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GI News is published online every month 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 carbohydrates, dietary fibres, blood glucose and the glycemic index.

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FOOD FOR THOUGHT

FATS Q&A: OUR EXPERTS ANSWER YOUR QUESTIONS

Prof Jennie Brand-Miller and Dr Alan Barclay answer the most common questions we are asked about dietary fats.

WHAT ARE FATS? They are an essential nutrient like protein and carbohydrate playing numerous roles in our bodies including:

- Forming the structure of our body cells
- Helping make bile and sex hormones
- Insulating us from cold
- Surrounding and protecting vital organs like our kidneys
- Providing us with fat-soluble vitamins (A, D, E and K), and
- Storing energy.

They are also energy dense – 37kJ per gram (9 calories), compared with 17kJ per gram (4 calories) for protein and carbs.

Most of the fats we eat are triglycerides – fat molecules composed of three fatty acids joined to a glycerol (sugar alcohol) backbone. During digestion our bodies break the fatty acids down into free fatty acids which the cells in our intestine absorb and release into the bloodstream.

Fats may lower insulin requirements when we first consume them because they delay the rate that foods are emptied from the stomach into the small intestine, and are absorbed into the blood. However, an increasing body of evidence suggests that they raise insulin requirements 3–5 hours after a meal, most likely due to increased insulin resistance.

WHAT ARE THE DIFFERENT FATS IN OUR DIET? Saturated fat, trans fat, mono-unsaturated fat, and polyunsaturated fat are the main fats in the foods we eat. Collectively, mono-unsaturated fat, and polyunsaturated fat are called unsaturated fats because of their chemical structure. Most fats and oils, however, are a combination of saturated, poly- and mono-unsaturated fats.

WHY ARE SOME FATS CALLED GOOD FATS? Unsaturated fats are the ones with a health halo. These are the fats found in plant foods including nuts and seeds, avocadoes and olives, and oils and spreads made from plants and seeds. They can help lower LDL (bad) cholesterol and raise HDL (good) cholesterol reducing our risk of cardiovascular disease (e.g., heart disease and stroke). It's important to eat some good fats every day.

Polyunsaturated fats are particularly important because they provide us with the essential omega 3 and omega 6 fatty acids which our bodies can't produce. Best sources are oily fish (e.g. salmon and mackerel), seeds (flax seeds, chia seeds, sunflower seeds) and nuts (especially walnuts and Brazil nuts). For mono-unsaturated fats, enjoy avocadoes, almonds cashews and peanuts or use oils made from them along with olive oil of course.

WHY ARE SOME FATS CALLED BAD FATS? Saturated fats have earned the label "bad fats" because too much of them will raise our LDL (bad) cholesterol which can block blood vessels and increase our risk of cardiovascular disease (heart disease and stroke). Trans fats not only increase LDL cholesterol, they also lower HDL (good) cholesterol so their overall effect is even worse for our health.

- Foods naturally high in saturated fats include animal foods like fatty meats (sausages, bacon, salami, Devon, etc), butter, ghee, cream, hard cheese, and full cream milk.

- Foods high in trans fats include some margarines (e.g., cooking and some cheap table varieties), and cooking fats for deep-frying (particular those used in fast food restaurants) and shortening for baking (pies, pastries, cakes, biscuits/cookies, buns, etc).

WHAT ABOUT CHOLESTEROL? This is a special kind of fat that's only found in animal foods such as meat and dairy foods. It's actually the saturated fat and trans fats in these foods that cause LDL cholesterol levels to rise, which is why for many years, dietary advice to help people lower their blood cholesterol has focused on the fats in our diets. There is now growing evidence that the kind of available carbohydrate (sugars, maltodextrins and starches) that we eat has an effect on our blood cholesterol levels too.

However, when it comes to lowering blood cholesterol levels, some carbs are helpful. For example, oats, legumes, fruits and vegetables, contain certain kinds of fibre (e.g., beta-glucans) that may help lower blood cholesterol levels by binding it in our guts.

