

## GI News - November 2020

GI News is published online bi-monthly (during 2020) by the University of Sydney, School of Life and Environmental Sciences and the Charles Perkins Centre, and delivered to the mailboxes of our 97,000 subscribers. Our goal is to help people choose the high-quality carbs that are digested at a rate that our bodies can comfortably accommodate and to share the latest scientific findings on food and diet with a particular focus on available carbohydrates (maltodextrins, starches, sugars), dietary fibres, blood glucose, the glycemic index and glycemic load.

**Publisher:** Professor Jennie Brand-Miller, AM, FAA, FAIFST, FNSA, PhD

**Editor:** Dr Alan Barclay, PhD, APD

**Contact GI News:** [glycemic.index@gmail.com](mailto:glycemic.index@gmail.com)

### Sydney University Glycemic Index Research Service

**Manager:** Dr Roslyn Muirhead, PhD, APD

**Contact:** [sugirs.manager@sydney.edu.au](mailto:sugirs.manager@sydney.edu.au)

### FOOD FOR THOUGHT

#### NON-DIGESTIBLE COMPONENTS OF FOOD – SHOULD WE BE EATING MORE?

Once upon a time, the roughage in food, now called dietary fibre, was regarded as a nuisance, something that might slow the growth of children, just like it did in animals. But in the 1970s two British nutrition scientists, Dennis Burkett and Hugh Trowell, proposed something radical - that dietary fibre might actually be helpful - preventing the development of diseases like type 2 diabetes and colon cancer. In fact, they suggested that nearly every “Western” disease might respond favourably to eating more roughage.



I can still remember raising my eyebrow while listening to Dennis Burkett’s presentation to Sydney scientists in 1980. He showed us a plate-size ‘cow pat’ next to a match box. In the next slide, he showed a typical human stool of a westerner, a few hard pellets, again next to a match box (If you’d like to see more description of human stools, you’ll **love** the Bristol stool chart (see below)). Today, 50 years later, we know that dietary fibre increases the water content, volume and weight of faeces, and along with that the ability to alter human metabolism in ways we never thought possible.

Last year, I was lucky enough to join a group of 40 eminent scientists calling themselves the **International Carbohydrate Quality Consortium**, who met in Palinuro, Italy, to draw up a consensus statement on what we know and don't know about dietary fibre. The ensuing paper was published in the journal *Nutrients* recently (see below).

There is still some confusion and disagreement about the definition of dietary fibre and how it should be measured. Many of us still use the original definition: carbohydrates (and relatively small amounts of other substances) derived from plants that are **not** digested by our digestive enzymes or absorbed in our small intestine. Hence, they reach the large intestine where a substantial amount is digested by the microbes in our microbiome. Helpful bacteria produce small organic acids that are absorbed into the body, used for our metabolism, and promote insulin sensitivity.

However, there is much that is not known about dietary fibre, in part because the structure of the plant cell wall which makes up the majority of our dietary fibre has not been fully explored. Added to this, what occurs during chewing and movement through the digestive tract is not clear. The nature and actions of the microbiome are just beginning to be investigated.

**What do we know?** Dietary fibre can alter gut function starting in the mouth and ending where the intestinal tract exits the body (the anus). The actual physiological effects depend critically on the properties of individual plant polysaccharides and oligosaccharides (i.e., types of fibre) and also the structural integrity of cell walls, an important part of the architecture of the plant tissue. These effects may include increasing or decreasing salivation, viscosity of the food as it travels down the gut, stomach emptying rate, extent of nutrient digestion and absorption, transit time, faecal bulking, laxation, fermentation, colonic acidity, microbiota amount and composition, binding of mucus, enzymes, hormones, bile acids and other metabolites, which may also be bioactive. Whew!

Beyond the gut, the established metabolic effects of specific types of fibre include lowering of blood cholesterol and postprandial (after meal) blood glucose, and fasting blood glucose in people with diabetes. In particular, these effects have been observed with isolated viscous fibres such as psyllium,  $\beta$ -glucans, guar gum, glucomannan and pectic polysaccharides. Another plant isolate, inulin, though not viscous, can lower fasting glucose and insulin and fasting LDL-cholesterol while increasing good cholesterol (HDL) in people with diabetes and to a lesser extent in overweight and obese persons. Some manufactures add inulin to yogurt and other products.

