

# GI News

## Transcripts

**Professor Jennie Brand-Miller** talks about old nutrition, new nutrition and what people really need to know about food to make better choices in this edited transcript of a presentation on food labelling given in Sydney, Australia, in July 2013.

### Old Nutrition, New Nutrition: What Do People Really Need to Know About Food?

How do you sum up the nutritional quality of a food? How can the label be simple, but not too simple? How can we be sure it does not have unintended consequences? How does it keep pace with advances in nutrition science?

#### The Old Nutrition

The old nutrition messages (what people have been told for the past 20 years) go like this:

- Foods can be dissected into (and judged by) their macronutrient content (protein, carbohydrate or fat).
- Saturated fat is the main dietary risk factor for cardiovascular disease.
- A low-fat diet is best for preventing obesity, diabetes and cardiovascular disease.
- Eat a diet that is low in fat and high in “complex” carbohydrates (carbs).
- Eat plenty of cereals, breads, rice, pasta and noodles, preferably wholegrain.
- Eat a diet that is high in fibre.
- Eat less, or limit, sodium (added salt and salty foods).
- Minimise added sugars.

But gradually, over the past decade or so, the nutrition landscape has changed.

We discovered from the findings of large, long-term randomized controlled trials (RCTs) that the low fat dietary advice did not have the desired outcome. It did *not* prevent people from getting heart disease, stroke, type 2 diabetes, breast cancer, and colorectal (bowel) cancer etc. In fact, the prevalence of obesity and type 2 diabetes just continued to increase.

We also discovered that *some* carbs were worse for us than saturated fat. Carbs with high glycemic index (GI) values, in particular, were linked to higher risk of CVD, type 2 diabetes and some cancers. High GI carbs include those

in most potatoes, breads, breakfast cereals, rice – even in the wholegrain versions.

Head to head in high quality randomized controlled trials, we found that:

- Energy-dense, high protein-very low carb diets were associated with faster weight loss and better CVD risk factors than low fat diets.
- Higher fat, Mediterranean style diets produced better weight control and cardiovascular outcomes than low fat diets.
- Low GI/low glycemic load diets were associated with improved diabetes control, prevention of weight re-gain and reduced risk of type 2 diabetes.

These alternate diets share an underlying, unifying mechanism:

- They reduce postprandial glycemia and insulinemia.
- They reduce oxidative stress and inflammatory markers, not just (bad) LDL-cholesterol and triglycerides.
- They rely on the naturally satiating qualities of individual foods to control appetite, not on counting calories or grams of fat or carbs.
- They focus on real *foods* rather than macronutrients.

Some authorities, including the Institute of Medicine in the USA and the Joslin Diabetes Clinic, began to recommend a lower carbohydrate intake and higher protein intake.

#### The New Nutrition

The new nutrition (what people need to know) goes something like this:

- Low fat dietary advice has been unhelpful. It is consistently associated with weight re-gain. It does not reduce the risk of chronic disease.
- We should pay more attention to lean protein sources, especially plant protein.
- We should pay more attention to the quality of carbohydrate sources. We need to swap high GI carbs for low GI carbs.
- There is a range of healthy macronutrient ratios: high fat-Mediterranean diets, traditional high carbohydrate Asian diets (rich in rice and vegetables), higher protein diets and low GI diets are all helpful.

This range of advice offers people flexibility and moderation. It takes into account the diversity of cultural and ethnic backgrounds. At the

individual level, it is more sustainable (people can stick with it).

What about fibre? I'm not convinced that we need to eat brown bread, brown rice, brown pasta (most chefs don't touch them). The evidence for eating more whole grains is overwhelmingly "observational" and highly likely to be confounded by other health-conscious activity. In several well designed, randomised controlled trials, consumption of whole grains (vis-a-vis refined grains) has *not* improved heart disease and diabetes risk factors. Yes, oats have produced improvements but we can't eat oats for breakfast, lunch *and* dinner.

What about added sugar? I'm a skeptic here too. I'm not convinced that we need to keep added sugars to a very low level. Honey has been a favourite food for humans for millennia. A diet with a moderate amount of added sugars (about 5–10 per cent of total energy, or 25 to 50 grams in a 2,000-calorie/8,400 kilojoule diet) is the amount considered commensurate with a nutritious diet.

