

## GI News—April 2010



- Why some of us are designed to drink milk and others aren't
- The GI values of milks and yogurts
- Milk, muscle gain and fat loss
- Calcium, vitamin D and diabetes risk
- Are dairy-free diets better for you?
- Chocolate milk and recovery after exercise
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For many of us, milk and yogurt are the key to strong healthy bones. By choosing the reduced fat or skim varieties we enjoy a low GI food that provides us with sustained energy and boosts our calcium intake but not our saturated fat intake. In this issue we will be looking at other benefits including the role of dairy foods in achieving and maintaining a healthy weight and why some athletes like chocolate milk.

Good eating, good health and good reading.

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### Food for Thought

#### **Why some of us are designed to drink milk and others aren't**

'The answer lies in evolution and genetic changes and not in ideology,' says Glenn Cardwell.

***What is lactose intolerance?*** Our major source of lactose is milk (cow, goat, sheep, domesticated buffalo, camel and human) or yogurt. It is not found in hard cheese or butter. When we are born, we have a digestive enzyme called lactase to break down lactose in breast milk to its constituent sugars, glucose and galactose, which are then absorbed into the blood.

By the age of five, many people no longer produce their lactase enzyme and can't digest lactose any more. For them, large amounts of lactose can cause intestinal

cramping because gut bacteria convert the lactose to gas and lactic acid. Not comfortable. They are now lactose intolerant.

### ***Why some of us can continue drinking milk after early childhood***

Scientists have been able to check DNA from around the world and by marrying their findings to human history (who lived where, when), have given us a better understanding why some of us can enjoy milk and yogurt and ice-cream right throughout our lives and others can't.

Around 10,000 years ago, when humans started to keep cattle as a beasts of burden and a source of meat, the ability to handle lactose in adulthood was absent. However, at some point over the next thousand years or so, a mutation occurred which allowed some people to be able to drink milk well past their fifth birthday and on into adulthood. Researchers who have studied the DNA from skeleton remains in central Europe, report that about 80% of people in this area had the mutation for tolerating lactose about 7000 years ago. This is a rapid spread of a mutation, strongly suggesting that it offered a survival advantage to milk drinkers, according to a new book (and a really terrific read), *The 10,000 Year Explosion – How Civilization Accelerated Human Evolution* (Gregory Cochran & Henry Harpending).

Over time, the mutation became more dominant in parts of Europe through to northern India. It is thought the mutation occurred independently in parts of Arabia when the camel became domesticated and camel milk became part of the local diet.

In fact, being able to tolerate lactose in the diet, allowed the expansion of Indo-Europeans, tracked by both the spread of lactose tolerance and the Indo-European languages (e.g. Spanish, English, Hindi, Portuguese, Russian, German, French). Put another way, if your native language was Indo-European in origin, then there was a good chance you could handle lactose over the last 7000 years or so. It also explains why eastern and southern Asia, Japan, parts of Africa and the indigenous folk of Australia have both a very different language background and the inability to handle lactose after being weaned.'

Glenn's complete article is at <http://glenn-glenncardwell.blogspot.com/2009/07/lactose-intolerance.html> .

## News Briefs

### **Dairy foods and weight**

Although the jury is still out, the bulk of the evidence suggests that dairy foods play a beneficial role in weight management according to Dr Marta Van Loan who has reviewed some of the most recent scientific evidence in the *Journal of the American College of Nutrition* ([www.ncbi.nlm.nih.gov/pubmed/19571169](http://www.ncbi.nlm.nih.gov/pubmed/19571169)). Her umbrella review covers observational and retrospective studies with adults as well as children and adolescents plus randomized clinical trials on body weight and composition, energy expenditure, substrate oxidation and fecal fat loss. She turns to research from animal and *in vitro* studies to investigate possible mechanisms.