HOW MUCH FAT SHOULD I EAT? It all comes back to balance. Because the different kinds of fats are found in such a broad range of foods, it's essential to eat a variety of foods, avoid trans fats as much as possible and for every gram of saturated fat you consume, eat 2 grams of unsaturated.

You only have to look around the world to see that there are very different dietary patterns with very different fat intakes that are associated with good health and long life. For example, traditional Mediterranean and Japanese diets, which are both linked with a long and healthy life, couldn't be more different. The Mediterranean diet is relatively high in fats and tends to be rather moderate in carbs. The Japanese diet, like most Asian diets, is high in carbs and low in fats. What they have in common and what seems to matter most is that they are based on good, wholesome foods and ingredients. Mostly plants. If you need advice on what to eat, see a registered/accredited dietitian.

HOW MUCH FAT SHOULD CHILDREN EAT? Children need fat for energy, growth, brain development and a healthy immune system. For babies, breastmilk and infant formula are high in fat to sustain the rapid growth during the first year of life. Once weaned, children start obtaining fat from other foods and between 2 and 3 years of age, growth slows down and fat becomes less important in the diet. As children begin consuming a more varied diet, the type of fat in their diet should become a higher consideration. A reasonable amount of fat for a child is around 30 per cent of their daily kilojoule intake. For 4–8-year-olds this equates to 50–60 grams, for older kids around 60–80 grams of fat per day.

Read More:

- *Reversing Diabetes* (Murdoch Books), Dr Alan Barclay
- *Eat Like an Athlete: Boost your performance and energy through nutrition* (Hardie Grant), Simone Austin, Advanced Sports Dietitian

WHAT'S NEW?

WHICH FAT IS WORSE FOR FATTY LIVER DISEASE?

Non-alcoholic fatty liver disease occurs when too much fat accumulates in the liver. Many people have no symptoms of the disease, but can end up with cardiovascular problems and

type 2 diabetes. In addition, the liver can scar and not work properly, causing serious health issues if the problem isn't dealt with.

While obesity is a major risk factor for fatty liver disease, some overweight people develop it and others don't. A group of researchers in Europe designed an overfeeding study to see if it's the type of fat that makes a difference to the amount of fat that accumulates in the liver. Thirty-eight overweight volunteers were split into three different groups. Along with the food they normally ate each day, they consumed 4200kJ (1000 calories) extra for three weeks. The extra foods were provided and the participants were carefully monitored throughout.

- The fats in group 1's extra calories were mainly saturated including coconut oil, butter, and blue cheese.
- The fats in group 2's were mainly unsaturated fats including olive oil, pesto, pecan nuts, and a little butter (20g).
- Group 3's extra calories came from naturally occurring and added sugars in fruit juice, sugar-sweetened beverages, and candy.

While all three extra calorie diets produced an increase in the amount of fat in the liver, the diet rich in saturated fats produced a greater amount of liver fat than the others along with increased insulin resistance which leads to type 2 diabetes. In their conclusion, the researchers recommend that people with fatty liver disease should avoid foods rich in saturated fat to help reduce their risk of type 2 diabetes.

Read more

- Saturated Fat Is More Metabolically Harmful for the Human Liver Than Unsaturated Fat or Simple Sugars

WHAT'S HOT?

PLANT MILKS

Gone are the days when the lactose intolerant or those with milk allergy had to opt for soy or rice milk. Zoom around the supermarket and you are spoiled for choice – regular, light, flavoured, and calcium enriched plant milks from numerous nuts and grains and even a fruit (coconut). It's a growth industry.

WHAT ARE THE KEY INGREDIENTS IN PLANT "MILKS"? It's important to read the label as a typical ingredients list can contain from 3 or 4 to 13 or 14 ingredients. Remember, ingredients are listed on a food label from the greatest to smallest amounts that have been added.

- Soy "milks" are water (about 85–90%) and ground whole soy beans or soy protein isolate powder.
- Nut "milks" (almond, cashew, hazelnut, macadamia) are water (about 97%) and ground nuts/nut pastes.
- Grain/seed "milks" (hemp, quinoa/chia, oats, rice) are water (about 85–90%) and a mix of flours and/or brans.
- Coconut "milk" is water (about 70%) and coconut cream/milk.

