FOOD FOR THOUGHT

ALTERNATE DAY FASTING IS NO BETTER THAN ANY OTHER FAD DIET

In his Obesity Notes blog, Dr Arya Sharma recently reviewed a year-long randomised controlled study by John Trepanowski and colleagues that showed alternate day fasting is evidently no better in producing superior adherence, weight loss, weight maintenance, or cardio-protection compared to good old daily calorie/kilojoule restriction (which also produces modest long-term results at best).

“It seems that every year someone else comes up with a diet that can supposedly conquer obesity and all other health problems of civilization. In almost every case, the diet is based on some “new” insight into how our bodies function, or how our ancestors (read – hunters gatherers – never mind that they only lived to be 35) ate, or how modern foods are killing us (never mind that the average person has never lived longer than ever before), or how (insert remote population here) lives today with no chronic disease. Throw in some scientific terms like “ketogenic”, “gluten”, “anti-oxidant”, “fructose”, or “insulin”, add some level of restriction and unusual foods, and (most importantly) get celebrity endorsement and “testimonials” and you have a best-seller (and a successful speaking career) ready to go.

The problem is that, no matter what the “scientific” (sounding) theories suggest, there is little evidence that the enthusiastic promises of any of these hold up under the cold light of scientific study. Therefore, I am not the least surprised that the same holds true for the much hyped “alternative-day fasting diet”, which supposedly is best for us, because it mimics how our pre-historic ancestors apparently made it to the ripe age of 35 without obesity and heart attacks.

The alternate day fasting group in the year-long randomised controlled study published in JAMA Internal Medicine had significantly more dropouts than both the daily calorie
restriction and control group (38% vs. 29% and 26% respectively). Mean weight loss was virtually identical between both intervention groups (around 6kg).

Purists of course will instantly criticize that the study did not actually test alternative-day fasting, as more people dropped out and most of the participants who stayed in that group actually ate more than prescribed on fast days, and less than prescribed on feast days – but that is exactly the point of this kind of study – to test whether the proposed diet works in “real life”, because no one in “real life” can ever be expected to be perfectly compliant with any diet. In fact, again, as this study shows, the more “restrictive” the diet (and, yes, starving yourself every other day is “restrictive”), the greater the dropout rate.

Unfortunately, what counts in real life is not what people should be doing, but what people actually do. The question really is not whether or not alternate-day fasting is better for someone trying to lose weight but rather, whether or not “recommending” someone follows an alternate-day fasting plan (and them trying to follow it the best they can) is better for them. The clear answer from this study is “no”. So why are all diets the same (in that virtually all of them provide a rather modest degree of long-term weight loss)?

My guess is that no diet (or behaviour for that matter) has the capability of fundamentally changing the body’s biology that acts to protect and restore body fat in the long-term. Irrespective of whether a diet leads to weight loss in the short term and irrespective of how it does so (or how slow or fast), ultimately no diet manages to “reset” the body-weight set point to a lower level, that would biologically “stabilize” weight loss in the long-term. Thus, the amount of long-term weight loss that can be achieved by dieting is always in the same (rather modest) ballpark and it is often only a matter of time before the biology wins out and we put all the weight back on.

Clearly, I am not holding my breath for the next diet that comes along that promises to be better than everything we’ve had before. My advice to patients is: do what works for you, but do not expect miracles – just find the diet you can happily live on and stick to it.”

Read more:
- Effect of Alternate-Day Fasting on Weight Loss, Weight Maintenance, and Cardioprotection Among Metabolically Healthy Obese Adults A Randomized Clinical Trial
- Dr Sharma’s Obesity Notes
- How to lose 50 pounds and keep them off (TEDx)

Dr Sharma is Professor of Medicine & Chair in Obesity Research and Management at the University of Alberta, Edmonton, Canada. He is also the Clinical Co-Chair of the Alberta Health Services Obesity Program. He has authored and co-authored more than 350 scientific articles and has lectured widely on the etiology and management of obesity and related cardiovascular disorders and is regularly featured as a medical expert in national and international TV and print media and maintains a widely read obesity blog at www.drsharma.ca.
WHAT’S NEW?
FUDGING CONCLUSIONS ABOUT CHILDHOOD OBESITY PREVENTION
“We have a pretty good idea of how to curb childhood obesity.” Such convictions run deep. And because of those convictions, prevention is a frontline strategy for dealing with childhood obesity. So, it’s especially dispiriting when we see the scientific literature stained by a paper that fudges conclusions about childhood obesity prevention into “some evidence of effectiveness” reports ConscienHealth’s Ted Kyle.

