

GI News—February 2010



- Better breads for blood glucose
- How to pick a low GI bread
- Why 'wholegrain' and 'low GI' are not the same
- Does gluten cause your symptoms?
- Does sugar make kids hyper? Nicole Senior investigates
- Coffee, tea and diabetes risk: what you need to know

A simple 'this for that' swap is all it takes to reduce the GI of your diet. Because it's the type of bread (and breakfast cereal) you eat that can affect the overall GI of your diet the most, we give you some key tips for swapping those high GI breads with low ones that will steadily trickle fuel into your engine in Food for Thought. In GI Update Prof Jennie Brand-Miller explains why wholegrain and low GI are not the same.

Good eating, good health and good reading.

Editor: Philippa Sandall

Web management and design: Alan Barclay, PhD

Food for Thought

Better breads for blood glucose

However you slice it, bread is truly a staple food. It's not particularly fattening (a typical slice has around 300 kJ/70 cal) so long as you watch what you spread on it, and it's an affordable convenience food. However, most breads on supermarket shelves – and that includes most English style muffins and bagels, baguettes, rolls, burger buns, Turkish (pide) bread and pocket (pita or Lebanese) breads – are made from quickly digested highly refined flours (white or wholemeal) that can send your blood glucose soaring. If you make the 'this for that' switch to a low GI bread for your sandwiches and toast, you will be well on your way to reducing the overall GI of your diet, managing the blood glucose roller coaster and trickling those smart slow carbs into your engine for sustained energy.

How do you know which ones are low GI? Well, you can look for the GI Symbol if you live in Australia or New Zealand or check out *The Shopper's Guide to GI Values 2010*. Otherwise, here's what we suggest. Look for:

- Grainy wholegrain breads such as 'multigrain' contain lots of 'grainy bits' right in the bread (not just on top for decoration). They tend to have a slightly chewy texture.
- Soy and linseed tends to be a moist bread with good keeping qualities. It's typically made by adding kibbled soy beans or soy flour and linseeds to bread dough. These breads are also rich in omega-3 fatty acids (the good essential oils).
- Crusty, chewy traditionally made sourdough's characteristic flavour comes from the slow fermentation process, which produces a build-up of organic acids.
- There are several types of fruit loaves or breads which include raisins, sultanas, dried apricots or apple, figs and sometimes nuts and seeds. Generally, the heavier, dense fruity breads will have a lower GI.
- Pumpernickel, a traditional rye bread from Germany, can be something of an acquired taste. It's a very good source of fibre and thanks to its high proportion of whole cereal grains, has a low GI value. It is usually sold thinly sliced and vacuum packed for long shelf life.

If you like to buy your bread from a specialty bakery or hot bread shop (no labels at all), look for really grainy wholegrain breads, a traditionally made sourdough, or soy and linseed breads. If you want a general rule of thumb: the higher the proportion of kibbled grains (ideally around 20%), the coarser textured, denser and less processed a bread is, the lower its GI is likely to be from these outlets.

A word of warning: Don't overspread yourself. It's what goes on the bread or into the sandwiches that can really pile on the calories.

News Briefs

Bread: This for that #1

The simple change from regular white bread to a low GI bread could reduce the risk of type 2 diabetes according to Australian researchers from the Cancer council of Victoria. The study published in *Diabetes Care*

(<http://care.diabetesjournals.org/content/27/11/2701.abstract>) looked at the diets

and health records of more than 36,000 men and women in Australia for four years and found white bread was the food most strongly related to diabetes incidence—participants who ate the most white bread (more than 17 slices per week) had the highest risk of type 2 diabetes.

A small Swedish cross-over study of seven women with impaired glucose tolerance and a history of gestational diabetes published in the *European Journal of Clinical Nutrition* (www.nature.com/ejcn/journal/v60/n3/abs/1602319a.html) highlights the immediate value of making the ‘this for that’ switch. For the study, the women were given either a low GI bread that was specially baked and was rich in fibre or a high GI, low fibre bread during consecutive 3-week periods separated by a 3-week washout period. The results were unanimous. All the women reduced their post-meal insulin responses after eating low GI, high fibre bread compared with eating the high GI, low fibre bread.