WHAT ELSE IS IN THEM? Food manufacturers add a number of ingredients and approved food additives to make them more nutritionally equivalent to cow's milk, to provide a creamy mouth-feel and to make them tasty. We have put together this table to help you decode the ingredient list so you know what you are buying and can make an informed decision.

What's added?	**Typical ingredients**
Calcium (mineral salts)	Calcium carbonate (170), organic calcium, plant calcium, tricalcium phosphate (341), calcium phosphate (341), Aquamin (organic calcium)
Other mineral salts	sodium bicarbonate (500)
Vitamins	Vitamin A, vitamin B_1, B_2, vitamin $B_{12,}$ vitamin D
Salt	Salt, sea salt
Sugars/sweeteners	Sugar (sucrose), barley malt, rice syrup, agave
Oils	Sunflower oil
Food acids	332 (potassium citrate)
Vegetable gums	Gellan
Emulsifiers/stabilisers/thickeners	Lecithin, 339 (sodium phosphate), 407 (carrageenan) 412 (guar gum), 466 (sodium carboxymethylcellulose), 471 (mono- and di-glycerides of fatty acids, maltodextrin
Flavours	Natural flavour

In a review of plant milks in *The Conversation*, dietitian Suzie Ferrie makes the point that many consumers are probably being misled by the labelling of these alternative products as milk and that some are startlingly low on nutrition. She says: "The large amount

of added water means that many of these products are quite dilute. Other than soy milk, none of the others have even a tenth of the protein in animal milks. If you adjust for the amount of added water by looking at their nutrition relative to calorie content (instead of just per 100ml as most labels show), then some of the nut products look a bit better ...Then, there's added salt, which surprisingly seems to be a supplement to every nut milk product on the market. Calcium content is not comparable either, unless it has been added. Unfortunately, the form of calcium commonly used is not easily absorbed by the human body compared to what's present in animal milks."

If you need to manage your blood glucose, you need to know that there's here's also a considerable difference in GI values of plant milks as you can see in the following table.

Product	**GI**	**SERVING**	**AVAILABLE CARBS PER SERVE**	**GL PER SERVE**
Cow's milk				
Whole milk, 4% fat	27–34	1 cup/250ml	12g	4
Fat-reduced milk, 1–2% fat	20–30	1 cup/250ml	13–14g	4
Plant "milk"–soy				
Regular soy milk (added calcium)	24–37	1 cup/250ml	13–15g	4–5
Light soy milk (added calcium)	34	1 cup/250ml	7g	2
Plant "milk"–grains				
Oat	69	1 cup/250ml	23g	16
Quinoa and chia seeds	42	1 cup/250ml	11g	5
Rice, regular	79	1 cup/250ml	24g	19
Rice, low fat	92	1 cup/250ml	34g	31
Plant "milk"–nuts				
Almond (unsweetened)	23	1 US cup/240ml	2g	0.5

Read more:

- Milking the market: are your pouring additives on your cereal?

PRODUCT REVIEW

THE FREE-FROM-DAIRY MILK BAR

If you check out the ingredient list on a carton of cow's milk, there's one ingredient: milk (or low-fat milk). That's because it's a whole food that's minimally processed (pasteurised and possibly homogenised). Plant "milks" on the other hand tend to have a longish list of ingredients because they are processed foods from factories not farms. We took a look at four calcium-enriched plant milks (soy, rice, almond and coconut) for product review this month to help you choose one that's right for you. The nutrition data comes from the manufacturers' websites, which we found very comprehensive and much easier to read than the small print on the nutrition label on the containers.

SO GOOD SOY

Ingredients: Filtered water, soy protein (3.5%), corn maltodextrin, vegetable oils (sunflower, canola), cane sugar, minerals (calcium, phosphorus, magnesium), acidity regulators (332, 450), antioxidant (ascorbic acid), vitamins (A, B12, D2, B2, B1), natural flavour.