These observations show that fibre is capable of modifying our metabolism. Moreover, fibre-rich sources of edible plants such as pulses, nuts, barley, oats, some vegetables and fruits have been shown to improve long-term control of established chronic-disease risk factors, like blood fats (i.e., cholesterol and triglycerides), glucose, blood pressure and body weight. Many of these beneficial health effects have been attributed to the presence of fibre in these foods. But a distinction needs to be made between natural sources of dietary fibre and purified or modified forms of fibre. The purified forms may not have the same properties that they did as part of the original food.

## Recommendations from the ICQC:

- Dietary fibre is an important part of a sustainable, balanced healthy diet. Consumption is below recommended intake levels for optimal health in many parts of the world and may be decreasing.
- We should eat a total of 14 g /1000 Calories (3.3 g / 1000 kilojoules) of dietary fibre a day, ideally from naturally-occurring fibre.
- Dietary fibre should be a compulsory part of a food label's Nutrition facts / information panel.
- Labelling should distinguish between fibre that is intrinsic to foods and that added as a functional supplement.

## REFERENCES:

- Burkitt DP and Trowell HC. [Refined carbohydrate food and disease](#). Academic Press, London, 1975.
- The [Bristol stool chart](#)
- Dietary Fibre Consensus from the [International Carbohydrate Quality Consortium](#)
- Capuano E. [The behavior of dietary fiber in the gastrointestinal tract determines its physiological effect](#). Crit Rev Food Sci Nutr. 2017



**Professor Jennie Brand-Miller** holds a Personal Chair in Human Nutrition in the Charles Perkins Centre and the School of Life and Environmental Sciences, at the University of Sydney. She is recognised around the world for her work on carbohydrates and the glycemic index (or GI) of foods, with over 300 scientific publications. Her books about the glycemic index have been bestsellers and made the GI a household word.

## WHAT'S NEW?

### FIBRE AND BODY WEIGHT

The role of dietary fibre in weight management has been investigated for many decades and is still debated. A recently published systematic review and meta-analysis of randomised controlled trials sheds more light on the subject by specifically investigating the effect of viscous dietary fibres on body weight, waist circumference, body mass index (BMI), and body fat, independent of energy (kilojoule/calorie) reduction.



Agar, alginate,  $\beta$ -glucan, guar gum, konjac, viscous fiber blend (konjac, alginate, and xanthan), psyllium and xanthan gum are all common kinds of viscous dietary fibres that are found naturally in foods, are added as ingredients, or can be consumed as fibre supplements, and were included in the systematic review.

There was a total of 62 trails including 3,877 people, with an average age of 51 years (range 16 – 70 years), and a baseline body mass index (BMI) of 27 (range 19 - 33) kg/m<sup>2</sup>. Around one fifth (18%) of participants had diabetes and/or the metabolic syndrome and over a third (37%) were at risk of cardiovascular disease (e.g., heart disease or stroke). The main findings were:

- consuming 8 g (range 0.8 - 36 g) of viscous fibre a day leads to a 0.33 kg decrease in body weight over 8 weeks (range 4-52 weeks), with evidence that the longer people consume the soluble dietary fibre, the more weight they lose.
- consuming 7 g (range 2.3 - 36 g) of viscous fibre a day leads to a 0.63 cm decrease in waist circumference over 12 weeks (range 4-52 weeks), with evidence that the longer people consume the soluble dietary fibre, the smaller their waist circumference.
- consuming 6 g (range 1.3 - 36 g) of viscous fibre a day leads to a 0.28 kg/m<sup>2</sup> decrease in BMI over 8 weeks (range 4-52 weeks).
- consuming 9 g (range 3 - 36 g) of viscous fibre a day did not quite lead to a statistically significant decrease (-0.78%, P=0.05) in body fat over 8 weeks (range 4-52 weeks).

While the reductions in weight, BMI and waist circumference are not huge by any measure, they were all independent of energy (kilojoule/calorie) reduction and are comparable to other popular dietary approaches like the Mediterranean-style diet (0.29 kg reduction in body weight), low-carbohydrate diet (0.48 kg reduction in body weight) and high-dietary pulses (legumes) diet (0.34 kg reduction in body weight).