Bread: This for that #2

‘A lack of satisfying, filling foods is a hurdle for many people when trying to maintain a balanced, healthy diet,’ says Prof. Jennie Brand-Miller. ‘We found that your daily bread choice can play a role in satisfying hunger and decreasing food intake at a subsequent meal.’ Researchers in the Human Nutrition Unit at Sydney University carried out the lab-based [unpublished] study for George Weston Foods from January–March 2008.

Twenty healthy weight (BMI 18–25) volunteers aged 18–45 were randomly asked to breakfast on either two slices of Burgen Wholemeal & Seeds bread (GI 39) or two slices of standard white sandwich bread (GI 70) with margarine and jam and a glass of water and rank their feelings of fullness. They also had to list their subsequent meal’s food intake. The volunteers stated that they felt fuller for longer after the low GI bread breakfast and, on average, reduced their intake at the next meal by 500 kilojoules (120 cal) and 4 g of fat compared with the standard white bread breakfast. They also had a lower glycemic response to the low GI bread brekkie, which may have contributed to keeping hunger pangs at bay. The low GI bread was also a good source of fibre and provided some protein which may have also helped to provide the greater satiety response.

Does gluten cause your gut symptoms?

At the Nutrition Society of Australia conference in December 2009, PhD candidate Jessica Biesiekierski reported on her initial study that found for the first time,

evidence that gluten itself may trigger gut symptoms such as bloating, wind and pain and also fatigue in individuals who do not have coeliac disease. To understand how and why, Jessica is currently recruiting for a follow up study beginning January 2010. Details of the new study follow.

Volunteers are required for an Australian trial investigating gluten intolerance in people who do NOT have coeliac disease. The research team is seeking participants living in Melbourne (Australia) who:

- Feel the gluten-free diet has relieved their gut symptoms
- Have had coeliac disease ruled out
- Have currently well controlled symptoms
- Follow a gluten free diet
- Are aged 16 years or older

The research will be conducted by the Department of Gastroenterology, Box Hill Hospital. The study will involve consuming gluten at two different levels for 7 days each (all food will be provided – and Jessica has hired a pastry chef to make sure the food is fabulously tasty), completing bowel symptom and food diaries, a blood sample and collecting faecal samples. All information is kept strictly confidential. To find out more information about this new research study, contact:

Email: Jessica.Biesiekierski@med.monash.edu.au

Tel: (03) 9094 9530 or 0422 176 052

Relieving stress on insulin-producing cells may prevent diabetes

Cells in your body are constantly churning out poisonous forms of oxygen (oxidants) and mopping them up with a countervailing force of proteins and chemicals (anti-oxidants). This balancing act of oxidative stress is particularly likely to go haywire in beta cells, the insulin-producing cells that malfunction and then start to die off in Type 2 diabetes.

Writing in The FASEB Journal (www.fasebj.org/cgi/content/abstract/fj.09-136572v1), scientists at Joslin Diabetes Center report on a study (in mice) that found that a relatively little-studied enzyme plays a central role in defending beta cells against oxidants, but is damaged by the high levels of blood glucose produced in diabetes.

'The research showed that an essential antioxidant called NADPH, on which all cellular antioxidants ultimately depend, can regulate the growth and death of beta cells,' says Joslin Principal Investigator Robert Stanton, M.D. The researchers went on to demonstrate that increases in the level of blood glucose cause a decrease in NADPH that ends up killing beta cells – and that increasing the level of this antioxidant guards against this effect, at least in mouse beta cells. Stanton says the discovery raises hopes of finding drugs that protect the enzyme, and thus the beta cells and their insulin production. Such drugs could help to stem the tide against type 2 diabetes, which now afflicts more than a quarter of a billion people worldwide.

Coffee, tea and diabetes risk

Drinking three to four cups of regular or decaffeinated coffee and tea may reduce the risk of developing diabetes by 25% says a new review and meta-analysis of the data from prospective studies published in Archives of Internal Medicine (<http://archinte.ama-assn.org/cgi/content/abstract/169/22/2053>). The reviewers, led by Dr Rachel Huxley from the University of Sydney, Australia found that for each additional daily cup of coffee was associated with a 7% reduction in the excess risk of diabetes.