In the *Australian and New Zealand Journal of Public Health*, Mary Malakellis and colleagues published a report on a large obesity prevention program called “It’s Your Move.” Deep in the bowels of their paper, you will find that the sum of all their data showed no effect. But, the authors did not stop there. They picked apart the data to look for subgroups with an effect. They found it in two of the schools they studied. So, their abstract failed to mention finding no effectiveness in the overall results. And their conclusion claimed “some evidence of effectiveness.”

Ted Kyle asked biostatistics expert, Professor David Allison, about this study. Despite the claims of effectiveness in the paper’s abstract says Allison, the body of the paper clearly describes the findings as null. The authors state “Models to Compare the Intervention and Comparison Groups (i.e. All Three Intervention Schools Combined Compared to All Three Comparison Schools Combined) ... showed No Statistically Significant Interaction Effect on Weight, Height, BMI, BMI-z and Proportion of Overweight/obesity.” The contrary statements in the abstract are an inappropriate use of spin as defined by Boutron et al. They lead to distortion of the scientific record and propagation of myths and presumptions which are all too common in the obesity domain. Authors and journals should hold themselves to higher standards of accurate reporting.

Null findings offer golden opportunities for learning. You do a study and the data tells you, you were wrong. That intervention – perhaps a wonderful prevention program – didn’t work the way you thought it would. Maybe the study was flawed. Or maybe the intervention just doesn’t work. Perhaps we need a new approach. But if you ignore that null finding, you’re kidding yourself. You might deceive others. And you get in the way of progress.

- Reports: School-based systems change for obesity prevention in adolescents: outcomes of the Australian Capital Territory ‘It’s Your Move!’
- Negativity towards negative results: a discussion of the disconnect between scientific worth and scientific culture
- Contact: ConscienHealth

FASTING BLOOD GLUCOSE AND INSULIN NEW BIOMARKERS FOR WEIGHT LOSS
Fasting blood glucose and/or fasting insulin can be used to select the optimal diet and to predict weight loss, particularly for people with prediabetes or diabetes say researchers from the Department of Nutrition, Exercise and Sports at the University of Copenhagen
reporting the findings from a weight loss biomarker study published in the *American Journal of Clinical Nutrition (AJCN)*. The findings suggest that for most people with prediabetes, a diet rich with vegetables, fruits, and whole grains should be recommended for weight loss and could potentially improve diabetes markers. For people with type 2 diabetes, the analysis found that a diet rich in healthy fats from plant sources would be effective for achieving weight loss. These diets could also be effective independent of caloric restriction.

“Recognizing fasting plasma glucose as a key biomarker enables a new interpretation of the data from many previous studies, which could potentially lead to a breakthrough in personalized nutrition,” said Prof Arne Astrup. “The beauty of this concept is its simplicity. While we are looking into other biomarkers, it is quite amazing how much more we can do for our patients just by using those two simple biomarkers. We will continue to participate in and support research to explore additional biomarkers such as gut microbiota and genomics approaches, which may offer more insights and help to more effectively customize the right diet for specific individuals.”

- **Study:** Pretreatment fasting plasma glucose and insulin modify dietary weight loss success: results from 3 randomized clinical trials
- **Contacts:** Assistant professor Mads Fiel Hjorth: madsfii@nexs.ku.dk
  Professor Arne Astrup: ast@nexs.ku.dk

**PERSPECTIVES WITH DR ALAN BARCLAY**

**KETONES**

No. Not a music group. But ketones are creating a lot of noise. They are a kind of fuel our liver produces from fatty acids (from what we eat or body fat stores), when glucose is severely restricted. Dietary regimens that stimulate the production of ketones are known as “ketogenic diets”. What are their health effects?