Therefore, making sure you include more soluble dietary fibre in your diet may have some added benefits if you are trying to lose weight or get into shape.

#### Read more:

- [Can dietary viscous fiber affect body weight independently of an energy-restrictive diet? A systematic review and meta-analysis of randomized controlled trials.](#)



**Alan Barclay** PhD is a consultant dietitian and chef. He is author of *Reversing Diabetes* (Murdoch Books), and co-author of 30-plus scientific publications, *The Good Carbs Cookbook* (Murdoch Books), *Managing Type 2 Diabetes* (Hachette Australia) and *The Ultimate Guide to Sugars and Sweeteners* (The Experiment Publishing).

**Contact:** Follow him on [Twitter](#), [LinkedIn](#) or check out his [website](#).

**PERSPECTIVES: DR ALAN BARCLAY**  
**FIBRE AND GLYCEMIC INDEX**

There is a common belief that foods that are high in fibre do not raise blood glucose levels as much as those that are low in fibre, and therefore “high fibre” can be used as a surrogate marker for “low GI” when shopping for foods. Is this belief valid?



Before I can answer this question, it’s important to consider what information about carbohydrates can be found on most food labels around the globe.

*Carbohydrates and food labelling*

As discussed in previous editions of [GI News](#), currently, in most parts of the world, only very basic information about carbohydrate is included on food labels. Unfortunately, Nutrition Facts / Information panels are not mandatory in many parts of the world, and in places where they are, only **total (available) carbohydrate** (i.e., all maltodextrins, starches and sugars) and **total sugars** (e.g., all naturally occurring and added sugars) are generally included.

Dietary fibre, which is a kind of carbohydrate, is not a mandatory component of the Nutrition Facts / Information panel in most countries at present, with the exceptions being Canada and the United States of America (USA). In some nations, it must be included under certain circumstances, like when a fibre claim is made, and in many countries, it can also be included as voluntary information.

Unfortunately, the GI is not a mandatory component of food labels in any part of the world at present. However, voluntary GI labelling scheme’s do exist in many countries, including Australia, China, India, New Zealand, Singapore, South Africa and the USA.

*Total carbohydrate and blood glucose levels*

People with diabetes – in particular those that use insulin – can use the information about the total amount of available carbohydrate to help manage their blood glucose levels. Carbohydrate counting – whether using gram (g) amounts, 10 g portions or 15 g exchanges – has been proven in randomised controlled trials to significantly lower glycated haemoglobin (HbA1c), the 3-month average of blood glucose levels, by 0.35% - 0.64% points in people with type 1 diabetes. While it may sound small, lowering HbA1c by 0.5% points may reduce the risk of deaths related to diabetes

by around 10%, heart attack by 7%, and microvascular complications (e.g., retinopathy, neuropathy, nephropathy, etc...) by around 18%.

#### *GI and blood glucose levels*

There is good evidence from randomised controlled trials that choosing mostly low GI foods and meals instead of high GI alternatives lowers HbA1c by 0.5% points in people with diabetes.

#### *Sugars and blood glucose levels*

Surprising to most, the total amount of sugars in a food or meal is not useful from a blood glucose management perspective, for several reasons:

- The GI of commonly consumed sugars (naturally occurring and added) ranges from a low of around 20 for the sugar fructose to a high of 105 for the sugar maltose.
- Commonly added sugars like sucrose, high-fructose corn syrups and most honeys, have GI values in the 60's and therefore are medium GI.
- Sugars are not the only kind of carbohydrate that effect blood glucose levels – maltodextrins and starches also raise them, and they are all included as a part of total carbohydrate in Nutrition Facts / Information panels.

This is why, for people with diabetes, total carbohydrate is a more useful component of Nutrition Facts / Information panels than sugars.

#### *Dietary fibre and blood glucose levels*

Jason Bao and colleagues recently investigated the effect of 121 different foods and 13 mixed-meals in 1000 kJ (240 Calorie) or 2000 kJ (480 Calorie) portions, respectively, on blood glucose and insulin levels. The foods and meals all had widely differing amounts of carbohydrate, fat, protein and dietary fibre, reflecting what we commonly consume in our regular diets. Consistent with the evidence from clinical trials in people with diabetes that investigated the effect of either total available carbohydrate or GI on blood glucose levels, they found that the foods glycemic load, which is the product of available carbohydrate and GI ( $GL = GI \times \text{available carbohydrate per serve} \div 100$ ) was the strongest predictor of a foods and meals effect on blood glucose and insulin levels.