Nutrition Facts	**Per 250ml/1 cup**	**Per 100ml**
Energy (kilojoules)	683kJ	273kJ
Energy (Calories)	163 Cal	65 Cal
Protein	8g	3.2g
Fat	8.8g	3.5g
–Saturated	1.0g	0.4g
–Polyunsaturated	4.3g	1.7g
–Mono-unsaturated	3.5g	1.4g
Available carbohydrate	12.8g	5.1g
–Sugars (added)	5.0g	2.0g
Sodium	100mg	40g
Calcium	400mg	160mg

VITASOY RICE MILK

Ingredients Filtered water, whole brown rice (min. 13%), sunflower oil, mineral (calcium phosphate), sea salt.

Nutrition Facts	**Per 250ml/1 cup**	**Per 100ml**
Energy (kilojoules)	533kJ	213kJ
Energy (Calories)	127 Cal	51 Cal
Protein	0.7g	0.3g
Fat	3.0g	1.2g
–Saturated	0.3g	0.1g

–Polyunsaturated	0.5g	0.2g
–Mono-unsaturated	2.0g	0.8g
Available carbohydrate	23.8g	9.5g
–Sugars (naturally occurring)	14.5g	5.8g
Sodium	163mg	65g
Calcium	300mg	120mg

SO GOOD ALMOND MILK

Ingredients Filtered water, almonds (2.5%), mineral (calcium), emulsifier (sunflower lecithin), natural flavour, salt, mineral salt (sodium bicarbonate), vegetable gum (gellan), antioxidant (ascorbic acid), vitamins (B12, B2, B1).

Nutrition Facts	**Per 250ml/1 cup**	**Per 100ml**
Energy (kilojoules)	173kJ	69kJ
Energy (Calories)	41 Cal	16 Cal
Protein	1.4g	0.6g
Fat	3.5g	1.4g
–Saturated	0.3g	0.1g
–Polyunsaturated	1.0g	0.4g
–Mono-unsaturated	2.2g	0.9g
Available carbohydrate	0.8g	0.3g
–Sugars (naturally occurring)	0.3g	0.1g
Sodium	90mg	36g
Calcium	300mg	120mg

SO GOOD COCONUT MILK

Ingredients: Filtered water, coconut cream (9%), chicory inulin, mineral salt (tricalcium phosphate), flavour, emulsifier (sunflower lecithin), salt, vegetable gum (gellan).

Nutrition Facts	**Per 250ml/1 cup**	**Per 100ml**
Energy (kilojoules)	238kJ	95kJ
Energy (Calories)	57 Cal	23 Cal
Protein	0.5g	0.2g
Fat	5.3g	2.1g
–Saturated	4.9g	1.9g
–Polyunsaturated	0.2g	0.1g
–Mono-unsaturated	0.1g	0.0g
Available carbohydrate	0.8g	0.3g
–Sugars (naturally occurring)	0.7g	0.3g
Sodium	49mg	20g
Calcium	188mg	75mg

PERSPECTIVES: DR ALAN BARCLAY.

FATS AND BLOOD CHOLESTEROL

As well as being a highly concentrated source of energy and a carrier for fat-soluble vitamins, fats provide food with a pleasant mouth feel and carry many of the flavours that

make certain dishes taste delicious. Current dietary guidelines advise people to eat less saturated fat to help improve blood cholesterol levels, a major risk factor for heart disease and stroke. Will simply eating less saturated fat improve your blood cholesterol or is it more complicated than that?

WHAT IS CHOLESTEROL? Cholesterol is a kind of fat that is a part of all of our body's cells. It is essential for many metabolic processes, including the production of hormones (e.g., oestrogen and testosterone), vitamin D and bile for digesting fat, and absorbing fat-soluble vitamins from foods. It is produced by the liver and also made by most cells in the body.

WHERE DOES CHOLESTEROL IN FOODS COME FROM? Cholesterol is only found in animal foods like meat, poultry, seafood, dairy and eggs. Plant foods like fruits, vegetables, legumes and grains do not contain any cholesterol in their natural state.

