

GI News–September 2009



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‘Let them eat cake!’ said the Queen, and they did. Two centuries plus after the demise of Marie Antoinette, the poor are fat and the rich are thin,’ says Steve Jones, Professor of Genetics at University College London in his new book *Darwin's Island*. ‘Across the globe, death from excess has, for the first time in history, overtaken that from deficiency. The problem comes from evolution as manipulated by man.’

Good eating, good health and good reading.

Editor: Philippa Sandall

Design: Scott Dickinson, PhD

Web management: Alan Barclay, PhD

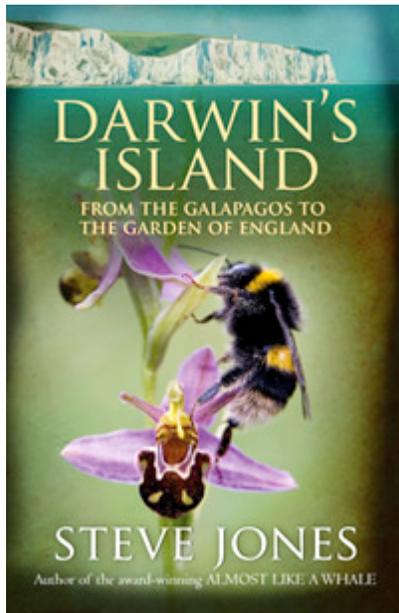
Food for Thought

Obesity – a potent cause of evolutionary change

‘Evolution on the farm transformed society ten millennia ago and is doing the same today. Farmers have been powerful agents of selection on wheat, maize, cows, pigs, chickens and more, but the influence of those domestic creatures on the biology of the farmers has been almost as great. Diet began to act as an agent of natural selection as soon as the wild was domesticated ten thousand years ago and caused people to evolve the ability to deal with new kinds of food. Today's shift in what we eat will have equally powerful effect on the genes of our descendants.’

‘A new global power – and a new agent of natural selection – is on the move. The empire of obesity began to flex its stomach in the 1980s and shows no sign of retreat. Twenty years before that dubious decade there was, in spite of a collapse in the real price of food, little sign of the coming wave of lard. Then thanks to technology, came the industrialization of diet; the last step in the scientific exploitation of the Darwinian machine. Now a tsunami of fat has struck the world and its inhabitants are paying the price ...’

The twenty-first century plague is a side effect of the triumph of scientific agriculture. Many of those worst afflicted suffer because they bear genes that make it hard for them to deal with the new diet. Many of the obese will die young or fail to find a mate. As a result obesity will soon be – as farming itself was when it began – a potent cause of evolutionary change.’
– *Darwin’s Island* by Steve Jones



Darwin's Island is available from bookshops, online and from [Amazon](#).

News Briefs

Fasting safely with diabetes

Most people with type 2 diabetes whose diabetes was well-controlled before Ramadan can safely observe Ramadan fasting is the finding of [recent study](#). UK dietitian Azmina Govindji agrees. ‘It is possible to fast safely if you are careful about managing your diabetes,’ she says.

‘The reason why you need to take care is that some drugs used to treat type 2 diabetes (sulphonylureas) and insulin can make your blood glucose level drop too low when you are not eating. Not drinking enough water can also make you dehydrated. Often the evening meal, Iftar, contains lots of carbs and perhaps sugary drinks. Because this is a time when families eat together to break the fast, the food is richer than you may be eating normally. And you may feel having fasted all day, you have an excuse to reward yourself. You need to be particularly strong willed at this time.’

Azmina’s fasting checklist

- Seek the advice of your healthcare team before starting and at the end of the fast, since they may advise you to change the times or amount of medication you take.

- Do not stop taking your medication.
- Avoid eating lots of unhealthy foods as a reward! Try and maintain a healthy eating pattern after you break the fast. Make sure that you have lots of fruit and vegetables and dal as these are slowly digested and help your blood glucose to rise more slowly too. Remember to drink plenty of fluids.
- Divide your daily food intake into two equal portions, one to be taken at Sehri and one at Iftar
- Remember to check your glucose level regularly, at least once a day at different times of the day.
- After the period of Ramadan, it is essential that you visit your doctor to make sure that your blood glucose is being controlled adequately and also to check whether your medication needs to be adjusted.



