for sugar, improved mood and weight loss averaging 3-4 pounds a week. They are naturally moving towards increasing their activity level as they gain more energy.

- "I feel alive for the first time in years and my depression/anxiety symptoms are getting less" was a recent testimonial from a patient.

- “I have gone from a size 14 to a size 10 in four months, look at what my oversized bosom now looks like. I want the last eight years of my life back” was another recent comment from a patient.

I believe that a low GI/GL diet as an adjunct and when appropriate as an alternative to pharmaceutical management is leading patients towards managing diabetes like never before.’



**‘My dietitian said I should be the poster child for the low GI diet’ – Carol from Colorado**

‘I just came from a visit with my dietitian. I got a positive report. My A1c is at 6.7 and over all cholesterol is down from 195 to 161. Tryglerides 116 – down from 161; LDL 117 – down from 133. I was diagnosed with type 2 diabetes in July 2006, after a stroke. At 198 lb, and with a clotting disorder that is treated by coumadin therapy, it was a big adjustment for me to regulate my diet to accommodate both the glyberide and the coumadin. The up side to that is that I had changed my diet so drastically that I no longer needed the pill. I had lost 20 lb in the first 10 days. I continued to stay away from coffee, sugar (refined) or any processed food. I could not eat artificial sweeteners due to a history of seizures.

It was difficult to prepare my own meals. I received pointers from my dietitian and the general ADA stuff, but my daughter-in-law had done some low GI dieting and she pointed me in the right direction. So with some divine intervention about which foods to prepare, I was able to prepare and freeze meals for myself on the weekends. With my husband’s help, we prepared lunches that consisted of chicken (without hormones or antibiotics), green beans, great northern beans, brown rice, and I would finish off with a serving of peaches. For dinner it was chicken again with a baked russet potato (1/3 cup) and a pat of butter, peas, baby carrots and a plum. I would have a morning snack of cantaloupe with strawberries and a cheese stick and in the afternoon a few grapes or grapes and sweet cherries and a cheese stick. My breakfast consisted of shredded wheat, a boiled egg, 1/2 banana and a cup of milk.

After recommending the low GI Revolution books by Brand-Miller et al my dietitian saw me and remarked how well I had done. She said I should be the poster child for the low GI diet because with my evening snack, of plain yoghurt, strawberries and almonds I have incorporated six small frequent meals into my day. Oh, and I changed my breakfast to rolled oats with stevia. And in doing so I have dropped 58 lb and my body mass index (BMI) has gone from 35 to 25. I am no longer considered obese, and I am only 1 point away from a normal BMI). Only 5 more pounds!

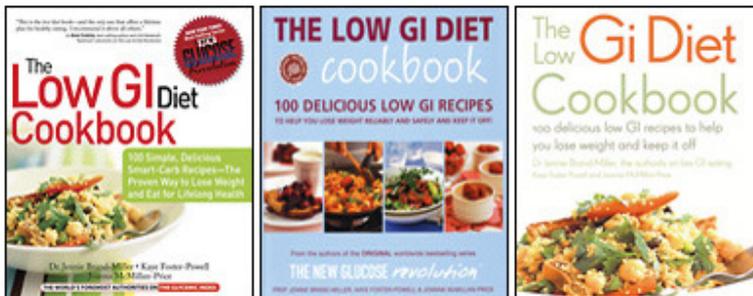
Now with other tools, such as Dr Brand-Miller’s books, cookbooks and this website, I have

many other options and I believe that it will get easier to add variety to my diet and help keep me on a healthy track. My next objective is to add some green leafy salad to my daily evening meal to help round out my diet. I will also take a multi-vitamin supplement. The trick is incorporating these into the coumadin regime. I am waiting for Dr Brand-Miller's book entitled: *Coumadin Therapy and the New Glucose Revolution (or How to balance your diet while maintaining glucose levels, weight, wellness, and vitamin K).*'

### Inspire others. Share your GI story.

If healthy eating the GI way has made a difference to your life by helping you achieve blood glucose control or lose weight, **please share your story** with readers of *GI News*. It's the real life success stories that give people the motivation they need to get started and help them appreciate that they are not alone. Just click anywhere in this text box to share your story. As a thank you, we will send you a copy of *The Low GI Diet Cookbook* or *The Low GI Vegetarian Cookbook* if your story is published in *GI News*.

We'll send you a free copy of *The Low GI Diet Cookbook* or *The Low GI Vegetarian Cookbook* if your story is published.



