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the small print

DETOX DILEMMA

Good diet
or gimmick?

WILD CHILD

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microbiome

FIT FOR PURPOSE?

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encouraging
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INTERVIEW

Dr Aseem Malhotra
on eating to beat
inflammation

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Print and digital publishing

CPUK Print Publishing

Published by

The Institute for Optimum Nutrition (ION)
Ambassador House
Paradise Road
Richmond
TW9 1SQ

ISSN: 1457-5876

Views expressed by authors are not those of ION or *Optimum Nutrition*, nor does ION or *Optimum Nutrition* endorse any of the third-party products advertised or mentioned.

Optimum Nutrition aims to report up-to-date research on nutrition and health-related issues. Articles are not intended to be used as health recommendations, and ION and *Optimum Nutrition* do not advocate implementing dietary changes without consulting a qualified health practitioner.

From the editor

I have always loved food and cooking. I still remember a group cookery lesson in year one of infant school when we (when I say “we” I mean Miss Ryan, the teacher) made bread. I wasn’t impressed. We ate it without butter and it wasn’t anything like the soft white sliced I was used to at home. But it stuck in my mind.

Then there was my first semi-independent cookery class in year four. On Wednesday afternoons, all girls and boys were set to work on ‘arts and crafts’ including painting, needlework, knitting, and cookery (aka: life skills). I made chocolate buns, which I took home and hid under my bed so that I didn’t have to share them with my brothers and sister.

By age 10, I was flicking through my mother’s cookbooks and cutting out any recipes I liked before sticking them in a scrap book (which I still have). Thankfully, my mother wasn’t into cooking and only expressed surprise and exasperation.

So it probably isn’t surprising that, now, my kitchen cupboards are rammed with ingredients. But, recently, as I tried to shove something onto a shelf when there was no space to be had, I realised that it has got out of control. How did I end up with four Christmas puddings? And after Christmas? So, I have resolved to start using things up.

I hate waste and almost never throw anything away. I plan, portion-up and freeze as much as I can. It genuinely upsets me when useable food is thrown away, and I will often liberate not-so-perky veggies from my partner’s fridge that he would otherwise throw away, to turn them into soups, stews or curries. Even a lemon or orange will be zested before or after being used, and the zest frozen for later use.

As the writer Shirley Conran famously said, “life is too short to stuff a mushroom” (although I might make the effort once every couple of years); so understandably, when we are short of time and resources, many of us will typically get stuck in our cooking habits. Yet the beauty of using stuff-destined-for-the-bin gives me the chance to break my habits because I can experiment with ingredients that would otherwise have been thrown away. In my logic, it’s almost cost-free! And if it goes wrong, there’s nothing lost and I’ve learnt something in the process.

So I’m rather proud of a soup I made the other day out of a sad-looking lettuce, wrinkly carrot, ageing spring onions,

frozen cauliflower, and some store-cupboard ingredients (mung bean lentils, chilli and ginger from the freezer, garlic, yellow mustard seeds, cumin, coriander, garam masala, seasoning and a dollop of coconut milk powder).

While it’s preferable to use veggies when they’re at their best, there is something incredibly satisfying in making the most out of what’s to hand. Mostly I cook vegetarian food, but am not vegetarian so the tiniest bit of left-over meat or bones from a very occasional roast will get thrown into a pot with lots of vegetables, herbs and spices. So, a chicken carcass provides stock and a little meat in another meal before going to the compost bin.

Another recent success was homemade oatcakes (made on a day, I suppose, when I did have time to stuff a mushroom), with my smugness increased all the more by using some plain Ready Brek (other brands would do) that had been lurking in the cupboard after a visit from nieces and nephews, and that would otherwise have gone stale. I didn’t have enough whole oats, and as the recipe said to blitz half of them until they were fine, using Ready Brek — which is just finely-milled oats — was a rather good idea, in my view. Homemade oatcakes achieved with ingredients that would otherwise have just taken up cupboard space — delicious.