What about sodium (salt)? While advice to reduce the amount of sodium in the diet makes good sense, there's no need to completely avoid all sodium. A recent large study found that both lower (less than 3 grams) and higher (more than 6 grams) sodium intakes were associated with an increased risk of major cardiovascular events like heart attack and stroke, and that the least risk was associated with people whose intakes were in the middle.

The new nutrition is still new, *very* new. Many people are confused and even health professionals are having trouble catching up with the new science. What is important is to remember is, as Yale's Dr David Katz says: "The simple single nutrient message is the wrong message. We can never get to good diets (or good health) one nutrient (or food) at a time."

### **So, How Do You Sum Up the Nutritional Quality of a Food on Its Label?**

I am uncomfortable with traffic lights and rating stars. Why? If breast milk were sold in the dairy compartment, it would have at least two red marks – one for saturated fat and one for sugar (human milk has the highest sugar content of any mammalian milk). This is because the algorithms that underpin traffic lights and rating stars are based on the old nutrition that has past its use-by date.

- The energy content (calories/kilojoules) of a food is not the best way to judge a food – lentils and licorice have the same energy density.

- The fat content of food is not the best way to judge a food – nuts have more fat and are more energy dense than French fries.
- The sugar content is not the best way to judge a food – dried fruit is full of sugar.
- The sodium content is not the best way to judge a food – soft drinks are low in sodium.

What's wrong with the current traffic lights and rating stars?

- They ignore micronutrients – vitamins, minerals and phytochemicals.
- They ignore two important proven attributes of foods in the new nutrition – the protein content and the GI of the carbohydrates. Both these factors are proven to help to curb appetite.

Appetite matters. Appetite is what drives our energy intake.

It is not possible to balance energy intake and energy expenditure by counting calories. Firstly, no one knows how many calories they expend each day. Even if you could, the calories on the food label are not precise enough. Secondly, mathematical modeling shows that a small but persistent excess of only 7 calories or 30 kilojoules per day over and above energy requirements for 10 years underlies the current epidemic of obesity. The best way to balance calories in and calories out is to weigh yourself regularly (on accurate scales) or use the belt test.

### **What Would I Like to See on Food Labels?**

I'd like to see a system that:

- Focused on the positive.
- Rated foods according to their contribution to desirable macronutrient and micronutrient intakes.
- Used Adam Drewnowski's Nutrient Rich Foods Index, which rates individual foods based on their overall nutritional value, as an essential component.
- Encouraged higher protein intake, particularly from legumes.
- Distinguished between naturally-occurring and added sugars.

I would advocate that we make the most of something we already have available to use on our food packaging here in Australia and that is proven to work: two certified and recognisable symbols that are signposts to both healthy foods and healthy diets.

One is the Heart Foundation Tick, which encourages eating healthy types of fat.

The other is the Glycemic Index Foundation Low GI Symbol, which encourages eating healthy carbs. And here I have a duality of interest to declare. The University of Sydney owns the Low GI Symbol trademark. Research shows that the low GI focus automatically improves diet quality because it increases fibre intake, it reduces saturated fat, and it improves micronutrient intake. While the *low fat* focus had unintended, undesirable consequences, the *low GI* focus has had unexpected benefits.

My take home message for Australians:  
The Low GI Symbol  
+ The Heart Foundation Tick  
= Good nutrition by default.



**Professor Jennie Brand-Miller** holds a Personal Chair in Human Nutrition in the Boden Institute of Obesity, Nutrition, Exercise and Eating Disorders, and Charles Perkins Centre, at the University of Sydney.

Both The Tick and the GI Symbol are designed to help shoppers choose the healthier product, when comparing similar products, in the supermarket.

Food manufacturers pay to participate in these programs.

Tick works with food manufacturers to make foods healthier by setting strict nutrient standards for foods which manufacturers are encouraged to meet by changing their product recipes. Once a food has met these standards, the manufacturer can apply to carry the Tick logo.

Foods that carry the GI Symbol have had their glycemic index tested at an accredited laboratory and meet strict nutrient criteria for kilojoules (calories), saturated fat and sodium, and where appropriate, fibre and calcium. The nutrient criteria are consistent with international dietary guidelines and were developed by the Glycemic Index Foundation in consultation with experts from the University of Sydney and Australian consumer diabetes organisations.

For more information:

The Tick: [www.heartfoundation.org.au](http://www.heartfoundation.org.au)

The GI Symbol: [www.gisymbol.com](http://www.gisymbol.com)