Posted by GI Group at [8:06 AM](#) \_\_

## [Move It & Lose It with Professor Trim](#)

### Breaking through weight loss plateaus

Here's something you won't read about in the women's magazines: Weight loss is not a linear process. In other words, you're unlikely to lose a steady 1 or 2 kilograms per week until you get down to where you want to be. The truth is weight loss is a dynamic process. Change one thing (food or exercise), and your body changes other things (the rate at which you burn energy, your level of hunger, the rate at which your body converts food into fat) to make sure that you don't disappear. Even someone starving to death will hit spots where weight loss stops for a while as the body adjusts to what is going on. What do we know about plateaus? The answer is not much. But here's a few tips.



Dr Garry Egger aka Prof Trim

1. Everyone losing (or gaining) weight will hit a plateau (or several plateaus) at some stage.
2. There are big individual differences in the timing and lengths of plateaus probably dependent on things like how long someone has been overweight, age, gender and the actions taken to lose weight.
3. A plateau is natural and is a period of adaptation. The great Harvard Nutritionist Jean Mayer once said: “Like a wise man will reduce spending when his income is cut, the body reduces the amount of energy it expends when energy intake (food) is reduced”.
4. Change is likely to be the best weapon against plateau-ing. Adaptation of the body comes about largely through routine ie. eating, drinking and exercising the same in relation to food intake over time. Similarly a change to the routine in the opposite direction is likely to cause a breakthrough in adaptation and a drop off a weight loss plateau.

#### **Break through with change**

<b>General</b>	<b>Energy intake</b>	<b>Energy expenditure</b>
Take a holiday	Try new foods	Try different exercises
Go to bed earlier	Change eating patterns	Add weights to exercise
Get up later	Try different drinks	Increase speed
Go camping	Eat different foods	Walk a different route
Go bushwalking	Go low GI	Stand for longer

– Click for more information on [Professor Trim](#).

Posted by GI Group at [8:05 AM](#) \_\_

### **[Dr David’s Tips for Raising Healthy Kids](#)**

#### **Children’s livers turning fatty**

While it's known being overweight is a big reason for the rising number of children with type 2 diabetes, it's also increasing the prevalence of another dangerous condition: non-alcoholic fatty liver disease (NAFLD). This is a silent but dangerous epidemic. Just as type 2 diabetes exploded into our consciousness in the 1990s, so we at Children’s Hospital Boston think fatty liver will in the coming decade. Already it’s one of the most common yet least recognized complications of obesity – as many as one in three overweight children and one in two overweight adults have evidence of excessive fat accumulation in the liver. Fatty liver usually has no symptoms, but it

can lead to hepatitis and sometimes progress to cirrhosis and liver failure.



Dr David Ludwig

We wanted to see if a high GI diet would cause fatty liver. Of course we couldn't use children in such a study, so we fed either a high GI or a low GI diet to mice. The diets were equal in calories, fat, protein and carbohydrates. After six months on the diet, the mice in both groups weighed the same, but those fed the high GI diet had twice as much fat in their bodies, blood and livers. Our findings (published in *Obesity*, 2007;15) create a very strong argument that a high GI diet causes, and a low GI diet prevents, fatty liver in humans.

Here's what happens. The glucose released into the blood after a high GI food ramps up insulin production, which tells the body to make and store fat. This process can be most dramatic in the liver because it is located just upstream from the pancreas, so concentrations of insulin can be extremely high in the liver after a high GI meal

A study on people living in Italy who ate high GI food showed they had fatter livers, but the study wasn't tightly controlled, whereas this study on mice shows that high GI carbohydrates can cause fatty liver in animals, regardless of other diet and lifestyle factors. We have now launched a clinical trial involving overweight children aged from 8 to 17 who will be randomised to either a high GI or a low GI diet. We hope to show that a low GI diet can reverse fatty liver in overweight children.

The current standard treatment for being overweight involves putting children on low fat diets, but that doesn't work for many children with fatty liver. Low fat diets could make things worse if they replace fat with high GI sugars and starches. Two low fat Twinkies, billed as a health food, contain the same amount of carbohydrate as an oral glucose tolerance test, which is used to determine whether someone has diabetes.