Randomised controlled trials give us some clues. Ketogenic diets typically require people to limit their total carbohydrate intake to less than 10% of energy (less than 50g a day for an adult), and recommend fat provides around 80% of energy. This means **severe** restriction of:

- most fruits
- starchy vegetables (carrots, corn, peas, pumpkin, potatoes, etc)
- cereal-based foods (bread, breakfast cereals, pasta, rice, etc)
- legumes (beans, chickpeas, lentils, etc)
- milk and yoghurt.

For a typical adult, 10% of energy, or 50g of carbohydrate a day, is equal to 2 slices of bread plus 1 piece of fruit. Instead of carb-containing foods, people on a ketogenic diet mostly eat:

- meat, seafood, poultry, and eggs
- cheese, butter, and cream
- fats and oils
- low-carb vegetables (greens, onions, peppers, etc) and low-carb fruits (berries).

As it’s difficult to get all of the essential nutrients eating this way, people on a ketogenic diet need supplements.
**Epilepsy** A ketogenic diet has been trialled in children with chronic epilepsy. Children are typically given a diet that provides 80% of daily energy from fat, and the remainder from protein and carbohydrate (typically, 10% from each). A recent Cochrane review determined that after following a ketogenic diet for 3 months, seizure rates may decrease by up to 85% in some (but not all) children. But all studies included in the review also reported adverse effects – vomiting, constipation and diarrhoea plus other adverse effects. A recent study determined that while medically effective “The study did not find any improvements in quality of life”. So, while a ketogenic diet may help some children with epilepsy, it’s no panacea. However, if you have a child with severe, frequent seizures, you may wish to try a ketogenic diet under very careful medical and dietetic supervision.

**Cancer therapy** Certain kinds of cancer cells prefer to use glucose as a fuel. Therefore, in theory, reducing blood glucose levels may help in the management of certain kinds of cancer by starving them of fuel. A recent systematic review examined all the available evidence in people (not rats). No randomised controlled trials were identified, but 15 other lower-quality clinical studies, case-control and cohort studies incorporating 330 people were available. The authors concluded “In contrast, to the considerable attention from researchers, physicians and the media for its potential role in cancer treatments, evidence on benefits [of ketogenic diets] regarding tumor development and progression as well as reduction in side effects of cancer therapy is missing.” The bottom line – despite the hype, much more research is needed.

**Ketogenic diets for weight loss** While not new, ketogenic diets are at present one of the most popular weight loss diets around the world. Fortunately, over the past 2 decades, there have been a significant number of randomised controlled trials comparing (high-fat) ketogenic diets to low fat diets, and a systematic review and meta-analysis was published recently. It identified thirteen studies incorporating 1415 people and determined that over 1–2 years (medium-term), people consuming the ketogenic diet lost more body weight, and their blood pressure and fats improved compared to people consuming a low fat diet. The authors concluded “... in the long term and when compared with conventional therapy, the differences appear to be of little clinical significance, although statistically significant.”

So while the ketogenic diet may be an alternative to other diets under certain circumstances it is not necessarily superior in the long-term; we must as usual keep in mind the simple fact that one size does not fit all. Because food plays such a pivotal role in our family and social lives, ketogenic diets can be disruptive and long-term adherence and enjoyment of food (one of life’s pleasures) are frequently issues. And there are side effects, especially in the beginning until the body adjusts, including constipation, headache, and fatigue.

You can listen to Alan discuss ketogenic diets on Health Professional Radio, [here](#).

Alan Barclay PhD is a consultant dietitian. He worked for Diabetes Australia (NSW) 1998–2014. He is co-author of over 30 scientific publications, and author/co-author of *The good Carbs Cookbook* and *Reversing Diabetes* (Murdoch Books), *The Low GI Diet: Managing Type 2 Diabetes* (Hachette Australia) and *The Ultimate Guide to Sugars and Sweeteners* (The Experiment, New York).
VIEWPOINTS FROM THE CHARLES PERKINS CENTRE, SYDNEY UNIVERSITY

YOGHURT IS A LOW GI FOOD

The Sydney University GI Research Service (SUGiRS), established in 1995 to provide a reliable commercial GI testing laboratory, has tested a variety of yoghurts over the past 20 years – plain, flavoured, full fat, and diet. Over the same period of time, numerous studies in peer-reviewed journals have shown that high yoghurt intake is associated with a reduced risk of type 2 diabetes. Although several mechanisms could explain this association, Prof Tom Wolever recently addressed the glycemic and insulinemic impact of yoghurt in *Nutrition Today*.