[Yogurt chicken with fresh fenugreek](#) (pictured above) is from Azmina's most recent book (with Sanjeev Kapoor) *Healthy Indian Cooking for Diabetes*. It is available from bookstores in the UK, from Amazon and in Australia online from [Great Ideas in Nutrition](#).

Does diet play a part in Parkinson's disease?

Parkinson's disease or PD (named after English physician James Parkinson, who gave a detailed description of it in 1817 in 'An Essay on the Shaking Palsy') is a chronic, progressive, degenerative disease of the brain that affects movement and coordination.

It occurs when the dopamine-producing cells in a part of the brain called the substantia nigra begin to malfunction and die. Dopamine is an important neurotransmitter (think of it as a chemical messenger) that whizzes information to the parts of the brain that control movement and coordination. When the cells begin to die and the amount of dopamine decreases, messages from the brain telling the body how and when to move are delivered more slowly, producing the typical symptoms of PD – tremor, stiffness, slowness of movement (bradykinesia), unsteady walking and poor coordination.

We don't know what causes PD. It's thought that genes play a part in some cases, but that environmental and lifestyle factors are likely to be responsible for the most part.

Recent research has suggested that ‘insulin may increase dopamine transporter mRNA in the substantia nigra and regulate brain dopamine concentrations. Thus high GI or GL carbohydrates might be expected to decrease the risk of PD by an insulin secretion-induced increase in brain dopamine,’ suggest Japanese researchers in the journal of [Nutrition](#).

‘This hypothesis appears reasonable given that the prevalence of PD is generally lower in East Asian regions (China, Taiwan, and Japan) where white rice, a food with a high GI, is a staple food and thus dietary GI and GL appear to be relatively higher than in western regions (Europe and the US), where rice is not a staple,’ they write.

The Japanese study, which was based on what the participants reported eating in the previous month, found that people on a high GI diet were less likely to have PD than those on a low GI diet. The researchers acknowledge the limitations of the study and the need in future studies for an accurate assessment of past dietary habits.

We asked Dr Simon Thornley (Public Health doctor and researcher from the University of Auckland) to comment: ‘In many case control studies including this one, the researchers assess the patient’s diet at the same time as they look at his or her symptoms,’ he said. ‘So cause and effect can be confused. In this study the effects are actually quite small, so the result may be due to other things that they didn’t measure, so what’s called ‘confounding’ or mixing of effects may play a part in their results.’

‘Glucose is known to stimulate dopamine release in the mid brain. Lack of dopamine is a problem for those people with Parkinson's disease. High GI foods may mask or delay Parkinson's disease by stimulating more dopamine release. The dopamine excess from high GI food may protect a small proportion of people that would have gone on to develop Parkinson’s disease from becoming symptomatic and diagnosed. Many questions are still unanswered from this study but it is an interesting hypothesis and more studies are definitely needed. And it is far too early to rush out and tuck into a high GI diet. Remember, the really big problem we face as a community is diabetes.’

Beans benefit glycemic control

Whether you buy them dried or opt for canned convenience, beans, chickpeas, peas and lentils (called pulses or legumes) are one of nature’s lowest GI foods. They are high in fibre and packed with nutrients including protein, carbohydrate, B vitamins, folate and minerals. When you add them to meals and snacks you reduce the overall GI of your diet because your body digests them slowly – primarily because their starch breaks down relatively slowly (or incompletely) during cooking and they contain tannins and enzyme inhibitors that also slow digestion.

University of Toronto researchers looked at the evidence that pulses benefit glycemic control in a meta-analysis published in [Diabetologia](#). They report that alone or in low-GI or high-fibre diets, pulses do make a difference in managing blood glucose. However, because they found ‘significant inter-study heterogeneity,’ they call for further trials. (‘Heterogeneity’ means dissimilarity between studies. It can be because of the use of different statistical methods, or evaluation of people with different characteristics, treatments or outcomes.)

GI Group: Pulses or legumes are an important part of a low GI diet which is why it's a good idea to try and include them in your meals at least twice a week as a starchy vegetable alternative – more often if you are vegetarian or vegan. One serve is equivalent to ½ cup cooked beans, lentils or chickpeas.