Perhaps surprisingly, for individual foods containing between 0 and 24 grams of fibre and meals containing between 0 and 21 g of fibre, total fibre content was not a predictor of either blood glucose or insulin response for the foods or meals.

While this may sound surprising, its important to remember that there are a large number of factors that determine a foods GI, including (but not limited to):

- type and amount of sugars
- type and amount of starch (i.e., amylose or amylopectin)
- starch gelatinisation
- acidity (pH)
- polyphenol content

- type of dietary fibre

There is evidence that viscous dietary fibres like agar, alginate,  $\beta$ -glucan, guar gum, konjac, pectin, psyllium and xanthan gum do help lower the glycemic index of foods or meals. However, other types of dietary fibre may not have the same effect, particularly when processed. Unfortunately, the **type of dietary fibre** is not included in mandatory Nutrition Facts / Information panels anywhere in the world at present.

Therefore, total dietary fibre is not a useful surrogate for GI (or GL) with respect to the effects of individual foods or meals on blood glucose levels. Just because a food or meal is high in fibre does not mean it will have a low GI.

*The GI and GL are the best predictors of a food or meals effect on blood glucose levels*

Therefore, if you want to know how a food will affect your blood glucose levels, look at the amount of total available carbohydrate per serve (based on the amount you will be eating – which is not necessarily the same as what is printed on the pack) and the foods GI. Sydney University's GI Research Service lists the GI values for hundreds of foods on its website [www.glycemicindex.com](http://www.glycemicindex.com) which can be accessed for free on your PC, tablet or smart phone when shopping.

**Read more:**

- Food and Agriculture Organisation of the United Nations. [Food Labelling](#).
- Bell and colleagues. [Efficacy of carbohydrate counting in type 1 diabetes: a systematic review and meta-analysis](#).
- Thomas and Elliott. [Low glycaemic index, or low glycaemic load, diets for diabetes mellitus](#).
- Stratton and colleagues. [Association of glycaemia with macrovascular and microvascular complications of type 2 diabetes \(UKPDS 35\): prospective observational study](#).
- Bao and colleagues. [Prediction of postprandial glycemia and insulinemia in lean, young, healthy adults: glycemic load compared with carbohydrate content alone](#).
- Jenkins and colleagues. [Dietary fibres, fibre analogues, and glucose tolerance: Importance of viscosity](#).
- Sydney University's free on-line GI [database](#).



**Alan Barclay** PhD is a consultant [dietitian](#) and chef. He is author of *Reversing Diabetes* (Murdoch Books), and co-author of 30-plus scientific publications, *The Good Carbs Cookbook* (Murdoch Books), *Managing Type 2 Diabetes* (Hachette Australia) and *The Ultimate Guide to Sugars and Sweeteners* (The Experiment Publishing).

**Contact:** Follow him on [Twitter](#), [LinkedIn](#) or check out his [website](#).

## DIABETES CARE

### FIBRE AND DIABETES

People with diabetes are usually encouraged to include more fibre-rich foods in their diet. The importance of this has been confirmed in a recently published systematic review and meta-analysis looking at the role of dietary fibre and whole grains in diabetes management.



The scientists combined the findings of 44 studies involving people with type 1 diabetes, type 2 diabetes and prediabetes. This included two prospective cohort studies (which follow groups of people over time and compare them for different outcomes) and 42 controlled trials (where people are allocated to different treatment groups and the outcomes of those treatments are compared). Some studies used high fibre foods and others used fibre supplements.

The cohort studies showed a reduction in premature death in those eating a higher fibre diet, with a clear dose response, meaning that as fibre intake increased, the risk of death decreased. The controlled trials that included between 433 and 1807 people, found that increasing fibre intake resulted in improvements in blood glucose levels, blood fats (cholesterol and triglyceride), body weight and measures of inflammation. However, in this systematic review, no differences were seen between different types of fibre or the source of the fibre (food or supplements), most likely due to the smaller number of people included. There are of course other benefits of getting most of your fibre from a wide diversity of plant foods, particularly for your gut microbiome.