In her conclusion she says: ‘In general, data from observational studies shows that dairy is a healthy, nutrient-rich food that, as part of a balanced diet, is inversely associated with body weight and body fat in children, adolescents and adults. In addition, several randomized clinical trials have demonstrated that diets including three servings of milk, yogurt and cheese per day enhance body weight and/or body fat loss in obese and overweight adults during caloric restriction and when dairy and/or calcium intakes are increased from inadequate to adequate. Moreover, weight loss was achieved in all clinical studies examining the role of dairy in weight loss where caloric-restriction was induced.’

### **Calcium, vitamin D and diabetes risk**

Getting enough calcium and vitamin D for strong bones is a message we are all pretty familiar with. But there’s more. Emerging evidence suggests that getting enough of them also plays a role in reducing the risk of type 2 diabetes and metabolic syndrome. And many of us aren’t getting enough.

Looking at the role of vitamin D and calcium in type 2 diabetes in a systematic review and meta-analysis published in the *Journal of Clinical Endocrinology & Metabolism* ([www.ncbi.nlm.nih.gov/pubmed/17389701](http://www.ncbi.nlm.nih.gov/pubmed/17389701)) Dr A. G. Pittas and colleagues found that:

- ‘Observational studies show a relatively consistent association between low vitamin D status, calcium or dairy intake, and type 2 diabetes or metabolic syndrome.’
- ‘Evidence from trials with vitamin D and/or calcium supplementation suggests that combined vitamin D and calcium supplementation may have a role in the

prevention of type 2 diabetes only in populations at high risk (i.e. those with impaired glucose intolerance).’

- ‘The available evidence is limited because most observational studies are cross-sectional and did not adjust for important confounders, whereas intervention studies were short in duration, included few subjects, used a variety of formulations.’

In examining the intake of milk and milk products specifically between type 2 diabetes and metabolic syndrome, the researchers found there was a lower risk for type 2 diabetes among individuals with the highest dairy intake (3–5 servings per day) compared to those getting less than 1½ servings each day. They make the point that ‘although calcium and vitamin D are important components of dairy products, their contribution to the measured outcomes cannot be separated from other components in dairy products.’

You can find links to recent papers on dairy foods and type 2 diabetes and metabolic syndrome published in peer-reviewed journals on Canada’s **Dairy Nutrition** website ([www.dairynutrition.ca/scientific-evidence/keyword/type+2+diabetes](http://www.dairynutrition.ca/scientific-evidence/keyword/type+2+diabetes)) and in the European Dairy Association's (EDA) quarterly newsletter, Dairy Nutrition Digest ([www.euromilk.org/EDA/publications7.aspx?cid=2568](http://www.euromilk.org/EDA/publications7.aspx?cid=2568)) .

### **Dairy foods may reduce diabetes risk**

A diet with a higher intake of milk and a lower intake of staples like bread and rice may reduce the risk of developing type 2 diabetes suggests the latest findings from the Shanghai Women’s Health Study published in the *International Journal of Epidemiology* ([www.ncbi.nlm.nih.gov/pubmed/20231261](http://www.ncbi.nlm.nih.gov/pubmed/20231261)). The researchers identified three patterns: cluster 1 – women with the highest intake of dietary staples (rice, bread, and associated products); cluster 2 – women with the highest intake of dairy milk; cluster 3 – women with the highest energy intake. They found women in cluster 2:

- Were less likely to have abdominal obesity or hypertension when they entered the study compared with women in clusters 1 and 3.
- Had a 22% lower relative risk for developing type 2 diabetes during follow-up (when cluster 1 women were used as a reference).

## **Milk and recovery after exercise**

‘Several studies report that milk can be just as effective as sports drinks to aid recovery in athletes,’ says Dr Emma Stevenson. ‘Cockburn and colleagues (<http://rparticle.web-p.cisti.nrc.ca/rparticle/AbstractTemplateServlet?calyLang=eng&journal=apnm&volume=33&year=0&issue=4&msno=h08-057>) found having plain semi-skim milk after exercise that had resulted in muscle damage was more effective than a carbohydrate sports drink at lessening the decrease in muscle performance and the increase in creatine kinase and myoglobin (these are blood markers of muscle damage).’