Imagining a world where we eat less meat

By Jess Halliday

Cutting back meat consumption is the new darling cause of pop stars. But if necessary environmental and health goals are to be achieved, the whole supply chain needs to be strumming along in tune.

Foodwatch with Karen Kingham

Apples – an affordable super food

Apples have always been a staple in my home. My children eat them any time of the day or night. I often give thanks for this because they're super convenient – no sticky fingers, no need to peel and they don't squash in the schoolbag. And, as a health conscious mother, they tick all the boxes when it comes to a healthy snack – portable and easy to eat like other snack foods but without the added fat and sugar.

But does the proverbial apple a day really keep the doctor away. Apple eaters get a decent dose of fibre, some vitamin C and small amounts of B vitamins in a low calorie (kilojoule), low GI package. Apples are also loaded with anti-oxidant compounds called flavonoids (as are tea, onions and red wine) and are a significant source of quercetin and catechin. It's these antioxidant compounds primarily in the skin that are thought to be responsible for apple's health benefits – so wash them and eat them skin and all.

How does all this translate into health benefits? Research has found that people who eat three or four serves of fruit a day, particularly apples and oranges, have the lowest overall GI and best blood glucose control. While, large-scale studies published in recent years have also shown that eating apples is linked to a reduction in heart disease, diabetes, asthma and some types of cancer (lung, bowel and breast).

For example, the 2007 Women's Health Study found greater intakes of flavonoid rich foods like apples (along with red wine and pears) are associated with a reduced risk of heart disease among post-menopausal women.

With so many of us needing to trim our tummies, eating an apple a day could put us on the path to shedding pounds without pangs. January *GI News* reported on a study that showed how feel full foods that you have to chew a lot (apples, carrots, pearl barley, muesli, very grainy breads, lean meat) satisfy appetite faster and keep you feeling fuller for longer. While a study published in [Appetite](#) by researchers at Pennsylvania State University found that 'eating whole fruit (in this case a peeled apple) at the start of a meal can be an effective strategy for increasing satiety and decreasing energy intake at a meal.' People who ate a whole apple about 15 minutes before

lunch, consumed almost 190 fewer calories (around 800 kJ) at lunch than when they didn't have the apple.

Crunch time In a world where eating for health can easily become complicated and costly, it's good to know that something so naturally sweet and filling will help you enjoy a lifetime of healthy benefits.

Karen Kingham is a mother, health and nutrition writer and Accredited Practicing Dietitian. She also consults to the Australian apple industry.

Triple apple Thai salad

If you don't like chilli, add some thin strips of red capsicum instead. This light and tangy low GI recipe was created by Kathryn Elliott for Apples Australia & Horticulture Aust Ltd.

Serves 4, but simply halve quantities for 2

50 g (about 2 oz) raw cashews
2 green onions, cut into thin strips
150 g (5 oz) sugar snap peas, ends trimmed
1 cup wild or baby rocket
1 red chilli, seeds removed, finely chopped
5 wombok (Chinese cabbage) leaves, finely shredded
½ cup fresh coriander leaves
½ cup fresh mint leaves
1 Fuji apple
1 Granny Smith apple
2 Jonathon or Pink Lady apples

Dressing

1½ tablespoons sesame oil
2 tablespoons apple cider vinegar
1 tablespoon soy sauce
2.5 cm (1 inch) piece fresh ginger, grated

- Whisk together the dressing ingredients in a bowl and set aside.
- Place cashews in a frying pan over a medium heat and toast until browned on all sides – about 3–4 minutes. Keep a close eye on them, as they can burn very quickly.
- To make the salad, put the shallots, sugar snap peas, rocket, chilli, wombok and herbs into a bowl. Quarter and core the apples (leaving the skins on). Cut into thin slices and add to the vegetables. Pour over the dressing and toss to combine and serve the salad immediately with the toasted cashews sprinkled on top.

Per serving

Energy: 1030 kJ/245 cal; Protein: 5 g; Fat: 13 g (includes 2 g saturated fat); Carbs: 28 g; Fibre: 6 g

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 (photographed by Sergio Burani). For more information, check out [Johanna's website](#).