WHAT ABOUT BLOOD CHOLESTEROL? Cholesterol is carried around in the blood by little "couriers" called lipoproteins, which include:

- **LDL cholesterol** Low density lipoprotein (LDL) cholesterol, takes cholesterol from the liver to the rest of the body's organs. When levels are too high, cholesterol can build up in the walls of blood vessels, eventually blocking them. Having high levels of LDL in the blood is therefore a risk factor for heart disease and stroke. Aim for an LDL cholesterol level less than 2.0 mmol/L (77 mg/dL).
- **HDL cholesterol** High density lipoprotein (HDL) cholesterol, seems to protect against cardiovascular disease because it clears cholesterol from our blood vessels and helps in its removal from the body. Having low levels of HDL in the blood is therefore a risk factor for heart disease and stroke. Aim for a HDL cholesterol level of at least 1.0 mmol/L (39 mg/dL).

The main nutrients in food that cause LDL cholesterol levels to rise are saturated and trans-fats, not cholesterol. However, if you eat a diet high in saturated fat, eating high cholesterol foods can raise some people's blood cholesterol levels by an additional 10-20%. On the other hand, polyunsaturated and monounsaturated fats can help lower LDL cholesterol levels and raise HDL cholesterol.

The Heart Foundation currently recommends that we consume less than 10% of energy from saturated fat and less than 1% of energy from trans-fat. Dietary Guidelines recommend we consume 20-35% of energy from fat in total. Therefore, the optimal ratio for saturated and trans fats to unsaturated fats is no more than 1 : 2, or 0.5 if you prefer (this is what we use for recipes in GI News). In other words, for every gram of saturated fat, make sure you consume 2 or more grams of poly or monounsaturated fat.

It is of course important to note that no one has, or is, recommending complete avoidance of saturated fat, or foods high in saturated fat – it's the balance that counts. It is therefore ok to enjoy butter instead of margarine as long as you have olive oil, fatty fish, nuts, seeds, etc...to balance it out.

Triglycerides – the other kind of fat in blood

Triglycerides can come from fats in foods (e.g., butter, margarines, oils, etc...) and drinks (e.g., milk), or can be manufactured in our bodies from other nutrients like carbohydrates and proteins. High levels of triglycerides in the blood are often linked with having too little HDL cholesterol, and therefore high triglycerides may be an independent risk factor for heart disease and stroke. Aim for a triglyceride level less than 2.0 mmol/L (177 mg/dL).

High triglyceride levels can be caused by a number of factors, including being overweight, consuming a high fat diet, not eating enough omega-3 polyunsaturated fats (primarily from seafoods), eating too many high GI carbohydrates and/or refined proteins, and/or drinking too much alcohol.

So, the answer to the question "Will simply eating less saturated fat improve your blood cholesterol" is possibly – provided you replace the saturated fats with healthy alternatives.

Read more:

- *Reversing Diabetes* (Murdoch Books), Dr Alan Barclay
- Heart Foundation: Saturated and trans fat
- Serum Triglycerides and Atherosclerotic Cardiovascular Disease: Insights from Clinical and Genetic Studies

Alan Barclay PhD is a consultant dietitian. 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). Follow him on Twitter or check out his website.

BEST FOOD FORWARD

CARBS AND YOUR HEART, FOR WOMEN

Perhaps you've heard of *Go Red for Women*, the movement to end heart disease and stroke in women? Unfortunately, we need a movement because while heart disease is our greatest health threat, women are too busy looking after others to take personal prevention seriously. This needs to change and we can start with choosing heart-friendly food, including good carbs.

Despite the anti-carb hype in the pop-diet world, carbohydrates like dietary fibre and resistant starch are nutritional superstars. They not only keep your gut healthy, but they also help reduce your risk of developing heart disease. We know you show plenty of love to your family, but we encourage you to show your own heart some love, and 'keep calm and eat good carbs'.