However, at the 2008 Beijing Olympic Games, it was chocolate milk not plain semi-skim milk that was conspicuous by its presence with numerous elite athletes regularly seen drinking it. In 2006, Karp and colleagues had reported in the *Journal of Sport Nutrition and Exercise Metabolism* ([www.cababstractsplus.org/abstracts/Abstract.aspx?AcNo=20063086020](http://www.cababstractsplus.org/abstracts/Abstract.aspx?AcNo=20063086020)) that chocolate milk not only reduces muscle damage after exercise, but can also improve subsequent endurance capacity in well trained cyclists. It’s the extra sugars in chocolate milk that make it better for recovery than plain milk they speculated.

In a 2009 study published in *Applied Physiology, Nutrition and Metabolism* ([www.ncbi.nlm.nih.gov/pubmed/19234590](http://www.ncbi.nlm.nih.gov/pubmed/19234590)), nine trained male cyclists cycled 51% and 43% longer after drinking chocolate milk than after carbohydrate and fluid replacement drinks respectively despite the beverages having very similar calorie (or energy) contents. For this study, the athletes completed a glycogen depletion workout, drank one of the three test beverages during a four-hour recovery period, and then cycled in an endurance capacity trial over three experimental trials. ‘This difference could be attributable to differences in carbohydrate type and (or) fat content between the beverages,’ write the study authors.

‘It is most likely that the combination of carbs and protein provided in milk is the reason why it is such a good recovery product for athletes,’ says Dr Stevenson. ‘Skim or reduced fat milk (plain or chocolate) also has a low GI and so can be a healthier alternative to sports drinks (yes, even with the added sugar in the chocolate drink).’

## **Milk, muscle gain and fat loss**

A recent study by researchers at Canada’s McMaster University has found that women, like men, can reap the benefits of skim milk when exercising and training. The March issue of *Medicine and Science in Sports and Exercise*

[www.fasebj.org/cgi/content/meeting\\_abstract/23/1\\_MeetingAbstracts/213.1](http://www.fasebj.org/cgi/content/meeting_abstract/23/1_MeetingAbstracts/213.1)

found women who drank 2 cups of skim milk immediately after resistance exercise gained more muscle mass than those who drank a sports drink. The milk drinkers also benefited from a reduction in fat mass; the sports drink drinkers didn't. For the study, the women exercised five days a week for 12 weeks and changes in their body composition were measured. 'We believe there are two main constituents (among many other minor ones) responsible for the beneficial effects on muscle gain and fat loss,' says lead author Andrea Josse, 'protein and calcium/vitamin D.'

### **Nutrition profiling**

US First Lady **Michelle Obama** speaking at the Grocery Manufacturers Association Conference said: 'The vast majority of Americans rely on labels to help them decide what foods to buy. But we know those labels aren't always as helpful as they could be. And it's hard enough to figure out whether any one food item is healthy. It's even harder to compare items. And folks just don't have the time to line products up side by side and figure out whether these compare or not. And they shouldn't have to ... We need clear, consistent, front-of-the-package labels that give people the information they've been asking for, in a format that they understand'

While we wait for those 'clear, consistent, front-of-the-package labels,' US-based Hannaford Supermarkets did something about it. They introduced the Guiding Stars nutrition profiling scheme to make it easier and quicker for people to identify the healthier options in their stores. With the exception of bottled water, alcoholic beverages, coffee, tea, spices, all edible products are rated. The more nutritional value a food has for its calories, the more stars it gets on a good, better, best nutritional value scale of zero to three. Many get zero.

Does it work? Well it may not be the perfect system (it does not take account of a food's GI value for example), but research recently published in the *American Journal of Clinical Nutrition* ([www.ncbi.nlm.nih.gov/pubmed/20147468](http://www.ncbi.nlm.nih.gov/pubmed/20147468)) suggests that it has had a positive influence on healthier food choices. The study was conducted by Dr Lisa Sutherland and colleagues who were on the program's Scientific Advisory Panel at the time the research was undertaken.