– Dr David Ludwig is Director of the Optimal Weight for Life (OWL) program at Children's Hospital Boston and author of [\*Ending the Food Fight\*](#)

Posted by GI Group at [8:04 AM](#) \_

## Books, DVDs, Websites: What's New?

### **Sue Shepherd's new book: Gluten-free Cooking**

We decided show was better than tell for *Gluten-free Cooking* by Sue Shepherd. The recipes aren't specifically designed to be low GI, but some are. Sue is a dietitian who also has coeliac disease. She is completing her PhD in the dietary management of coeliac disease, irritable bowel syndrome and fructose malabsorption. Check out her website for more information:

[www.coeliac.com.au](http://www.coeliac.com.au)

Sue's pikelets are ideal for lunch boxes and a great way to get extra veggies into unsuspecting mouths. To cut back on saturated fat you may want to replace the butter with poly- or monounsaturated margarine. And of course use reduced fat milk. It's a perfect recipe for older kids to make after school. Remember what Dr David said last month about healthy 'mindful' snacks the kids have to prepare themselves if they want to watch TV.

### **Cheese and corn savoury pikelets**

Makes 15–20



- 1 cup fine rice flour
- ½ cup soy flour
- ½ cup fine polenta
- ¾ teaspoon bicarbonate of soda
- 1 teaspoon xanthan gum (optional)
- 2 eggs, lightly beaten
- 1¼ cups milk (or lactose-free milk)
- 1 cup grated parmesan
- 1 cup canned corn kernels, drained
- ½ cup grated zucchini/courgette (optional)
- 40 g ( 1½ oz) butter, melted

- Sift the flours, polenta, bicarbonate of soda and xanthan gum three times into a large bowl (or mix well with a whisk to make sure they are well combined). Combine the egg,

milk, parmesan, corn and zucchini (if using) in a medium bowl. Pour into the dry ingredients and mix with a spoon until well combined. Stir in the melted butter and leave to rest for 10 minutes.

- Heat a large frying pan over low-medium heat for 2 minutes. Spray with oil then pour in 2 tablespoons of batter for each pikelet.
- Cook for 2–3 minutes until bubbles appear. Flip over and cook a further 2 minutes.

Posted by GI Group at [8:04 AM](#) \_\_

## **[Feedback—Your FAQs Answered](#)**

### **Why is the GI of Frosties (55) lower than Kellogg's Corn Flakes (77), Crunchy Nut Corn Flakes (72) and Skippy Cornflakes (93)?**

Many people assume that the higher the sugar content, the higher the GI. But in fact, starch in cornflakes is very rapidly digested and absorbed (it's been fully 'gelatinised' during processing), giving the product its high GI. When you incorporate sugar into the recipe, you reduce the GI for two reasons:

- Sucrose has a lower GI than the starch in cornflakes.
- The presence of sugar reduces the ability of the starch to gelatinise by tying up water molecules.

Both effects work together to give Frosties its lower GI. And by the way, there is absolutely no difference in calories or nutrient content of Frosties vs cornflakes. Processed starch is pretty empty of micronutrients, just like sugar.



**So what you are saying is that even though Frosties has a much lower GI than cornflakes, there would be no benefits in eating the one with the lower GI? I thought that the lower GI was what I was supposed to look for when choosing breakfast cereals**

When choosing foods the GI isn't meant to be used on its own. The nutritional benefits of foods are many and varied and that's why we suggest you base your food choices on the overall nutritional content along with the amount of saturated fat, fibre, salt and of course the GI value. So although Frosties have a lower GI, nutritionally they are much the same as cornflakes. However, they won't spike your blood glucose in quite the same way as cornflakes will, so

would be a better choice for sustained energy. But better still, opt for a nutrient-rich, low GI breakfast cereal such as wholegrain oats, muesli or a high-fibre breakfast biscuit.