Nonna Anita's tuna-stuffed summer tomatoes

The late summer months in Italy are when Italian cooks feverishly start canning their home-grown tomatoes while preparing fresh tomato-based recipes that their families wait all year to enjoy. Just like with grapes, the sun's magic produces a succulent sweetness in tomatoes that reaches its peak in September. So, there are tomatoes on the table at lunch and at dinner every day until the family's garden supply is exhausted. This is my mother-in-law's recipe that she served for lunch on sweltering hot days. The tuna composition is not so unusual (except for the addition of capers perhaps) but it is the explosion in the mouth of summer fragrances and tastes embodied in the tomato that makes this a staple recipe in our household at this time of year.

Serves 2

2 x 340 g (12 oz) beefsteak tomatoes
200 g (7 oz) can light tuna in olive oil, thoroughly drained
1 (scant) tablespoon capers, drained and rinsed well
1 small stalk celery, with leaves, thinly sliced and diced (approx ½ cup)
3 large sprigs flat parsley, minced (approx 1 tablespoon)
4 large basil leaves, hand ripped into small pieces (approx 2 tablespoons)
¼ cup light mayonnaise
juice of 1 lemon (approx 2 tablespoons)
salt/pepper, optional



- Wash the tomatoes and, using a sharp knife, cut off the tops. With the knife and a teaspoon, loosen and scoop out the tomato pulp and seeds, creating a large hollow center. Sprinkle lightly the insides of the tomatoes with salt, turn upside down and set aside on a cutting board. On the same board, chop the tomato pulp.
- In a medium-sized bowl, add the tomato pulp, the tuna, capers, celery, parsley and basil. Mix all ingredients well, making sure to break up the tuna chunks into small pieces. Add the mayonnaise and the lemon juice and mix well. If desired, add salt and pepper to taste. Fill the tomato cavities with the tuna mixture and refrigerate for one hour before serving.

Per serving

Energy: 1402 kJ/ 334 cal; Protein 25 g; Fat 17 g (includes 3 g saturated fat and cholesterol 16 mg); Carbs 21 g; Fibre 4 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, visit [Diane's website](#).

Pork, choy sum and noodle stir-fry

I first created this for *Low GI Gluten-free Living* and it really is a one-pot wonder. I have adapted it slightly for *Money Saving Meals* to cut the costs without losing out on any of the flavour. Pork is a lean meat that's loaded with essential vitamins such as B12, B6, thiamine, niacin, minerals such as zinc and selenium and nutrients that include iron and magnesium. You can substitute 450 g (1 lb) skinless chicken breast for about the same cost. Buy vegetables that are cheapest on the day. I planned to use snow peas but sugar snap peas were cheaper. You can use any Asian green that you fancy – they are always great value. Remember, recipes are guides – change them to suit you.

Serves 4 @ AUD\$3.15 per serve

200 g (7 oz) dry rice noodles

2 tablespoons gluten-free reduced-salt tamari

2 tablespoons gluten-free sweet chilli sauce

1 teaspoon sesame oil

1 tablespoon canola oil

350 g (12 oz) pork stir fry mix (or pork fillet, sliced thinly)

1 onion, sliced into thin wedges

2 teaspoons finely grated fresh ginger

1 red (or green) capsicum, sliced into thin strips

100 g (3½ oz) snow peas or sugar snap peas, trimmed, sliced diagonally in half

1 bunch choy sum, trimmed, halved at stem joint, stem bases removed, leaves and stems sliced

¼ cup (50 g/about 2 oz) toasted peanuts, chopped roughly



- Prepare the noodles according to packet directions, drain and set aside.
- In a small bowl, combine the tamari, sweet chilli sauce and sesame oil and set aside. In a large frying pan or wok, heat 2 teaspoons of canola oil. Add half the pork strips and stir-

fry for 1–2 minutes or until just cooked. Spoon into a heatproof bowl and set aside. Repeat with the remaining pork. Heat the remaining oil in the pan over medium–high heat. Add the onion and stir-fry for 2 minutes. Add the ginger, and capsicum and, and stir-fry for about 1 minute. Add the snow peas or sugar snap peas and choy sum stems, and stir-fry for a further 1 minute. (Add a little water or gluten-free reduced-salt chicken stock to pan, if it starts to stick.)