'We used purchasing data from 2006 to 2008 from Hannaford Supermarkets,' said Sutherland, 'and examined the data before the Guiding Stars scheme was introduced and one and two years after it was implemented. When we looked at ready-to-eat breakfast cereals as a case study, we found that purchase of star-rated cereals by

shoppers significantly increased at one-year and continued to increase in year-two. Although we did not measure individual diet, the purchasing of low-sugar, high-fiber cereals increased greatly after program implementation. This finding is of particular importance to our understanding the potential impact of such programs on consumer diet’.

Betts Fitzgerald, Managing Director of Guiding Stars Licensing Company, told *GI News* that the program ‘has now been implemented in more than 1500 supermarkets in the US including Hannaford, Food Lion, Bloom and Sweetbay. Kings Super Markets will launch Guiding Stars in 2010.’ Read more at [www.guidingstars.com](http://www.guidingstars.com).

**GI Group:** If you shop in these supermarkets, please tell us if you find nutrition profiling like this helpful and whether seeing one, two, three or no stars has changed any purchasing decisions.

## Food of the Month

### **Milk and yogurt in a low GI diet**

Reduced or low fat or skim dairy and soy milk and yogurt are handy foods to have on hand for healthy drinks or snacks that can lower the overall GI of your diet.

**Milk’s** low GI (20–34 for various skim to regular fat cow milks) is a combination of its naturally low GI sugar (lactose) plus milk protein, which forms a soft curd in the stomach and slows down the rate of stomach emptying. The unique mix of amino acids in cow milk protein are also thought to stimulate insulin secretion, further lowering the GI. **Low fat flavoured milks** also have a low GI (26–42). Yes, they have added sugar, but it’s in relatively modest amounts (about 4%) compared with soft drinks (11–12%). Some are also made with alternative sweeteners. We don’t have GI values for **goat milk** as it hasn’t been tested (nor has **camel milk**). However, they are likely to be similar to cow milk.

**Soy milk** is dairy- and lactose-free and an easy way to include soy protein in your diet. The GI values of soy milks range from 16–45. To ensure it is a suitable alternative to regular dairy milk, manufacturers enrich it with calcium, riboflavin and vitamin B12.

**Oat milk’s** GI value (69) is roughly twice that of dairy milk, however we think it’s probably a better option than rice milk (GI 79–92) if you are choosing a grain-based milk. Look for calcium-enriched products. The only GI-tested **almond milk** to date

is Almond Breeze (GI 25 for Almond Breeze Original). It's not a significant source of protein or carbs (1g and 2g respectively in 240ml serving). We reported on it in *GI News* ([http://ginews.blogspot.com/2010\\_01\\_01\\_archive.html](http://ginews.blogspot.com/2010_01_01_archive.html)). **Rice milks** that have been tested to date have very high GI values (Australia's Own GI 92 and Vitasoy GI 79). They are typically processed from brown rice and are essentially a source of carbs (24g per cup). Choose calcium-enriched products if you buy them.

**Yogurt's** low GI values are thanks (mainly) to the combination of acidity and high protein and of course the fact that lactose, the sugar in milk, has a naturally low GI (46). How low does yogurt go? Well, testing at the University of Sydney has found 'diet' yogurts have the lowest GI values (14–21) and contain fewer kilojoules/calories, and around half the carbohydrate compared with yogurts that have added sugars (26–43). Even if you are lactose intolerant, you can enjoy yogurt without symptoms because the 'bugs' (i.e. culture organisms added to milk to make yogurt) do the job of lactase digestion for you.

**Soy yogurt** (GI 50) is usually made from soybeans or soy protein rather than soy drink. Look for calcium-enriched, low fat varieties.

## 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](http://www.eatgoodcarbs.com)). The photographs are by Sergio Burani. His food, travel and wine photography website is [photosbysergio.com](http://photosbysergio.com).

### Seafood and mushroom lasagne

Lasagne is often the first choice for a special menu. I always use traditional Italian uncooked lasagne sheets. If you use pre-cooked ones, make extra white sauce for extra moisture.