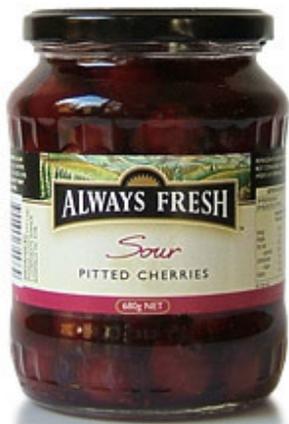
Posted by GI Group at [8:02 AM](#) \_

## [GI Values Update](#)

### **New values from SUGiRS**

#### **Sour (tart) cherries**

Sour cherries may be good for more than just making pie, according to an oral presentation of findings from an animal study conducted by University of Michigan researchers at the Experimental Biology 2007 meeting in Washington, D.C. The researchers report that rats that received powdered tart cherries in their diet had lower total cholesterol, lower blood sugar, less fat storage in the liver, lower oxidative stress and increased production of a molecule that helps the body handle fat and sugar, compared with rats that had a similar diet but didn't get the cherry on top. The key is anthocyanins, natural compounds which help stop cholesterol clogging up arteries. Sour cherries are especially rich in them. They also have a low GI. But the season is short, so the way to make the most of these treasures is frozen, dried or bottled (jarred). Way back in October 2005, we published the GI values for Montmorency frozen (GI 54) and dried tart cherries (GI 58). In recent months we've discovered big jars of juicy Always Fresh bottled Sour Pitted Cherries on the supermarket shelves. Quite a few of the GI Group have become addicted – they are absolutely delicious with muesli and yoghurt for breakfast. So we tested them. And all we can say is enjoy them with your breakfast along with the health benefits.



#### **Always Fresh Sour (tart) Pitted Cherries**

GI = 41, Serving Size = 50 g, Available Carbs = 17 g, GL = 7

Always Fresh Sour Pitted Cherries are made from morello cherries and can be used in recipes from cherry pie to fruit salads or simply served as a topping for muesli, yoghurt or ice-cream

(reduced fat of course).

### **Where can I get more information on GI testing?**

#### **North America**

Dr Alexandra Jenkins  
Glycemic Index Laboratories  
36 Lombard Street, Suite 100  
Toronto, Ontario M5C 2X3 Canada  
Phone +1 416 861 0506  
Email [info@gilabs.com](mailto:info@gilabs.com)  
Web [www.gilabs.com](http://www.gilabs.com)

#### **Australia**

Fiona Atkinson



Research Manager, Sydney University Glycemic Index Research Service (SUGiRS)  
Human Nutrition Unit, School of Molecular and Microbial Biosciences  
Sydney University  
NSW 2006 Australia  
Phone + 61 2 9351 6018  
Fax: + 61 2 9351 6022  
Email [sugirs@mmb.usyd.edu.au](mailto:sugirs@mmb.usyd.edu.au)  
Web [www.glycemicindex.com](http://www.glycemicindex.com)

#### **New Zealand**

Dr Tracy Perry  
The Glycemic Research Group, Dept of Human Nutrition  
University of Otago  
PO Box 56 Dunedin New Zealand  
Phone +64 3 479 7508  
Email [tracy.perry@stonebow.otago.ac.nz](mailto:tracy.perry@stonebow.otago.ac.nz)  
Web [glycemicindex.otago.ac.nz](http://glycemicindex.otago.ac.nz)

## GI Symbol News



### **Trans fats regulation added to nutrient criteria for GI Symbol**

GI Limited CEO Alan Barclay talks to GI News about trans fats:

‘Trans fats were not thought to be a major issue back in the late 1990s when the GI Symbol program was developed, and in fact there was very little information about the trans fat content of Australian and New Zealand foods. Since then, many foods have had their trans fat content measured, and modelling has been carried out by Food Standards Australia New Zealand. It appears that the trans fat intake of the average Australian and New Zealander is well within the World Health Organisation’s limits, although some foods still contain appreciable amounts and could potentially pose a health problem if consumed in large amounts. After investigating the way that trans fats are regulated around the world, GI Ltd decided to base their trans fat criterion on the model used by the Danes and this has been added to the Sandwich Spread category at this stage. It may be extended to other food categories, following the completion of a more extensive review of the GI Symbol program’s nutrient criteria by early 2008.’



### **New Muesli Bar category**

By their very nature, muesli bars contain a variety of nuts and seeds that are naturally high in fat (mostly the healthy unsaturated kinds). However, as a consequence of this, no muesli bars could ever meet the GI Symbol criteria. To help consumers identify healthier choices within a broad range of popular food categories including muesli bars, GI Ltd have developed criteria for a special Muesli Bar category after an extensive review of the products available in Australia and the Australian and New Zealand food databases.

For more information on the new trans fats criteria or muesli bar category contact GI Ltd CEO Alan Barclay: Email: [awbarclay@optusnet.com.au](mailto:awbarclay@optusnet.com.au)

### **Where can I get more information on the GI Symbol program?**

Alan Barclay



CEO, Glycemic Index Ltd

Phone: +61 2 9785 1037

Fax: +61 2 9785 1037

Email: [awbarclay@optusnet.com.au](mailto:awbarclay@optusnet.com.au)

Web [www.gisymbol.com.au](http://www.gisymbol.com.au)

See The New Glucose Revolution on [YouTube](#)