High fibre foods, such as wholegrains, legumes, fruit and starchy vegetables, are also often rich in available carbohydrate (e.g., starches and sugars). But despite some people advocating low carb diets for diabetes management and weight loss, the authors of this paper found no evidence to suggest that relatively high intake of these carbohydrate-rich foods negatively affect blood glucose or weight management.

Based on their findings, the authors recommend that people with diabetes or prediabetes should increase their fibre intake to at least 35g per day. Considering the average Australian adult only consumes around 23g per day, and intakes are even lower in most other developed nations, this means increasing fibre intake by at least one-third.

A good place to start would be aiming for your '2 and 5' fruit and veg each day. Switching refined grains (such as white bread and highly processed low fibre breakfast cereals) to wholegrains (such

as dense grainy breads and traditional rolled oats) and incorporating legumes (lentils, chickpeas and dried/canned beans) into your meals regularly are also great ways help to boost fibre intake.

#### References:

- Reynolds and colleagues. [Dietary fibre and whole grains in diabetes management: Systematic review and meta-analyses](#). PLoS Med. 2020
- Heiman and Greenway. [A healthy gastrointestinal microbiome is dependent on dietary diversity](#). Mol Metab. 2016



**Dr Kate Marsh** is an is an Advanced Accredited Practising Dietitian, Credentialed Diabetes Educator and health and medical writer with a particular interest in plant-based eating and the dietary management of diabetes and polycystic ovary syndrome (PCOS).

**Contact:** Via her website [www.drkatemarsh.com.au](http://www.drkatemarsh.com.au).

## YOUR GI SHOPPING GUIDE

### HIGH FIBRE FOODS

You might be familiar with the dietary recommendation to include high fibre, low GI foods but you would be misled to think that all high fibre foods were low GI. Brown rice and wholemeal bread are two common examples of *high fibre, high GI* foods. The fibre in these cereal grains is predominantly insoluble fibre, which is great for bowel regularity but isn't as effective at slowing carbohydrate digestion as soluble fibre. Barley and oats, on the other hand, have higher proportions of soluble fibres and lower GI values. In the tables below, pearl barley, wholemeal bread, porridge and brown rice are ranked from highest to lowest fibre per serve but the pearl barley and porridge have the lower GI and GL values, despite their differences in fibre content..

**For people with diabetes** – To those of you who count your carbohydrate intake in grams, exchanges or portions, we have included the details for each of these.

15g carbohydrate exchange – a serve containing 12-18g carbohydrate.

10g carbohydrate portion – a serve containing 7.6-12.5g carbohydrate.



**Pearl Barley, cooked**

Serving size, ½ cup (95g/3 ½ oz)

GI	Energy	Available carbohydrate	Fibre	Exchanges	Portions	Glycemic load
22-35	562kJ/134Cal	24g	5.2g	1.5	2	9

**Wholemeal bread**

Serving size, 2 slices (64g/2 oz)

GI	Energy	Available carbohydrate	Fibre	Exchanges	Portions	Glycemic load
52-87	562kJ/134Cal	24g	4g	1.5	2	12-21

**Porridge, made from rolled oats - cooked**

Serving size, ½ cup (approximately 130g/4 ½ oz)

GI	Energy	Available carbohydrate	Fibre	Exchanges	Portions	Glycemic load
49-75	630kJ / 150Cal	18g	2.2g	1	1.5	9-14

**Brown rice - medium grain**

Serving size, ½ cup (approximately 80g/3oz)

GI	Energy	Available carbohydrate	Fibre	Exchanges	Portions	Glycemic load
72-87	580kJ/138Cal	28g	1.4g	2	3	20-24

## Read more:

- [www.glycemicindex.com](http://www.glycemicindex.com)



**Kaye Foster-Powell** is an Accredited Practising Dietitian who has worked with people with diabetes for 30 years. She was co-author of the original series of international, best-selling books on the glycemic index. She conducts a specialized private practice for people with diabetes in the Blue Mountains, west of Sydney, Australia.

**Contact:** Via her [website](#).

## GOOD CARBS FOOD FACTS

### YAMS

Living in Australia, my exposure to the celebration of Thanksgiving was through the American TV shows I watched growing up. I know turkey plays a central role on the thanksgiving table, but I also know candied yams are a traditional side-dish. As thanksgiving is coming, it got me thinking about yams, as I don't think I've ever eaten them.