Serves 8

2 tbsp olive oil

½ cup shallots or onion, finely chopped

1 large clove garlic, minced

230g (8oz) mushrooms, coarsely chopped

1 tbsp finely chopped flat-leaf parsley

½ tbsp fresh thyme leaves

450g (1lb) seafood (I use 225g/½lb medium-size uncooked shrimps/prawns, cut into 6 pieces **and** 225g/½lb scallops, quartered  
salt and freshly ground black pepper, to taste  
2 cups 2% milk  
4 tbsp butter or margarine  
4 tbsp all-purpose flour  
16 lasagne strips uncooked

- Preheat oven to 200°C (400°F).
- In a large, heavy-based skillet or frying pan, add the olive oil, shallots and garlic and sauté lightly for 2 minutes. Add in the mushrooms and continue sautéing for 2 minutes. Add the parsley and thyme, mix all ingredients well, and cook for 2 minutes. Increase heat to medium-high and add the shrimps. Cook for 2 minutes, stirring well. Add in the scallops. Continue cooking the mixture until all shrimp pieces have turned pink (approximately 2 minutes). Add salt and pepper to taste. Set aside.
- In a small pot, pour the milk and heat gently until it slowly begins to bubble (approximately 7 minutes), removed from heat and cover the milk to keep it hot.
- In a separate, small, heavy saucepan, melt the butter or margarine, add the flour and whisk briskly for 1–2 minutes, taking care to prevent browning. Gradually add the hot milk to the butter-flour mixture, a few tablespoons at a time, continuing to whisk. Continue until all the milk has been added and the mixture is smooth and thick enough to coat a spoon. Season with salt and pepper. Set aside.
- In a large pot with salted boiling water, cook the lasagne strips, 6 at a time, following the manufacturer's instructions. However, limit cooking time to just 7 minutes. Remove the lasagne strips with a slotted spoon and place on a clean linen kitchen towel, taking care that they do not overlap. Continue until all the pasta is cooked.
- Assemble the lasagne as follows: Place 2–3 tablespoons of the plain white (besciamella) sauce on the bottom of a lasagne pan (30 x 22 x 5cm deep/13 x 9 x 2¼in deep). Add the remaining sauce to the seafood-mushroom mixture. Place 4 lasagne strips on the bottom of the pan, allowing them to slightly overlap. Spread about ¾ cup of the mixture evenly over the pasta. Keep forming layers this way until all the pasta and sauce are used up. There will be 4 layers. Cover the pan with aluminium foil and place it on the upper rack of the oven. Bake for 15 minutes. Remove foil and continue baking for another 5

minutes. Remove the pan from the oven, cover with aluminium foil and let it rest for 10 minutes before serving.

*Per serving*

Energy: 1560 kJ/ 370 cal; Protein 22 g; Fat 12 g (includes 3 g saturated fat and 59 mg cholesterol if using margarine); Carbs 46 g; Fibre 2 g

**Cut back on the food bills** and enjoy 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 ([www.moneysavingmeals.com.au](http://www.moneysavingmeals.com.au)).

### **Cauliflower pasta**

You can ring the changes with this recipe simply by using a different cheese or herb for flavouring.

Serves 4

300g (10 oz) pasta such as penne (or your favourite shapes)

3 tbsp olive oil

1/2 cauliflower (about 750g/1½lb), cut into florets

1 cup fresh (low GI of course) breadcrumbs

4 cloves garlic, crushed

1/4 tsp chilli flakes (or more to taste)

2 tsp dried oregano

1/3 cup finely grated parmesan cheese

1/3 cup roughly chopped flat-leaf parsley

- Cook the pasta in a large saucepan of boiling water following the directions on the packet until *al dente*. Drain, but reserve a little of the pasta cooking water. Tip the pasta back into the saucepan and stir in 2 teaspoons of olive oil. Cover to keep warm. Meanwhile ...
- Cook the cauliflower until just tender (about 5 minutes), drain and set aside keeping warm. Heat 1½ tablespoons oil in a large frying pan and sauté the breadcrumbs and garlic for about 1½–2 minutes until the breadcrumbs are golden and crunchy, stirring constantly. Don't let them catch and burn. Tip them into a small heatproof bowl.
- Wipe the frying pan clean with a paper towel and heat the remaining oil. Sauté the chilli flakes, oregano and cauliflower for about 2–3 minutes on a medium heat until cauliflower starts to brown, stirring occasionally.