Huxley and her co-workers reviewed data of over 500,000 individuals with over 21,000 cases of type-2 diabetes from prospective studies. Eighteen studies looked at coffee, six studies also included information about decaffeinated coffee, and seven studies reported on tea consumption. In addition to risk-lowering effects of additional regular coffee consumption, three to four cups of decaffeinated coffee were associated with a 33% lower risk of diabetes, compared to drinking no decaf. Tea drinkers also benefited, with three to four cups associated with a one-fifth lower risk. Huxley and her co-workers noted that because of risk reductions associated with decaffeinated coffee, the effects were unlikely to be due solely to caffeine. Other compounds in coffee and tea, such as magnesium, antioxidant lignans or chlorogenic acids, may be involved.

Comment: Professor Lars Rydén (spokesperson for the European Society of Cardiology), who is a diabetes specialist, says: 'This is a cautiously and carefully conducted meta-analysis which means authors have carefully conducted studies although each are too small to give an answer to the question although they indicate a positive correlation between the consumption of coffee and a decreasing occurrence of diabetes. So the principle is that if you drink coffee whether it is decaffeinated or not, you have less chance of developing diabetes. The data has been strengthened by

bringing several studies together.

There are sometimes claims that coffee may do harm, that it may increase the propensity to cardiovascular disease, but there is no evidence for this. The message is that people may drink coffee safely. Coffee from this point of view may actually be of benefit, as well as reducing the risk of getting diabetes – although the reduction is small (around 7%).’

‘Coffee helps, but other things are even more important. Those who are overweight should reduce their bodyweight by 5–10% – not too much – and include physical activity such as a brisk walk for 30 minutes a day. Then those people who are at risk of developing diabetes will reduce this risk by 40–50%.’

Renovate your Recipes

Renovate your recipes – tips for reducing the amount and improving the quality of fat

Renovate your recipes: Fat - tips for reducing the amount and improving the quality. The problem with fat is the amount we eat, sometimes without realising it. Fat provides more calories per gram (9 cal or 37 kJ) than protein or carbs (4 cal per gram each), which is why fat is a good place to start when giving your recipes a healthy makeover. It's not just the quantity you have to think about, it's the quality - the type of fat can make a big difference to your health and waistline. It's not too hard to give your favourite recipes a healthy renovation to reduce the amount or improve the quality of the fat. Here are dietitian Kaye Foster-Powell's 3 simple steps to get you started.

1. Substitute.

- Make that dessert or white sauce with reduced fat or skim milk instead of full cream milk, replace cream with low fat evaporated milk or yoghurt or buttermilk thickened with a little corn flour.
- Try light sour cream or crème fraiche or low fat yoghurt or reduced fat ricotta instead of regular sour cream.
- Use filo brushed with skim milk or water or even orange juice if it's for a dessert instead of regular pastry,
- Pick the skinless chicken fillets, the leanest mince, fat reduced sausages,

- Use one of the good oils in your cooking instead of butter and a reduced fat cheese.

2. Reduce.

- Cut back the quantity of meat, particularly if it's a fattier cut like bacon or sausage (many recipes have way too much). For 4 people you need around 500 grams (1 lb 2 oz) meat or chicken - the bonus is the savings on the weekly housekeeping budget. Add extra vegetables or legumes to bulk out the recipe and boost the nutrition.
- Go halves, too. Many recipes have a very heavy hand when it comes to cheese and the amount of oil. If a recipe asks for 1 cup of shredded cheese for that cheesy topping, a ½ cup extended with some low GI breadcrumbs or rolled oats or even wheatgerm will do the job just as well. And if it's for a sauce, use less cheese but a sharper tasting one to deliver the flavour.
- If you warm the frying pan a little first then you only need 1 tablespoon of oil to sauté those onions or leeks not 2 or 3 tablespoons. And measure your oil for cooking don't tip and guess.
- Try reducing the amount of margarine or butter in your baking and adding fruit puree or egg whites as a partial substitute.

3. Eliminate. Yes, leave it out altogether.

- That means leaving out cream most of the time (see our substitute suggestions above).
- It also means doing simple things like trimming the visible fat from meat or chicken before cooking or making soups and stews the day before, chilling them overnight and skimming the fat from the top before reheating and serving.
- By using lighter and healthier cooking methods - grilling (broiling), roasting on a rack, steaming or barbecuing – you will naturally reduce the amount of fat (and calories) in a recipe.