But wait, I've eaten sweet potato and isn't that the same thing? No. Although the terms are used interchangeably in North America, sweet potatoes (*ipomoea batatas*) and true yams (*Dioscoreaceae*) are different things altogether. Although they are both root vegetables (tubers), they aren't even in the same botanical family. Yams are part of the lily family. Candied yams enjoyed at Thanksgiving aren't yams at all but sweet potato.

Most yams are grown in Africa and they're also native to Asia. Yams are cylindrical and come in different sizes, including some that can be up to 25kg each! The most common African species have dark brown, rough skin and white (*Dioscorea rotundata*) or yellow flesh (*dioscorea cayennensis*). The white yam was (*dioscorea alata*) first cultivated in Asia and is known as uhi in Hawaii. The Chinese yam is *Dioscorea polystachya*. In New Zealand and Polynesia *Oxalis tuberosa* are referred to as yams, or Oca in Spanish and are only 2-3 cm long.

Yams are starchier and drier than sweet potato and typically ground into a paste known in Africa as Iyan, but they can be cooked in many ways. Most yams need to be cooked as eating them raw can cause illness. Boiling, frying or roasting are common, and similar to other starchy vegetables

they provide a neutral base on which to serve savoury or sweet dishes. If you'd like to give them a try, find them at specialty greengrocers and perhaps make this [African Yam Stew](#) or [Yam fries](#).

Nutritionally, yams have high water content, are low in protein, virtually fat-free and contain around 27% carbohydrate of which most is starch. They are a good source of potassium, fibre and also contain vitamin B6 and vitamin C. The yellow flesh varieties are loaded with carotenoid antioxidants. The glycemic index (GI) varies by species. The common African species are medium to high GI, while the New Zealand and Chinese species are low GI.

<b>Good Carbs Food Facts</b>	
<b>Yams</b>	
★ ★ ★ ★ <sup>1/2</sup>	
<b>Glycemic index 34 - 82</b>	
<b>Serving size</b> – ½ Cup, cubes (about 68g or 2.4oz) boiled and drained, or baked, with salt.	
Kilojoules	324
Calories	78
Protein	1g
Fats – Total	0.1
Includes:	
–Saturated fat	0.003
–Polyunsaturated fat	0.05
–Mono-unsaturated	0.05
Saturated : unsaturated fat ratio	0.03
Carbohydrates – Total	18.5g
<i>Available</i>	16g
Includes:	
–Natural sugars	<1g
–Natural starches	15g
–Added sugars	0
–Added starches	0
<i>Unavailable</i>	2.5g
Includes:	
–Dietary fibre	2.5g
Sodium	166mg

Potassium	456mg
Glycemic load	5 - 13
Diabetes exchange	1
<b>Ingredients:</b> Yam, water, salt	

Source: [USDA](#), 2020



**Nicole Senior** is an Accredited Practising Dietitian, author, consultant, cook and food enthusiast who strives to make sense of nutrition science and delights in making healthy food delicious.

**Contact:** You can follow her on [Twitter](#), [Facebook](#), [Pinterest](#), [Instagram](#) or check out her [website](#).

## THE GOOD CARBS KITCHEN

### GRILLED VEGETABLE and RICOTTA STACK

0:30 Prep • 4 Serves • Main • Every day



#### INGREDIENTS

200g reduced-fat fresh ricotta  
2 tablespoons finely chopped chives  
1 teaspoon lemon zest  
150g store-bought roasted red capsicum, diced  
2 tablespoons chopped flat-leaf parsley  
1 tablespoon balsamic vinegar  
1 small eggplant, thinly sliced  
1 x 400g can no-added-salt brown lentils, rinsed, drained  
2 medium zucchini, thinly sliced  
450g sweet potato, peeled, thinly sliced  
4 tablespoons balsamic glaze, to serve

#### METHOD

Combine ricotta, chives and lemon zest in a bowl. Season with cracked black pepper. Set aside. Combine the capsicum, the parsley, balsamic vinegar and 1 teaspoon of olive oil in a bowl; set the mixture aside.