- Tip the cauliflower mixture into the pasta along with the breadcrumbs, parmesan cheese and chopped parsley, adding a little of the reserved pasta water if you wish. Season with freshly ground black pepper, mix thoroughly and serve.

*Per serving*

Energy: 1910kJ/ 456 cal; Protein 15 g; Fat 17 g (includes 3g saturated fat and 6mg cholesterol); Carbs 55g Fibre 7g

**Gabriel Gaté's mother's rabbit, carrot and prune casserole**

This recipe is from *Recipes My Mother Cooked* – a new book of family recipes and mealtime stories that provides a heart-warming reminder of the timeless benefits of home cooking and sitting down together for dinner. We would love to hear about your mother's favourite recipes.

'My mother has always shared with me her love of good food. She is très gourmande! I grew up in the Loire Valley and my parents grew most of the vegetables, herbs and fruits that we needed. We also had a tiny vineyard and made our own wine. Both my Mum and Grandmother prepared the family meals, and from an early age encouraged us kids to contribute by asking us to do small jobs like peeling vegetables or making a salad dressing or mayonnaise. Some of my most memorable moments in the kitchen were helping to garnish the delicious home-made fruit tarts with raspberries, strawberries or apple. Rabbit was one of our favourite meats and during the winter months, wild rabbits were sometimes brought to us by relatives.'

Serves 4

1 rabbit, about 1.2kg (2lb) or rabbit pieces if you prefer

1 tbsp olive oil

1 tbsp chopped thyme

1 small brown onion

1½ tbsp plain flour

about 12 pitted prunes

1 cup red wine

2 medium carrots, peeled and cut into 2cm thick slices

1 cup veal or chicken stock

salt and freshly ground black pepper

4 tbsp chopped parsley

1 clove garlic, finely chopped

- Cut the rabbit into seven pieces (the four legs, and the body, cut in three). You can also buy
- Heat the oil on high heat, then brown the rabbit pieces on all sides. Add the thyme and stir well for 10 seconds. Add the chopped onion and cook for 2 minutes. Sprinkle in the flour and stir well. Add the prunes and wine and bring to the boil. Add the carrots and stock and season with salt and pepper. Cover with foil and a lid and cook gently for 2 hours or until the rabbit is tender and the flesh falls easily away from the bone. Stir in the parsley and garlic just before serving.

*Per serving*

Energy: 2030kJ/ 485 cal; Protein 61 g; Fat 13 g (includes 4g saturated fat and 153mg cholesterol); Carbs 17g Fibre 4g

*Recipes My Mother Cooked* is available in Australia

([www.allenandunwin.com/default.aspx?page=94&book=9781742373317](http://www.allenandunwin.com/default.aspx?page=94&book=9781742373317)).

## Busting Food Myths with Nicole Senior

***Myth: Dairy-free diets are better for you***

***Fact: Dairy foods are nutrient rich and low fat versions even better***

Dairy foods (milk, yogurt, cheese) are nutrient rich and have assumed such importance in our diet as to warrant their own food group. This means that health experts and governments around the world have reviewed the evidence and concluded our health and wellbeing are enhanced by including dairy foods in our diets, and recommended us to eat them.

Along with their low GI status, there is a lot to recommend dairy foods. They are high in calcium needed for healthy bones and provide the majority of calcium in the diet. They also contain a bundle of other important nutrients including protein, vitamins A and B12, riboflavin, phosphorus, potassium, magnesium and zinc. Regular milk drinkers have a lower risk of heart disease and stroke, and emerging research is discovering beneficial 'bio-actives' in dairy such as lactoferrin which enhances bone and immune health.

With so much to recommend them, why are there so many "dairy-free" claims on food these days? Why do naturopaths seem to routinely suggest people avoid dairy foods? Why are there websites devoted to the "dangers of dairy"?