- Return the pork to the pan with tamari mix, choy sum leaves and the noodles. Toss until well combined and heated through. Spoon into serving bowls and serve sprinkled with peanuts.

Per serving

Energy: 1600 kJ/ 382 cal; Protein 28 g; Fat 15 g (includes 2 g saturated fat and 83 mg cholesterol); Carbs 32 g; Fibre 5 g

New low GI cooking website

Libby is ‘cooking at the cutting edge.’ She is a Sydney (Australia) home cook with a family member with type 2 diabetes. Her new [website](#) features favourite recipes adapted for low GI eating. There are only a handful of recipes at present, but Libby is adding them regularly ... ‘as fast as I can cook and photograph them in my day-to-day life!’ says Libby.

Busting Food Myths with Nicole Senior

***Myth:* Potatoes are bad for you.**

***Fact:* Potatoes are a vegetable, and vegetables are good for you.**

The poor old potato is a much maligned food but it really doesn’t deserve all the criticism. It has been called fattening, bad for blood glucose, and generally undesirable, but this really isn’t fair. Spud lovers can relax. Potatoes are good for you.

Potatoes are starchy tubers that grow underground. I remember as a child digging them out of the soil and roasting them whole in an open fire at a friend’s farm – pure joy! They are high in carbohydrate for energy and stimulate that feel-good brain chemical called serotonin. Eating potatoes help you feel that life is good. Potatoes are also a good source of vitamin C and fibre (especially if you eat the skin) and also contain vitamin B6 and potassium.

People often say potatoes are fattening, but this is an exaggeration. Any food containing kilojoules can be fattening if you eat too much, and carbohydrate in potatoes is no more or less fattening than kilojoules from any other source. It is sad for low-carb diets to recommend followers eat mashed cauliflower and pretend it’s potato. Just enjoy a bit of both.

Eaten whole with minimal additions, potatoes are difficult to overeat due to their high ‘satiety index’. Boiled potatoes are one of the most filling foods you can eat. Potatoes cut into French fries and cooked in unhealthy fats are a different story, but don’t tar all potatoes with the same fast food brush. If you are a French-fry (hot chip) fan, then look for establishments that cook

them in healthy oil, keep your portions small and skip the salt. This way, you can have your chip and eat it.

Most potatoes have a high GI but even GI Queen Professor Jennie Brand Miller agrees there is no need to ban high GI foods altogether. Just enjoy them in a balanced meal with plenty of other vegetables and some lean protein. There are also lower GI varieties such as canned new potatoes, and varieties such as Almera (GI 65) and Nicola (GI 58). Orange-fleshed sweet potato has a GI of 61. Adding a little healthy fat also lowers the GI, so in fact some nice fat potato wedges roasted in a little olive, sunflower or canola oil is a healthy, lower GI option. Adding vinegar also lowers the glycemic response. To keep potatoes healthy, avoid serving them with butter, cream and cheese.

One of the things I love about the potato, apart from the gorgeous taste and texture, is how simple they are to prepare. I simply wash, cut and microwave on high until tender, and lightly dress with some extra virgin olive oil, dried rosemary and black pepper. Use whatever healthy oils, herbs and spices you like for an instant accompaniment to lean meat, chicken or fish and steamed greens. And a good tip: always cook more than you need because cooled and reheated potato contains a beneficial kind of dietary fibre called resistant starch that keeps your bowel healthy. That's what I call potato magic.

If you'd like some delicious ideas to enjoy potatoes in sensible portions, check out the new-look <http://www.eattobeatcholesterol.com.au/>

Talking Turkey with Prof Trim

'Really, what do you guys know about nutrition anyway? One day you say eat this and the next day avoid it? When will you get it right?'

The fact is that nutrition is a very incomplete science. Unlike other areas of health (like exercise), where we can specifically study muscles and their reaction, nutrition involves so much more.

Hence we chip away at the edges, with small increases in knowledge occurring gradually over time, rather than anything being set in stone. What do we know? Well we can limit it to a few positives.