Your easy guide to 100 low GI carbs

The January-February issue of *Diabetic Living* magazine (Australian edition, \$7.95) comes with a booklet called: *Your 100 Best Carbs for Healthy Low GI*. Look for it in newsagents now.

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.

Orecchiette and broccoli alla Franca

I've known Franca almost as long as I know my husband (39 years). They were high school friends and anytime we visit my husband's hometown, Reggio Emilia (about 30 minutes west of Bologna), we always wind up at Franca's house for dinner. Her culinary prowess is as acclaimed as her affable personality, wit and contagious laugh. Recently I asked her for a low GI recipe that I could share with readers; she wrote this up for me in less than 5 minutes! Orecchiette are 'little ears' pasta shapes, but you could use your favourite shapes for this.

Serves 4

250g (1/2 lb) head of fresh broccoli

250g (8 oz) uncooked orecchiette

1 oz. freshly grated pecorino romano cheese

1–2 cloves garlic, minced

3 tablespoons extra virgin olive oil

- Bring 5 litres (quarts) of water to a boil and add 1 heaped tablespoon kosher (sea) salt.
- In the meantime, wash the broccoli and divide it up into small florets, trim the stems and cut into small slices.
- When the water starts to boil, add the broccoli and the pasta at the same time. Cook over moderate heat for 10–11 minutes, stirring frequently with a wooden spoon.
- While the pasta and broccoli are cooking, combine half the cheese, the garlic, 2–3 tablespoons of the cooking water and 1 tablespoon of the oil in a small bowl; mix to form a dense 'cheese paste'.
- When the pasta and broccoli are cooked, drain them, keeping aside ½ cup of the cooking water.

- Place the pasta quickly in a preheated serving bowl, add the remaining olive oil (2 tablespoons) and the cheese paste. Add some of the reserved cooking water if the pasta is too dry. Serve immediately with extra grated cheese sprinkled on top.

Franca says: Instead of the garlic, one can substitute 2–3 anchovies in oil, smashing them with a fork and adding them to the cheese.

Per serving (without the extra cheese)

Energy: 1617 kJ/ 385 cal; Protein 16 g; Fat 14 g (includes 3 g saturated fat and 7 mg cholesterol); Carbs 53 g; Fibre 9 g

Cut back on the food bills and enjoy fresh-tasting, easily prepared, seasonal, satisfying and delicious low or moderate GI meals that don't compromise on quality and flavour one little bit with *Money Saving Meals* author **Diane Temple**. For more recipes check out Diane's Money Saving Meals website (www.moneysavingmeals.com.au).

Chicken and corn nuggets

The next time the clamour for takeaway starts, try these lightly pan fried nuggets' with crispy low GI breadcrumbs for satisfying crunch. You can also bake them, but they take a little longer to cook. Made this way, they are a quick and budget friendly meal, tasty finger food when entertaining or ideal for lunch boxes. These work out at about 32 cents a nugget (AUD\$1.30 for 4), less if you buy the mince on special. Freeze uncooked patties and cook after thawing in the fridge. I serve them with crudités (carrot, celery, tiny tomatoes, blanched snow peas) when my daughter's friends come round for a sleepover, and there are always clean plates (yes, all the veggies are eaten too).

Makes about 30

500 g (1 lb 2 oz) chicken mince
1 tablespoon soy sauce
2 cloves garlic, crushed
125 g (4 oz) can corn kernels, drained
1 cup fresh low GI multigrain breadcrumbs
2 tablespoon chopped chives
½ cup dried multigrain breadcrumbs (see tip below)
2 tablespoons canola oil

To serve

Celery and carrot sticks

Tiny tomatoes

Blanched snowpeas (mangetout) or sugar snap peas

Crispy green beans

Tomato, barbecue or sweet chilli sauce

- Mix the chicken mince, soy sauce, garlic, corn kernels, fresh breadcrumbs and chives together. With damp hands, roll 1 tablespoon of the mixture into a ball, then flatten it slightly. Repeat with the rest of the mixture. Roll each nugget in dry breadcrumbs and chill in the fridge for 10–20 minutes, if you have time (they will stick better).
- Heat the oil in a large non-stick frying pan and cook the nuggets in batches (about 2 minutes each side) until golden brown and cooked through. Place them on a tray lined with paper towel. Repeat with remaining nuggets.