Even though whole dairy foods do contain mostly saturated fat, this is easy to avoid by choosing low fat versions, and limiting hard cheese. Although some still believe milk is fattening, studies have demonstrated dairy foods may actually help with weight loss. The Asthma Foundation in Australia says that sufferers should not eliminate dairy without proper medical advice because food affects less than 5% of people with asthma. The idea that milk causes mucus has been studied in controlled conditions and has not stood up to scientific scrutiny.

Milk allergy affects 5% of children at most (and more likely 2%), and 1% of adults. Lactose intolerance is an issue for some people however complete dairy avoidance is not usually necessary. The anti-dairy argument is hard to reconcile with the idea that millions of humans have been eating dairy foods for several thousand years, and even today, the Masai in Tanzania live principally on milk, blood and meat.

***Why do anti-dairy myths persist?*** Food myths are prevalent in societies where food is abundant and choices are practically endless. Are we fussy with our diets because we're too well fed? Are we desperately clutching at ideas to narrow down our food options because they are now overwhelming? Are we looking to fix our broader dis-ease with hectic modern lifestyles? For those who have chosen the dairy-free path, I'm sorry to say there are a plethora of websites also attacking the safety and goodness of soy milk as well ...

If you'd like quality information on heart health and great recipes check out Nicole's website ([www.eattobeatcholesterol.com.au](http://www.eattobeatcholesterol.com.au)).

## Body Work

### **Too much sitting is bad for your health**

Our public health advisers tell us to exercise for just 30 minutes a day. But a recent study on television viewing time and mortality published in *Circulation* (<http://circ.ahajournals.org/cgi/content/abstract/CIRCULATIONAHA.109.894824v1>) suggests that's only part of the solution to the obesity problem, as the human body was designed to keep moving, not sit for extended periods of time.

Australian researchers at the Baker IDI Heart and Diabetes Institute in Australia tracked the TV viewing habits of 8800 adults in Australia (age 25 and older) over 6 years and found that compared with people who watched less than two hours of television daily, those who watched more than four hours a day had a 46% higher

risk of death from all causes and an 80% increased risk for CVD-related death they report. This association held regardless of other independent and common cardiovascular disease risk factors, including smoking, high blood pressure, high blood cholesterol, unhealthy diet, excessive waist circumference, and leisure-time exercises.

'It's not the sweaty type of exercise we're losing,' says Prof. David Dunstan, a leading researcher on the role of physical activity in the prevention and management of type 2 diabetes. 'It's the incidental moving around, walking around, standing up and utilizing muscles that doesn't happen when we're plunked on a couch in front of a television.' In fact, the study participants typically reported getting between 30 and 45 minutes of exercise a day.

'What has happened is that a lot of the normal activities of daily living that involved standing up and moving the muscles in the body have been converted to sitting,' Dunstan said. 'People don't move their muscles as much as they used to – consequently the levels of energy expenditure as people go about their lives continue to shrink. For many people, on a daily basis they simply shift from one chair to another – from the chair in the car to the chair in the office to the chair in front of the television. Even if someone has a healthy body weight, sitting for long periods of time still has an unhealthy influence on their blood sugar and blood fats,' he said. The implications are simple, Dunstan said. 'In addition to doing regular exercise, avoid sitting for prolonged periods and keep in mind to **'move more, more often'**. Here are David's tips for moving more:

- Switch off, stand up and get moving
- Avoid prolonged periods of sitting – whether in front of the TV, a computer screen or on transport. At the very least get up and move once every hour
- Limit your TV viewing to two hours a day
- Use commercial breaks for household chores
- Stand up and move around while answering the telephone

## GI Symbol News with Dr Alan Barclay

### **Finding healthy low GI milks, yogurts and alternatives**

In their 'natural' state, milks and yogurts are nutritious foods with a low GI. However, not everyone likes the *au naturel* flavour of plain milks and yogurts, so food manufacturers add ingredients to appeal to a broader range of tastes and this

can affect the GI and calorie count. Milk alternatives like soy, rice and oat milks don't contain lactose and have different proteins and fats which is why their GI values range from low (soy milks) to high (rice milks). These plant-based milks are not naturally a good source of calcium, so look for calcium-fortified ones.