It's well known the types of fats you eat greatly influence your cholesterol levels, but it's less well known that carbohydrates are no longer neutral in the cardiovascular risk equation. Choosing the wrong carbs increases your risk of heart disease. This was demonstrated in a study published by the Harvard Group in 2015. They compared the effect of saturated fats, unsaturated fats and sources of carbohydrate on the risk of coronary heart disease (CHD) in two large cohorts (84,628 women nurses and 42,908 male health professionals) followed up over 24-30 years. They found saturated fats increased risk and unsaturated fats (especially polyunsaturated fats) were protective. This was a result consistent with previous studies. Wholegrains were also protective. But the real newsflash came with their finding that refined starches and added sugars were positively associated with coronary heart disease. While the message is well and truly out about reducing added sugars, we're clueless about refined starches. Here's our three-step plan to help you choose good carbs.

ENSURE AT LEAST HALF YOUR GRAIN FOODS ARE WHOLEGRAIN

- Choose wholegrain and high-fibre breakfast cereals
- Use wholegrain bread and crispbread
- Buy wholemeal pasta, noodles, couscous and brown rice

CHOOSE LOWER GI CARBS AS OFTEN AS POSSIBLE

- Look for dense grainy breads, breads with seeds or soy, or sourdough breads
- Buy lower GI rices such as Basmati, or *Doongara*
- Include legumes (beans, split peas and lentils) in your meals
- Choose lower GI potatoes (Nicola, Carisma) and starchy vegetables (carrots, parsnips, butternut pumpkin and orange-fleshed sweet potato)

LIMIT ADDED SUGARS AND REFINED STARCHES

- Leave soft drinks, flavoured waters and sports drinks to special occasions
- Enjoy confectionery such as candy and chocolates occasionally and in small amounts

- Enjoy cakes, biscuits (cookies), pastries, sweet buns and donuts sometimes and in small amounts
- Limit the quantity and frequency of white bread, white rice (and rice crackers), regular potatoes and low-fibre breakfast cereals (e.g. puffed rice, flaked corn)
- Limit highly processed food products with high levels of refined starches such as potato crisps, rice crisps and crackers, extruded savoury snacks (potato thins, cheesy puffs, twists etc.)
- Limit foods with high levels of added refined starches such as maltodextrin (check the label) and all the food additives with the term 'starch' in the name (additive code numbers 1400-1451). Remember, the ingredients are listed in order by weight on the label so starches near the top of the ingredients list are present in the largest proportion.

Thanks to Rachel Ananin aka TheSeasonalDietitian.com for her assistance with this article.

In this series we explore how you can reduce your ecological impact through your healthy food choices. We'll help you do your bit for the environment, one mouthful at a time.

Nicole Senior is an Accredited Nutritionist, author, consultant, cook, food enthusiast and mother who strives to make sense of nutrition science and delights in making healthy food delicious.
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GOOD CARBS FOOD FACTS

MILK

Milk and other nutrient-rich dairy products such as yoghurt and cheese are one of the most affordable sources of nutrition. They provide us with energy, protein and carbohydrate; and with minerals including calcium, potassium, phosphorus; and vitamins A, D and B12, riboflavin, and niacin. While milk a valuable source of nutrients for young and old alike, it is very easily overconsumed. So, think of it as food in liquid form. The recommended intakes vary for different ages and stages of life, but for healthy, non-pregnant adults around 250–450ml of low-fat milk a day is suitable. For children, reduced fat dairy foods are recommended from two years of age.

Lactose, the sugar that occurs naturally in milk, is digested into glucose and galactose by the enzyme lactase found in the small bowel of all mammals at birth (apart from those born with lactase deficiency). A person without enough lactase has digestive problems when they consume foods and drinks that contain lactose. About a third of the world's population continues to produce lactase throughout life. The rest don't. However, there are many lactose-free milks on the market, so there's no need to go without calcium-rich dairy foods. Some people who are lactose intolerant find they can enjoy yoghurt because the micro-organisms added to milk to make yoghurt breakdown lactose - in other words, the "bugs" help do the job of lactose digestion for you. People with lactose intolerance can eat cheese because it is made from milk solids (curd); the lactose-rich whey has been drained off during the early stages of processing.