Per nugget

Energy: 236 kJ/ 56 cal; Protein 4 g; Fat 4 g (includes 0.5 g saturated fat and 15 mg cholesterol); Carbs 3 g; Fibre 0.5 g

Diane's Money Saving Meals tips for making low GI breadcrumbs

Crumbs are great for topping dishes like macaroni cheese or potato bakes, for crumbing pieces of fish, chicken or meat before pan-frying, or for sprinkling over grilled tomatoes or stuffed mushrooms. Keep those stale bits of low GI bread or crusts and make your own 'fresh' crumbs by whizzing them in the food processor and freezing in an airtight container so you have them when you need them.

To make 1 cup dried breadcrumbs, cut four slices of low GI grainy bread (or gluten-free bread) into four pieces each. Place the squares on a wire rack in a baking dish and bake in a preheated oven (180°C/350°F) for 10–15 minutes until just coloured. Turn off the oven and leave the bread there for a further 20–25 minutes until it is hard. Break into smaller pieces and whiz in a food processor until crumbed. Or put in a strong plastic bag and crush with a rolling pin.

To flavour crumbs when cooking add some:

- Lightly toasted sesame seeds
- Freshly chopped herbs or dried
- Spices or spice blends – cumin, paprika, cayenne

- Pesto (any flavour) especially for crumb toppings for grilled tomatoes or stuffed mushrooms
- Lemon zest for chicken, fish, lamb or veal; lime zest for chicken, fish or seafood; and orange zest for pork or veal.

Busting Food Myths with Nicole Senior

Myth: *Sugar causes hyperactivity in children.*

Fact: *Food is not a big causal factor in hyperactivity, and sugar is not the culprit.*

The scientific jury is in – sugar is not to blame for hyperactivity in children. There is no good evidence and no plausible mechanism, however food may still play a part – especially for a small minority of children. Sugar per se is not implicated in hyperactivity but it is found in many foods such as confectionary and soft drinks which also contain chemicals a small number of sensitive children can react to.

Hyperactivity is now known as Attention Deficit Hyperactivity Disorder (ADHD) and covers a spectrum of difficult behaviours. It has a strong genetic basis and can be affected by a variety of physiological and environmental factors including exposure to alcohol and smoking in the womb. A small number of children are sensitive to food colours and preservatives which can result in adverse behavioural symptoms like those of ADHD. It is thought these chemicals behave more like a drug than a food on the nervous system of sensitive individuals, affecting mood, attention, concentration and impulsivity.

The idea that food colours and preservatives might influence children's behaviour was reinforced by the Southampton study published in the prestigious Lancet medical journal. It identified six colours associated with adverse behavioural effects in children: sunset yellow (E110), quinoline yellow (E104), carmoisine (E122), allura red (E129), tartrazine (E102) and ponceau 4R (E124). It could not conclude a specific effect of the preservative benzoate (E211). While this study attracted worldwide media attention and calls to ban these colours in the UK, the study has since been criticised on methodological grounds casting doubt over its conclusions. The amount of colours given to the study children was very much greater than children typically eat in the UK or abroad, and the effects were weak and inconsistent. The European Food Safety Authority found insufficient grounds to change the approved status of the additives used.

Food and behaviour studies are notoriously hard to construct and control because children's behaviour is so easily influenced by their social setting, parenting, peer influences and individual factors. Perhaps sugar is found in children's party foods and they are simply responding to the expectation of a party? Maybe sugar is merely fuel for their childish energy? The myth about sugar and hyperactivity is so entrenched there is significant bias in parent's observations too. In one study parents were asked to rate their kids behaviour after a sweet drink and were told it had lots of sugar when an artificial sweetener was secretly used instead- they all said the kids behaviour was worse. Another difficulty is food chemical sensitivities are difficult to diagnose- there are no blood tests. It takes the skills of a specialist dietitian and an able and committed parent to complete an elimination diet and re-challenge needed to identify food chemical intolerance in a hyperactive child.

Emerging research is examining whether lack of long chain omega-3 fats are contributing to developmental brain disorders such as ADHD. Australian researcher Dr Natalie Simm has found up to 40-50% of children in her research with ADHD symptoms associated improved with omega-3 supplementation over a 30 week period. Part of the solution toward better behaved children may be eating more fish rather than hiding the sugar bowl- and it's good for their heart as well.