- In the first place we know that fresh fruit and vegetables – of almost all kinds – are healthy and should be eaten more.
- We know that we eat too much saturated fat for our own good, particularly in the form of spreads like butter and margarine, oils in frying and the fatty meats and skin on birds.
- We know that seafood, of just about all forms, contains healthy oils than can help prevent heart disease. But we don't know yet though whether this remains the case when seafood is farmed, as it will inevitably have to be, given that wild seafood is a finite resource.
- We know that some carbohydrate rich foods that are digested slowly (called low glycemic index or low GI foods) tend to raise blood sugar slowly and reduce hunger levels and are therefore good for people with diabetes and possibly for helping weight loss.

- And finally – and here’s the good news – we know that alcohol in moderation (i.e. 1-2 glasses per day for men and women) can be beneficial for the heart.
- But that’s about it for nutrition. Our knowledge of exercise on the other hand is much clearer – doing it regularly is good; doing nothing is bad.

Your Success Stories

Elissa Renouf’s story

If you met us you would see five beautiful, happy, healthy, well loved children and two adults that love each other very much and live for their children. If you delved further you would see how determined we are to keep our family this way even if we are constantly handed challenging health issues.

In 1992 not long after our first child, Sam, was born my husband Steve developed type 1 diabetes. He was only 22 and was playing professional Rugby League for the Brisbane Broncos and for Australia. His main concern was to play football again at this elite level. And he did, mainly due to his attitude and by keeping a very strict control of his levels through diet and insulin.

Today, of my five beautiful children, four boys and a girl, three also have diabetes. All the children were happy and healthy until May 2002 when 3-year-old Charlie was diagnosed, then in 2003 Billy, 8 at the time, showed signs. Over the next few months we tested the other children and by October 2003 noticed Freddie, our youngest, was developing diabetes. I found this a particularly hard time. Why couldn’t I stop this from happening?

Managing diabetes 24 hours a day is a way of life for us. We do allow the kids to eat almost anything they want, in moderation, but if their blood glucose level doesn’t allow this we would give them a choice: eat the food and have a needle or don’t eat the food. Billy knew if he had a high blood glucose level at school to ring and find out how much insulin to give himself. The two little boys learnt that if they wanted food outside meal times they sometimes tested themselves and brought me a needle, as they know if they eat at that level they will go high. Steve and the boys are now on insulin pumps, so whenever they eat it is as easy as testing themselves and pushing a few buttons to administer the insulin.

I very rarely have to perform any ketone tests for the children, I prefer to treat high blood glucose levels immediately by giving quick acting insulin. I have studied the kids’ levels through writing everything down including the time of meal, what was eaten, how many serves, the GI, insulin given and activity done. Through doing this I have quite a good understanding how the insulin works in each of their bodies.

I am not sure why so many things have happened to us but I am now trying to make a difference by helping other people who have been affected by diabetes. I have started my own business designing and developing funky, bright, practical ‘Diabete-ezy’ products (Management Plans, Hypo Sticker labels, a Dia-Logit record book, Test-wipes and Ezy-fit cases) that will help others

manage diabetes. We have had a fantastic response to our range which we sell direct from our website www.diabete-ezy.com and through pharmacies and Diabetes Australia.

As diabetes affects a huge population, I just hope that I can be of help in spreading the word that managing your diabetes and being positive has so many benefits. If we as a family can be positive with what challenges we have been handed, there is no reason why other families can't!

GI Symbol News with Alan Barclay

A sweet blend: the best of both worlds?

Stevia was recently approved for use as a food additive in Australian foods by Food Standards Australia New Zealand (FSANZ). It has been used as a sweetener in Japan, South America and other nations for several decades. It is obtained from *Stevia rebaudiana* – a herb belonging to the chrysanthemum family which grows wild as a small shrub in parts of Paraguay and Brazil. Like many non-nutritive sweeteners, Stevia is 250–300 times sweeter than sucrose. Due to its intense sweetness, it is currently being blended with sucrose and sold as CSR Smart White Sugar Blend in Australia. Even in this form, it is still twice as sweet as plain white sugar, so in theory you should be able to use half as much, reducing your kilojoule and carbohydrate intake. Like many non-nutritive sweeteners, this may affect some recipes (lack of bulk, changes in texture, etc...), and it is more expensive than standard white sugar, Logicane™ and golden syrup.

For more information email: alan@gisymbol.com