“There is evidence that low GI and low GL (glycemic load) diets are associated with a reduced risk of type 2 diabetes. The 93 GI values for yoghurt in the University of Sydney’s GI database have an average of 34 and most (9 out of 10) of the yoghurts are low GI. The 43 plain yoghurts in the database have a lower GI (average GI = 27) than the 50 sweetened yoghurts (average GI = 41). This difference is not explained by sugar, per se, but rather by the higher protein-to-carbohydrate ratio in plain yoghurt. Although yoghurt has a low GI, its insulinemic index is higher than its GI. High insulin responses may be deleterious because hyperinsulinemia is associated with an increased risk of type 2 diabetes. Nevertheless, this may not be a concern for yoghurt because, although its insulinemic index is higher than its GI, the insulinemic index of yoghurt is within the range of insulinemic index values for non-dairy low-GI foods. In addition, mixed meals containing dairy protein elicit insulin responses similar to those elicited by mixed meals of similar composition containing non-dairy protein. Because the GI of yoghurt is lower than that of most other carbohydrate foods, exchanging yoghurt for other protein and carbohydrate sources can reduce the GI and GL of the diet, and is in line with recommended dietary patterns, which include whole grains, fruits, vegetables, nuts, legumes, fish, vegetable oils, and yoghurt.”

What’s the Insulinemic Index? Prof Jennie Brand-Miller explained this recently.

“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. When we eat carb-rich foods our blood glucose levels rise and our pancreas then releases insulin (a hormone) that drives the glucose out of our bloodstream and into our body’s cells where our body can use it as an immediate source of energy or store it as glycogen. What many people don’t realise is that protein foods (meat, fish, eggs and dairy foods) also stimulate insulin secretion – that’s why you may see them described as insulinogenic.”

Scientists at the University of Sydney have been researching the food insulin index or FII for more than 20 years. “The FII looks at how much insulin the body normally releases in response to a whole food or meal (its carbohydrate and the quantity and quality of its protein and fat). Some foods need more insulin to help utilise them, while other foods need much less. Choosing foods with a lower FII can help reduce your overall insulin demand on your pancreas or insulin requirements,” says dietitian and diabetes educator Dr Kirstie Bell.
• **Study:** https://www.ncbi.nlm.nih.gov/pubmed/28615381
• **GI Database:** www.glycemicindex.com
• **Food Insulin Index:** Validation of the food insulin index in lean, young, healthy individuals, and type 2 diabetes in the context of mixed meals: an acute randomized crossover trial

**FOOD UN-PLUGGED**

**THE FAUX MEAT PHENOMENON**

Faux (fake) meats have progressed since the days of *Tofurky* roasts. Even devoted meat lovers are being drawn over to the veggie side of life by convincingly tasty ‘not-meats’. Is *facon* better than bacon? Or are we better off sticking with the real deal?

**What in them?** Vegetarian ‘meats’ are made from a variety of non-animal foods such as beans, fungi, grains and nuts, and mostly from the protein parts. The result is a mass of chewy textured plant proteins with meat-like savoury flavours. Some are designed to resemble their animal food counterparts, such as soy-protein shaped to look like prawns or even pork belly with the layer of fat and crispy skin to boot – which is pretty amazing work by food technologists although vegans don’t like it much, preferring not to eat anything that even looks like an animal.

**Lab meat** Food scientists are working on lab-grown meat and have produced convincing burger patties with meat cells grown in a test tube, removing the need to raise or kill livestock. While this futuristic scenario is now a reality on a small scale, it is super expensive and won’t be meeting the world’s needs for meat anytime soon.

**Nutrition** With the rise in popularity of plant-based diets, faux meats are now finding a wider market with people wanting a healthy and sustainable option. However, although they are made from plants (or fungi) their nutritional composition can fall short of ‘superfood’ expectations. Like real bacon and sausages, some faux meat products are highly processed and contain high levels of sodium (salt) and other food additives.