If you'd like reliable information and great recipes on Nicole's usual favourite subject of heart health visit her website (www.eattobeatcholesterol.com.au).

Body Work with Dr Joanna McMillan Price

Get with the strength: the upper body workout

As I said in January *GI News*, strength training with resistance exercise is arguably the best means we have of really changing the shape of our bodies and it keeps us looking younger by maintaining a strong posture and frame. You need an exercise band for the triceps extensions and seated row. And remember, anything you do more than you are currently doing is a step in the right direction.

The upper body workout: Do 2 sets of 10 of each exercise with a rest in between and aim to complete the sequence 2-3 times a week (and not on consecutive days). Once you can do this easily add a second set with a brief rest between sets.

Standing tricep extensions – Works back of the upper arm (your 'wing flaps')

The back of the upper arms is a common problem area for women in particular—we tend to store body fat here and lack muscle tone. You will need a weight to provide resistance in this exercise. You can buy small hand-held weights at any good sports shop or department store. Alternatively, improvise from your kitchen cupboard: a bag of rice or an unopened can – anything around the 400g (14 oz) mark.

Stand tall and hold the weight overhead with both hands (you can also alternate, so one at a time), with your arms straight. Make sure you are standing with good posture and eyes straight ahead, rather than looking up at the weight. Keeping your arms close to your ears, lower the weight behind your head. Keeping the upper arm still, lift the weight back to the top.

Seated row – Works back

Move to a seated position and wrap the band around your feet, holding each end in your hands. Sit up tall and with knees slightly bent use a rowing action to pull your hands in to the ribs and slowly release back to the start position.

Assisted push up – Works chest, shoulders and arms

Why do most people hate push-ups? The answer is easy—because they are hard! In fact, they are even harder if you are carrying too much body weight since you are effectively lifting your own body weight against gravity. Here is a modified version of the traditional push-up, which enables you to gain the benefits of the exercise but makes it easier for you to perform it correctly. You will need a low coffee table – alternatively, use the second or third bottom step of a set of stairs.

Start in a kneeling position with your hands wider than your shoulders on the edge of the table/stair. Move your knees back until your body is a straight diagonal line from head to knee. Slowly lower your chest towards the edge of the table/stair while keeping your back flat and without letting your bottom stick up. At the bottom of the move, your elbows should be directly above your hands – adjust your hand position as appropriate before returning slowly to the starting position.

Dr Joanna McMillan Price www.joannamcmillanprice.com is a registered nutritionist and accredited practising dietitian with a PhD from the University of Sydney. She is also a trained fitness leader and has taught group exercise classes for over 15 years. She has written and co-authored several books including *The Low GI Diet Cookbook*. For Joanna's complete exercise program, check out a copy of *The*

Low GI Diet available from good bookstores and online (www.amazon.com/Low-Diet-Revolution-Definitive-Science-Based/dp/1569244138/ref=pd_sim_b_14).

GI Symbol News with Dr Alan Barclay

Finding a low GI bread

For many of us, bread is the number one source of glycemic carbohydrate in our diet. This is partly because it is such a versatile product – we can eat it for breakfast with our favourite spread, use it to make sandwiches for lunch, and serve it with dinner.

Bread is naturally very high in starch (carbohydrate), and typically it has a high GI so its overall glycemic load can be relatively high. But because bread is such an important part of life, we do not recommend cutting it out – low carbohydrate diets are generally unsustainable, and arguably not ideal for long-term health. Choosing a lower GI bread is a much easier way of lowering the overall glycemic impact of your diet.

There are a number of factors that potentially affect the GI of breads including:

- The type of flour (wheat, rye, barley, etc...)
- The amount of each type of starch in the flour (i.e., ratio of amylose to amylopectin)
- The method of milling the flour (i.e., steel vs stone)
- The addition of other ingredients (seeds, kibbled grains, dried fruit, sugar, fibre, water, etc...)
- The fermentation process (yeast and proofing time)
- How the bread is cooked

This is why you cannot simply look at a breads nutrition information panel or ingredient list and guess its GI value. It's absolutely essential that the bread has its GI tested at an Accredited Laboratory using the standard method (<http://infostore.saiglobal.com/store/Details.aspx?DocN=AS0733779662AT>).