From what my mother tells me, her grandmother would have told me that none of this is rocket science (albeit not in those exact words), because that is pretty much how she cooked every day. Everything was maximised, nothing was wasted... When I studied home economics in senior school, I was taught by a Mrs Whitehead who clearly remembered food rationing, and who taught us to maximise every ingredient and encouraged us to use peelings or trimmings to make something else. She even told us how to use a clean finger to scrape every bit of the egg white from the shell — no doubt because she remembered the days when eggs were rationed to one, per person, per week.

Not everybody had a Mrs Whitehead in their life, though, or feels confident in the kitchen; but this is where the internet is such a friend. Searching for ‘recipes using...’ is a great way to get ideas.

I think it is going to take me a long, long time to get through my kitchen cupboard stores, but I am convinced it can be done. Christmas pudding, anyone?

Louise Wates

ALCOHOL TYPES can affect our emotional responses, which may explain why individuals react differently when drunk. Research published in *BMJ Open* found that when it came to feeling relaxed, spirits were the least likely to be associated with this feeling (20 per cent). Red wine was more likely to be associated with feeling relaxed (just under 53 per cent), followed by beer (around 50 per cent). Spirits were most frequently associated with aggression. <http://bmjopen.bmj.com/lookup/doi/10.1136/bmjopen-2017-016089>

PROTEIN NEEDS depend upon activity levels, according to a small study which found that females performing variable intensity intermittent exercise had higher protein requirements than average, non-active males. Although further studies would be needed, the research could change the way nutritional recommendations are made according to biological sex. *Med Sci Sports Exerc.* 2017 Nov;49(11):2297-2304.

DIVERTICULITIS ASSOCIATED with lifestyle. An observational study has associated a set of lifestyle factors with increased risk of diverticulitis in men. High intake of red meat, low fibre intake, low vigorous physical activity, a high BMI, and smoking were independently associated with increased risk of diverticulitis. *Am J of Gastroent* doi:10.1038/ajg.2017.398.

'MAN FLU' may be based in fact. A researcher at Memorial University of Newfoundland, Canada, analysed relevant research and found some evidence that adult men have a higher risk of hospital admission and higher rates of influenza-associated deaths compared with women in the same age groups, regardless of underlying disease. Males are reportedly more susceptible to complications and mortality for many acute respiratory diseases, and some evidence suggests males suffer more from viral respiratory illness than women, because they have a less robust immune system. www.bmj.com/cgi/doi/10.1136/bmj.j5560

RSPCA RESEARCH has found that while 88 per cent of people think ducks should have full-body access to water, the majority of farmed ducks can only dip their heads in water. The RSPCA is calling on shoppers to ask supermarkets to source duck that has had adequate open water facilities, as per the RSPCA Assured scheme. www.rspcaassured.org.uk/get-involved/lobby-your-supermarket/



Events

VegfestUK Brighton
Brighton Centre
24-25 March
<http://vegfest.co.uk>

Food and Drink Expo (trade)
NEC Birmingham
16-18 April
www.foodanddrinkexpo.co.uk

Natural & Organic Products (trade)
ExCeL, London
22-23 April 2018
www.naturalproducts.co.uk

The British Dal Festival
Bristol
19-25 March 2018
www.britishdalfestival.com

EATING LATE could increase risk of heart disease and diabetes, according to the findings of a study on rats. Scientists at the National Autonomous University of Mexico found that the part of the brain that controls our biological clock, or circadian rhythms, also affects blood levels of triglycerides, which are associated with increased risk of cardiovascular disease. Their research found that eating late or during the night increases blood triglyceride levels more than eating in the early part of the day. *Exp Physiol.* 2017 Dec 1;102(12):1584-1595. doi: 10.1113/EP086026. [abstract].