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Quorn Sausages (50g)</th>
<th>Beef Sausages (50g)</th>
<th>Coconut Bacon (60g)</th>
<th>Shortcut Pork Bacon (60g)</th>
<th>The Alternative Meat Company Chicken Free Strips (67g)</th>
<th>Chicken Stir Fry Strips (67g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>276kJ 66 calories</td>
<td>551kJ 132 calories</td>
<td>1235kJ 295 calories</td>
<td>786kJ 188 calories</td>
<td>590kJ 141 calories</td>
<td>294kJ 70 calories</td>
</tr>
<tr>
<td>Protein</td>
<td>6.0g</td>
<td>7.5g</td>
<td>3.4g</td>
<td>9.2g</td>
<td>13.3g</td>
<td>14.9g</td>
</tr>
<tr>
<td>Fat - Includes saturated fat</td>
<td>1.9g</td>
<td>0.3g</td>
<td>10.3g</td>
<td>26.8g</td>
<td>16.9g</td>
<td>4.6g</td>
</tr>
<tr>
<td>Carbohydrates - Includes sugars - Includes starches</td>
<td>5.0g</td>
<td>0.0g</td>
<td>2.3g</td>
<td>7.9g</td>
<td>0.2g</td>
<td>9.2g</td>
</tr>
<tr>
<td>Sodium</td>
<td>200mg</td>
<td>394mg</td>
<td>389mg</td>
<td>689mg</td>
<td>367mg</td>
<td>27.5mg</td>
</tr>
<tr>
<td>Fibre</td>
<td>2.0g</td>
<td>0.7g</td>
<td>6.3g</td>
<td>0.0g</td>
<td>4.3g</td>
<td>0.0g</td>
</tr>
<tr>
<td>Iron</td>
<td>0.3mg</td>
<td>0.7mg</td>
<td>1.0mg</td>
<td>0.3mg</td>
<td>1.9mg</td>
<td>0.3mg</td>
</tr>
<tr>
<td>Vitamin B12</td>
<td>0.0μg</td>
<td>2.2μg</td>
<td>0.0μg</td>
<td>0.4μg</td>
<td>0.0μg</td>
<td>0.5μg</td>
</tr>
</tbody>
</table>
In the above table, we compared 2 faux meat products and one vegan ‘bacon’ recipe with their real meat equivalents to give you their nutrient profiles. Just a few mouthfuls of Coconut Bacon will use almost your entire daily saturated fat allowance (21.4g out of 24g). The two commercial products we looked at had no Vitamin B12 added, which is a problem for vegans as fortified foods are the only source in a vegan diet.

**Sustainability** Some say vegetarian diets are more sustainable because plant foods require fewer inputs (e.g. water, feed, energy etc.) than meat to produce; however, there is more to this story. Highly processed foods require more energy and have long supply chains that add transport inputs and emissions. Smaller animals have a lower eco-footprint than larger ones, and even cattle and sheep can be raised on land than can’t be used for cropping. Not to mention the social benefits of keeping farming communities around the world viable. Eating some animal foods within a plant based diet produced with more sustainable and fair farming practices can be better for people and the planet.

If you want to eat more sustainably, there are much lower hanging protein solutions. We could eat the whole animal (not just the prime cuts); swap some meat for legumes; and choose more sustainable meat sources. In Australia we are catching on to eating our national emblem, kangaroos as a wild and free-range source of lean meat rich in iron. And of course, we could waste less food generally, which is simply throwing away everything that went into producing it, and creating greenhouse gases from food rotting in landfill.

**The un-plugged truth**

- You do not need to go meat-free to be healthy; lean unprocessed meats are rich in essential nutrients.
- Faux meats can have more fibre but can contain more saturated fat and sodium than unprocessed meats – check the label.
- Be a more sustainable consumer by eating just enough meat, eating nose-to-tail, and don’t waste food.

Thanks to Rachel Ananin aka [theseasonaldietitian.com](http://theseasonaldietitian.com) for her assistance with this article.

Nicole Senior pulls the plug on hype and marketing spin to provide reliable, practical advice on food for health and enjoyment. She 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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**KEEP GOOD CARBS AND CARRY ON**

**YOUGURT CULTURE**

Yoghurt has long been a part of the human diet. The word seems to come from the Turkish *yoğurmak*, to thicken, coagulate, or curdle, which is what its beneficial bacterial cultures do as they feed on milk’s natural lactose and turn it into the lactic acid that gives yoghurt its characteristic taste and texture. At the same time, they transform a nutrient-rich
food (milk) into an even better one by making it easier for us to digest and by promoting health by restoring levels of beneficial probiotic bacteria in the gut.