In Australia and New Zealand, it is easy to find breads that have had their GI tested correctly – simply look for those that carry the GI Symbol:

Bürgen® Soy-Lin GI 52

Bürgen® Grains with Barley for Men's Wellbeing GI50

Bürgen® Pumpkin Seeds bread GI51
Bürgen® Rye bread GI53
Bürgen® Fruit & Muesli bread GI53
Bürgen® Wholemeal & Seeds bread GI39
Bürgen® Oatbran & Honey bread GI53
Tip Top original 9 grain bread GI53
Tip Top 9 grain Wholemeal GI53
Cripps 9 grain sandwich loaf GI53
Tip Top Up EnerGi white bread sandwich GI58
Country Life Low GI gluten free GI53

If you live in a country that does not yet have the GI Symbol Program, you need to do a little more detective work. If the bread is making a low GI claim, call up the manufacturer and ask who conducted the GI test. A list of Accredited Labs can be found here (www.gisymbol.com.au/join.htm#gilabs) – if it was done by one of these, you can trust the claim. While you're at it, why not ask the manufacturer to consider putting the GI Symbol on their breads – most are genuinely customer-focused and if enough people ask, you may be surprised with the results.



For more information about the GI Symbol Program

Dr Alan W Barclay, PhD
Chief Scientific Officer
Glycemic Index Foundation (Ltd)
Phone: +61 (0)2 9785 1037
Mob: +61 (0)416 111 046
Fax: +61 (0)2 9785 1037
Email: alan@gisymbol.com
Website: www.gisymbol.com

GI Update

GI Q&A with Prof Jennie Brand-Miller

I always pick a healthy wholegrain bread like a wholemeal sandwich bread, but a friend told me it wasn't low GI which might be why I am having trouble managing my sugar. Is that true?

There are countless reasons to include more whole grains in your diet, but it's hard to go past the fact that you are getting all the benefits of their vitamins, minerals, protein, dietary fibre and protective anti-oxidants. Studies around the world show that eating plenty of whole grains reduces the risk of certain types of cancer, heart disease and type 2 diabetes.

But 'whole grain' and 'low GI' are not the same. Indeed many wholegrain breakfast cereals and breads like wholemeal (whole-wheat) bread have a high GI because they are just as finely milled as their 'white' counterparts and will shoot your blood glucose levels sky high. You get double the benefit if your whole grains are also low GI – that's why we like to specify whole kernel grains because they not only have all the nutritional benefits of whole grains, they help you keep those blood glucose levels on an even keel.

There's no international definition of 'wholegrain'. It can mean slightly different things in different countries. For example, a few years ago, Food Standards Australia New Zealand (FSANZ) expanded the legal definition for packaging labels to allow more foods including wholemeal foods that contain all of the natural constituents (that may be high GI) to include 'wholegrain' on the label.

If you have diabetes or metabolic syndrome and low GI foods are an important part of your diet, what should you do? If there's no GI rating on the label, follow our rule of thumb, if you can't see the grains, then don't assume it's low GI. Why not follow up and encourage the manufacturers to have their products glycemic index tested?

New GI values with Fiona Atkinson: Indian whole wheat roti (flatbreads)

A new study from India published in the British Journal of Nutrition

(<http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=7151168>), reports that roti made from whole wheat and from atta mix have a low GI.

- Whole wheat roti GI 45
- Whole wheat plus atta mix roti GI 27

The whole wheat roti for GI testing following the international standardised method were made using branded commercial whole wheat flour (Pillsbury, General Mills India). The atta mix roti were made using whole wheat flour plus atta mix (roasted bengal gram flour, psyllium husk and debittered fenugreek (methi) flour. 459 g atta mix (about 1 lb) was added to 2 kg (about 2 lb 4 oz) whole wheat flour as per manufacturer's (Marico Ltd) instructions. The roti dough was rolled out to approximately 15 cm (6 in) in diameter, cooked fairly well on both sides on hot griddle and tossed on direct flame to puff.

The authors conclude that: 'both types of roti could be incorporated into the Indian diets to replace existing high GI food choices such as refined grains. However, selecting the atta mix could further reduce the overall dietary glycemic load which could be beneficial in a population, which is highly susceptible to type 2 diabetes and insulin resistance.'