The key problem for us today with milk and milk alternatives is the amount and type of fats they contain. Mammal milk fat is predominantly saturated fat, so reduced or low fat versions are better choices for most of us (not kids under two). Milk alternatives can be a better choice from a cholesterol perspective because their fats are unsaturated. But choosing reduced fat versions is still going to be better for your waistline as unsaturated fats have the same number of calories as saturated fats.

Adding large quantities of sugar to flavoured milks and yogurts (and alternatives) of all kinds can increase their glycemic load and calories. So, products with no added sugar are going to be a better choice. The GI Foundation has developed the following guidelines for choosing healthy low GI milks, yogurts and alternatives:

### **Milk fluid and dried (as reconstituted) and dairy drinks**

- Fat: 2g per 100g or less, or 2-4g per 100 g, provided that saturated fat is less than or equal to 20% of total fat
- Calcium: 100mg per 100g or more

*Examples:* Dairy farmers Light White, Skim Milk and Just Natural Malt, Honey and Chocolate (99% fat free milk), Sustagen (vanilla and chocolate).

### **Soy and alternative beverages**

- Fat: 3.5g per 100g or less, or 2-4g per 100g, provided that saturated fat is less than or equal to 20% of total fat
- Calcium: 100mg per 100g or more

*Example:* So Natural® Calci Forte.

### **Yogurt, or soy yogurt**

- Fat: 2g per 100g or less, or 2-4g per 100g, provided that saturated fat is less than or equal to 20% of total fat
- Energy: less than or equal to 35 kJ per 100g
- Calcium: 100mg per 100g or more

*Examples:* Brownes Fresh 'n Fruity® Yogurt, Nestle All Natural 99% Fat Free Yogurt and Nestle Diet Yogurt.



### **For more information about the GI Symbol Program**

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### **GI Update**

#### **GI Q&A with Prof Jennie Brand-Miller**

***'I've read that dairy products cause an increase in insulin secretion. Their GI is around 25–50 but their insulin index is three times higher. Is this a problem?'***

All protein foods (yes that includes meat, fish and eggs) stimulate insulin secretion – that's why you may see them described as being 'insulinogenic' to use the technical term. However, the proteins in milk may be more insulinogenic than in other protein foods because they are meant to help baby mammals grow and develop.

One of insulin's many functions is to act as a growth hormone designed to drive nutrients into cells – not just glucose but also amino acids, the building blocks of new tissue. It is thought that milk may contain a unique combination of amino acids that together are more insulin stimulating than alone. There is no evidence that this either increases your risk of weight gain or lifestyle-related diseases like type 2

diabetes.

The disparity between glucose and insulin response is not unique to dairy foods. We have found that certain sweets and baked products also do this. Chocolate may also contain amino acids that stimulate insulin secretion.

***'I read a paper in Medical Hypotheses by Bodo C. Melnik about the need to avoid dairy foods. It basically said that milk protein consumption is a key factor in promoting most chronic diseases of Western societies.***

***What's your view?'***

This viewpoint is not new and I know quite a few people who support it. While all the theory makes sense, it doesn't stack up in epidemiological studies (which are 'natural' experiments). In fact, in Western countries, dairy consumption is often associated with better insulin sensitivity, lower weight gain and lower cardiovascular disease risk (and one mechanism maybe the low GI of most dairy products).

To me, a whole race of people (Caucasians) have a genome that is shaped by milk drinking during our evolutionary past and we have high levels of lactase throughout life because it was such a useful food source. So I find it hard to accept that it's harmful to Caucasians, even in adulthood. Perhaps, the rest of the human race are not so lucky. But even then, I think of milk as the secretion of the mammary gland designed for growth of a newborn mammal – how could it be both safe at that time and then harmful later? I think we should keep an open mind on this one.