Yoghurt is a great source of calcium for healthy bones and contains significant amounts of vitamins A, B₁₂ and riboflavin, as well as potassium and other minerals. Its low GI is thanks (mainly) to the combination of acidity and high protein and the fact that lactose itself has a naturally low GI.

Production has taken off in a big way. When shopping, look for products with live cultures and few (if any) additives. We like pot-set Greek-style yoghurt, especially those that are strained so they’re naturally thicker and higher in protein. As dietitian Nicole Senior says: “These products have beautiful mouth-feel and flavour as well as better cooking properties, although all yoghurts are best added after cooking or at the last minute rather than cook in the dish as they will separate.”

Natural (unflavoured) yoghurt can be a star in savoury dishes says Nicole. It makes a great base for dips, such as baba ganoush or cucumber raita, not to mention beetroot kiz guzeli. Pumpkin soup lovers will know the pleasures of a dollop of yoghurt on top, as will those who enjoy the cooling and creamy addition on Indian curries. What else?

- Dollop on porridge or muesli along with some nuts and a drizzle of honey or date syrup
- Add to fruit and milk to make smoothie
- Use as a topping on desserts instead of cream
- Tuck into as a snack to get you through to your next meal.

**WHAT ABOUT LACTOSE INTOLERANCE OR LACTASE DEFICIENCY?**

Lactose, the sugar that occurs naturally in milk and yoghurt, 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 and yoghurts 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 are active in digesting lactose during passage through the small intestine, 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.

**IN THE GI NEWS KITCHEN**

**TOP IT WITH YOGHURT**

Yoghurt makes a difference as you’ll see in our recipes this month – Quinoa Crusted Veggie Cakes with Horseradish Yoghurt, Vegetable Frittata with Black Sesame and Herb Yoghurt, and Sumac Lamb Fillet with Tzatziki. Nutritional analysis: we use FoodWorks which contains
DO A DOLLOP
Jalna has developed a range of recipes to up veg intake with a dollop of their pot-set Greek yoghurt toppings. You’ll find more of their recipes on their website: Inspired by Nature.

QUINOA CRUSTED VEGGIE CAKES WITH HORSERADISH YOGHURT

Horseradish yoghurt is a great way to add oomph to veggie fritters. Add other vegetables such as wilted kale, grated eggplant, zucchini or corn and substitute wasabi for horseradish and amaranth for quinoa if you wish. Serves 6

400g can cannellini beans, rinsed and drained
400g can chickpeas, rinsed and drained
1 cup coriander leaves
1 medium red chilli, seeded and chopped
1 clove garlic, crushed
1 egg, lightly beaten
1 tbsp Greek yoghurt
1 cup cooked quinoa
½ cup edamame, blanched
½ cup green peas, blanched
1 green onion, finely sliced

½ cup quinoa flour
2 eggs, lightly beaten with 2 tbsp Greek yoghurt
1½ cups quinoa flakes
Vegetable oil or oil spray
Lemon wedges to serve

Horseradish yoghurt
1 cup pot-set Greek yoghurt
1½ tbsp prepared horseradish
1½ tbsp lemon juice
Salt and cracked pepper, to taste

Preheat oven (220°C/200°C fan forced) and line a baking tray with baking paper • Puree cannellini, chickpeas, coriander, chilli, garlic, egg and yoghurt in a food processor until coarsely mashed but mixture holds together. • Place mixture in a large bowl and add quinoa, edamame, green peas, green onion, and salt and pepper to taste if desired. Shape approx ¼ cup of mixture into balls and flatten slightly. Dip in flour, dust off excess, dip in egg and yoghurt mix, then roll in quinoa flakes. • Spray or lightly brush with oil and bake, for 20 minutes or until golden, turning halfway through. • To make horseradish yoghurt, place all ingredients in a bowl & whisk to combine. • Serve fritters with horseradish yoghurt and lemon wedges.