Calcium is essentially why dairy foods are recommended throughout childhood and beyond as it's the key to strong healthy bones. But dairy milk is not for everyone. If you are lactose intolerant, have a milk allergy or eat only plant foods, non-dairy options that will boost your calcium intake include almonds, brazil nuts, sesame seeds, dried figs, dried apricots, soybeans, dark leafy greens, dried legumes, Asian greens such as bok choy, calcium-enriched tofu and calcium-fortified breakfast cereals.

Good Carbs Food Facts **Reduced fat milk**	
★ ★ ★ ★ ★	
Glycemic index – 25	
Gluten free	
Serving size – 250ml or 1 cup	
Kilojoules	485
Calories	115
Protein	8.8g
Fats – Total Includes: –Saturated fat –Polyunsaturated fat –Mono-unsaturated	3.1g 2.1g 0.2g 0.8g
Saturated : unsaturated fat ratio	2.1
Carbohydrates – Total *Available* Includes: --Natural sugars –Natural starches –Added sugars –Added starches *Unavailable* Includes: –Dietary fibre	12.3g 12.3g 0 0 0 0g
Sodium	94mg
Calcium	300mg
Glycemic load	3

Diabetes exchange	1
Ingredients: Reduced-fat milk	

Source: AUSNUT2013

IN THE GI NEWS KITCHEN

Anneka Manning's Salmon & Roast Vegetable Frittatas • Dr Nick Fuller's Whole Roast Cauliflower with Lemon and chilli • SunRice Breakfast Rice Puddings

ANNEKA MANNING'S FAMILY BAKING.
SALMON AND ROAST VEGETABLE FRITTATAS

Anneka Manning – author, food editor, home economist, mother of two and the founder of BakeClub – specialises in teaching the 'why' behind the 'how' of baking, giving home cooks the know-how, understanding and skill to bake with confidence and success, every time. She suggests roasting extra vegetables when making them for dinner so you have them on hand for a quick and easy lunch or light meal the next day. Makes: 8 • Preparation time: 15 minutes (+ 5 minutes cooling time) • Baking time: 25 minutes

Olive oil, to grease
3½ cups chopped roasted vegetables (see Annie's Tips)
210g/7oz can red or pink salmon in spring water, drained and coarsely flaked
½ cup coarsely grated vintage cheddar cheese
⅓ cup chopped chives, flat-leaf parsley and/or basil
6 eggs
Salt and freshly ground black pepper, to taste

Preheat the oven to 190°C/375°F (170°C/325°F fan-forced). Grease 8 holes of a 1/3 cup (80ml) muffin pan with olive oil or alternatively line with paper muffin cases. • Place vegetables, salmon, cheese and herbs in a large mixing bowl and toss gently to combine evenly. Spoon the mixture into the muffin holes, dividing evenly. Crack the eggs into a jug, season well with salt and pepper and then use a fork to whisk to combine. Carefully pour into the muffin holes over the vegetable mixture, dividing evenly. • Bake in the preheated oven for 25 minutes until set and golden. (The eggs will continue to cook in the muffin pan, so it's ok if the centre is a little soft, just not runny). Stand in the muffin pan for 5 minutes,

then use a small palette knife or butter knife to remove the frittatas. Serve warm or room temperature with a green salad.

Annie's tips

- Roasted pumpkin, capsicum, carrots, sweet potato, zucchini, eggplant and mushrooms all work well in these frittatas.
- Add chopped fresh herbs such as rosemary, sage or thyme to your vegetables before roasting them for an extra flavour hit.
- These frittatas will keep in an airtight container in the fridge for up to 2 days. Serve at room temperature or reheat in an oven preheated to 180°C/350°F (160°C/320°F fan-forced) for 5–10 minutes.