Preheat a large chargrill pan or barbecue hotplate over high heat. Spray all of the vegetables lightly with olive oil. Grill vegies for 3–4 minutes each side, or until lightly charred and tender, then set aside to cool.

To serve, divide the eggplant among four serving plates. Spread each with a spoon of ricotta mixture and spoon over some of the lentils. Top with zucchini, another layer of the ricotta, some more lentils and finally the sweet potato. Finish with a large spoonful of the capsicum mixture and drizzle with balsamic glaze. Serve

## NUTRITION

Per serve 1262kJ/302 calories; 12.1g protein; 6.6g fat (includes 0.9g saturated fat; saturated : unsaturated fat ratio 0.2); 42.7g available carbohydrate (includes 18.6g sugars and 24.1g starch); 10.2g fibre; 35mg sodium

## RECIPE AND IMAGE

Recipe by: Chrissy Freer, Courtesy of [Australian Healthy Food Guide](#) magazine.



For more healthy recipe inspiration and expert advice, visit [healthyfoodguide.com.au](http://healthyfoodguide.com.au)

## HOT AND SOUR SOUP

0:05 Prep • 0:15 Cook • 4 Servings • Soup



## INGREDIENTS

- ¼ Cup dried wood ear mushrooms (black fungus)
- 1/3 Cup dried shiitake mushrooms
- 4 Cups water
- 1 Cup enoki mushrooms
- 1 medium carrot
- ½ block (250g) firm tofu, cubed
- ½ Tablespoon soy sauce (salt-reduced or dark soy sauce is preferred)
- 2 Tablespoons Chinese black vinegar

## **METHOD**

### *Preparation*

Gently rinse wood ear mushrooms and dried shiitake mushrooms with water. Soak each of them with 2 cups of warm water in two big bowls. Rehydrate for 30 minutes or until tender.

Next, peel the carrot and chop into cubes. Slice shiitake mushrooms into strips. Remove tough ends of wood ear mushrooms, then chop into bite-sized pieces.

Reserve the marinating water from the shiitake mushrooms, 2 cups in total.

### *Cooking*

Add water plus the 2 cups of marinating water (from above) into a pot. Heat over medium-high heat. Add all mushrooms, carrot and tofu to the pot. Cook until the water is simmering.

Add soy sauce and turn down to medium-low heat. Remove the pot from the stove. Add the vinegar and stir to mix well. Serve hot.

Decorate with sliced Chinese shallots.

## **TIPS**

- Use gluten free soy sauce for a gluten free dish.
- For more protein, add whisked egg or shrimps (prawns) into the soup.

## **DID YOU KNOW?**

Dark soy sauce is less salty than regular soy sauce. Dark soy sauce is darker, thicker and sweeter due to the added molasses. It is often used for seasoning and dipping. You can use dark soy sauce to replace regular soy sauce in stir-fries, stews and casseroles.

This soup is one of the Chinese restaurant favourites at all times.

Did you know about the mushrooms used in this recipe?

- Wood ear mushrooms are named as such because they look like ears. When they are fresh or rehydrated, they have a great spongy texture. They are often sold dry in all local Asian stores.
- Dried shiitake mushrooms are much more flavoursome than the fresh variety. Fresh shiitake mushrooms can be replaced in this recipe, but you may need a full cup of them to get a similar flavour. They are also available in all local Asian stores.
- Enoki mushrooms are also called winter mushrooms or golden needle mushrooms with thin white stalks topped with little white buttons at the end. They are often available fresh in local Asian stores.

## NUTRITION

*Per serve* 683 kJ/163 calories; 13g protein; 5g fat (includes 0.7g saturated fat; saturated : unsaturated fat ratio 0.16); 13g available carbohydrate; 3.9g fibre; 123mg sodium; 348mg potassium; sodium : potassium ratio 0.35

## RECIPE



**Shannon Shanshan Lin** is an Accredited Practising Dietitian and Credentialed Diabetes Educator with a particular research interest in culturally and linguistically and indigenous populations. She has been actively involved in the various committees both national and internationally, including the Australian Diabetes Educators Association, Global Chinese Diabetes Association and Beijing Key Laboratory of Nutrition Intervention for Chronic Disease.

**Contact:** You can contact her via Wechat (ID= shannon033)

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