Per serve
2025kJ/485 calories; 25g protein; 10g fat (includes 2.5g saturated fat; saturated : unsaturated fat ratio 0.33); 64g available carbs (includes 15g sugars and 49g starches); 15g fibre; 465mg sodium; 943mg potassium; sodium : potassium ratio 0.49
VEGETABLE FRITTATA WITH BLACK SESAME AND HERB YOGHURT

Don’t be shy about adding other veggies, such as shredded kale leaves, zucchini or broccolini. The more the merrier. You may also like to substitute the red potatoes with lower GI Carisma potatoes and the sweet potato (which has a moderate GI) with low GI butternut pumpkin (winter squash).

Serves 4

1 tbsp olive oil
250g (9oz) red baby potatoes, skins on, very thinly sliced
250g (9oz) sweet potato, very thinly sliced
1 red onion, peeled, thinly sliced
2 medium chillies, seeded, finely chopped
125g (4oz) broccoli florets
1 cup green peas
12 large eggs, whisked
½ cup pot-set Greek yoghurt
½ tsp ground turmeric
Zest of 1 lemon
1 tbsp black sesame seeds, toasted

Herb yoghurt
1 cup Greek yoghurt
½ cup chopped mint leaves
1-2 tsp lemon juice, to taste

Make the herb yoghurt by combining all ingredients.

• Preheat grill to high.
• Heat the oil in a large ovenproof heavy based frying pan over a medium heat. Stir in the potatoes, sweet potato, onion and chilli, and season to taste. Cover and cook until the potatoes are nearly tender, scraping along the bottom of the pan occasionally, 5-7 minutes.
• Add the broccoli and peas and cook a further 2-3 minutes, covered.
• Whisk the eggs, ½ cup yoghurt, turmeric, zest, and pepper and pour over the potato mix. Reduce heat to moderately low and cook until the eggs are just set, carefully lifting the frittata and tilting the pan so the uncooked egg runs to the underside.
• Place pan under a hot grill for a few minutes, until the top of the frittata has puffed up and set.
• Serve in the pan, warm or at room temperature, dolloped with herb yoghurt and sprinkled with black sesame seeds.

Per serve
2015kJ/480 calories; 32g protein; 24g fat (includes 7g saturated fat; saturated : unsaturated fat ratio 0.41); 30g available carbs (includes 16g sugars and 14g starches); 8g fibre; 315mg sodium; 1163mg potassium; sodium : potassium ratio 0.27

STICKS, SEEDS, PODS & LEAVES

Kate Hemphill is a trained chef. She contributed the recipes to Ian Hemphill’s best-selling Spice and Herb Bible. You will find more of her recipes on the Herbies spices website. Or you can follow her on Instagram (@herbieskitchen). Kate uses Herbies spices and blends, but you can substitute with whatever you have in your pantry.
SUMAC LAMB FILLET WITH TZATZIKI
This light summer dish is ideal for the barbecue. It’s quick and easy to whip up for one, or simply double quantities for two. Complete the meal with steamed or baked butternut pumpkin (winter squash) wedges. We appreciate that lamb fillet can be pricy, so try it with chicken tenderloins if you prefer. Prep: 5 mins • Cook: 15 mins • Serves: 1

150g (5oz) lamb tenderloin
1 tsp sumac
1 tsp rice bran oil
½ Lebanese cucumber
1 small clove garlic, crushed
½ tbsp lemon juice
¼ cup plain yoghurt
Small handful baby spinach
150g (5oz) cherry tomatoes, quartered
½ tsp olive oil
½ tsp sumac

Coat the lamb fillet with 1 tsp sumac by pressing it all over, and set aside at room temperature. • Grate the cucumber on a large setting and place in a sieve to drain with a pinch of salt. • Heat rice bran oil in a heavy based pan or heat a barbecue. Cook lamb for 4 minutes each side (for medium rare), then set aside to rest (5 minutes) while preparing tzatziki. • Stir drained cucumber with garlic, lemon juice and salt and pepper to taste. • Toss cherry tomatoes with baby spinach, sumac and olive oil. • Slice rested lamb thinly and serve on the spinach and tomato salad with tzatziki on the side.

Per serve
1850kJ/ 440calories; 53g protein; 18g fat (includes 6g saturated fat; saturated : unsaturated fat ratio 0.5); 12g available carbs (includes 10g sugars and 2g starches); 5g fibre; 590mg sodium; 1275mg potassium; sodium : potassium ratio 0.46

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