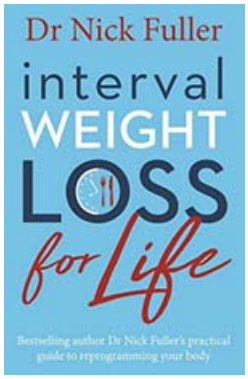
Per frittata
630 kJ/ 150 calories; 13 g protein; 8 g fat (includes 3 g saturated fat; saturated : unsaturated fat ratio 0.6); 5 g available carbs (includes 2.5 g sugars and 2.5 g starch); 5 g fibre; 340 mg sodium

WHOLE ROAST CAULIFLOWER WITH LEMON AND CHILLI
We are big fans of cauliflower here at GI News. It's what we called a three-in-one- veg in our *Good Carbs Cookbook* because it gives you an edible head of creamy florets and crunchy white stems encased by tender green leaves. This recipe is from Dr Nick Fuller's new book, *Interval Weight Loss for Life* (Penguin), a practical guide to helping people reprogram their body after weight loss. A small head of cauliflower roasted will serve 4.

1 small head cauliflower
Finely grated zest and juice of ½ lemon
Olive oil, for drizzling
Dried chilli flakes, for sprinkling
Sea salt and freshly ground black pepper

Preheat the oven to 180°C/350°F. Pre-line a baking tray with baking paper. • Place the whole cauliflower in a large saucepan of water. Bring to the boil, then reduce the heat and simmer for 7 minutes. Drain. Cut off the stalk and remove the leaves. • Place the cauliflower in the baking tray. Scatter over the lemon zest, and pour over the lemon juice and a drizzle of olive oil. Sprinkle lightly with chilli flakes, season with salt and pepper, and roast for 35 minutes or until tender and lightly golden. Cut into wedges and serve.

Per serve
320 kJ/ 77 calories; 5g protein; 3g fat (includes 0.5g saturated fat; saturated : unsaturated fat ratio 0.2); 4.5g available carbs (includes 4.5g sugars and 0g starch); 6g fibre; 100mg sodium; 635mg potassium; sodium to potassium ratio 0.16



Nick's Interval Weight Loss isn't a diet, it isn't intermittent fasting, or anything similar; it's an evidence-based plan to help people redefine their set point so they can prevent the ever-so-common weight regain that happens after people lose weight. Losing weight is the easy part, keeping it off is the hard part, and this is why more than 95% fail on their long-term weight loss journeys. To find out more, check out Facebook page: https://www.facebook.com/intervalweightloss/

5-INGREDIENT LOW GI RICE PUDDING

Nutritionist Lyndi Cohen, SunRice Health and Wellness Ambassador, developed this recipe to showcase their Doongara Clever Low GI White Rice which carries the GI Symbol. Doongara is a low GI (54) variety of long-grain rice grown in Australia that is ideal to serve with curries and stir-fries as well as use to make a simple rice pudding for a leisurely breakfast or brunch, or for dessert. • Preparation/cooking time: 25 minutes. • Serves 6

1½ cups SunRice Low GI White Rice (raw)
400ml (14fl oz) almond milk

1 cup water
1 tbsp maple syrup
¼ cup mixed seeds and/or nuts

Add the rice, almond milk, cold water, seeds and/or nuts, and maple syrup to a saucepan. • Bring to the boil, then reduce the heat and simmer for 15 minutes. • Remove from heat and stand, covered, for 5 minutes. • Serve with your choice of toppings such as berries, fruit, or extra toasted seeds/nuts.

Per serve
1087kJ/ 260 calories; 5.4g protein; 5.7g fat (includes 0.6g saturated fat; saturated : unsaturated fat ratio 0.12); 45.0g available carbs (includes 4.3g sugars); 1.0g fibre; 46mg sodium; 99mg potassium; sodium to potassium ratio 0.46

LOW GI LIVING

	Foods with the GI Symbol have been laboratory tested and meet strict nutrient criteria in line with international dietary guidelines including specified limits for carbohydrates, energy, total and saturated fat, sodium and, where appropriate, fibre and calcium. The independent certification program is run by the Glycemic Index Foundation, a not-for-profit health promotion charity. For updates on low GI products that carry the GI Symbol and for recipes, sign up for the Foundation's electronic newsletter, Low GI Living.

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