EATING LITTLE and often could have a negative impact on weight in women, according to a recent study that looked at data collected from a cross-sectional study of 4,544 adults. But while it was found that grazing was modestly but significantly associated with poorer diet and excess weight in women, men who grazed were found to have a lower BMI than men who followed conventional eating patterns (eating at typical times). *Am J Clin Nutr.* 2017 Oct;106(4):1121-1130. doi: 10.3945/ajcn.117.156588. Epub 2017 Aug 16.



#Twitter

Let's see what's been going on in cyberspace by sharing some of our favourite tweets

@BANTonline
BANT Comments on @BrDieteticAssoc List of Diets That Should be Avoided - concurs no to faddy diets but why were scientifically supported keto and intermittent fasting, dismissed: [https://tinyurl.com/yawnksmw ...](https://tinyurl.com/yawnksmw...)

@ION_Nutrition
Love Brussels sprouts as much as Santa does!! <https://youtu.be/ERWFwyKCnKO>

@ION_Nutrition
A word on lactose: <https://youtu.be/Zk4-gPD2E4w>



@PaulWhiteleyPhD
A Mediterranean-style dietary intervention supplemented with fish oil improves diet quality and mental health in people with depression: A randomized controlled trial (HELFI-MED) [http://www.tandfonline.com/doi/full/10.1080/1028415X.2017.1411320 ...](http://www.tandfonline.com/doi/full/10.1080/1028415X.2017.1411320...)

@officiallined
The brain in your head and the one in your gut are always exchanging info. But how do they do it? Neuroscientist Diego Bohórquez is trying to find out the answers. <http://bit.ly/2jzYEQg>

@FABResearch
New research suggests that #obesity increases #dementia risk <http://ow.ly/JL8330h2Mw1> #Alzheimers

@BANTonline
"fungi and NOT bacteria are responsible for aggravating the severity and inflammation of IBD" <http://bit.ly/2CylKcJ> Remember when candida was quackery?

For your chance to have your tweet featured in the magazine or retweeted, please use the hashtag #ion_nutrition.



Follow-up caffeine study finds no improvement to Parkinson's disease symptoms

Following a study five years ago which showed potential benefits of caffeine for Parkinson's disease (PD) sufferers, a larger, follow-up study, published in *Neurology*, has concluded otherwise.

In 2012, research led by Ronald Postuma MD, a neurologist from McGill University in Canada, concluded that caffeine could help alleviate the symptoms of PD. In the small study, 61 people with PD were given six weeks of caffeine pills or a placebo. The findings were positive in favour of caffeine, although the authors emphasised that the study had several limitations and that it was too early to conclude that caffeine could be a suitable treatment for PD.

In the follow-up trial, 60 patients were given caffeine and 61 a placebo for 6-18 months. It was found that caffeine showed no improvement in motor parkinsonism (the primary outcome) when compared with placebo. And with secondary outcomes, there was no change in motor signs or motor symptoms, and no difference to quality of life.

Although a slight improvement in somnolence (drowsiness) was found in the first six months, this decreased over time. There was also a slight increase in dyskinesia (involuntary muscle movements) with caffeine, and caffeine was associated with worse cognitive testing scores. The researchers concluded: "Epidemiologic links between caffeine and lower PD risk do not appear to be explained by symptomatic effects."¹

Reference:

1. Postuma RB *et al* (2017). Caffeine as symptomatic treatment for Parkinson disease (Café-PD) A randomized trial. *Neurology*, 10-1212.

Study unravels "the molecular mechanism underlying the effects of low or high dietary potassium"

Scientists at the University of Alabama at Birmingham (UAB), in the US, have "unravelling the molecular mechanism underlying the effects of low or high dietary potassium", and found that foods rich in potassium may help protect against hardening of the arteries (pathogenic vascular calcification).^{1,2}

In a study on mice, the effects of a reduced-potassium diet were compared with the effects of a diet containing normal potassium levels. Not only was it found that reduced dietary potassium promoted elevated aortic stiffness; a condition which, in humans, is predictive of heart disease and death from heart disease, but it was also reported that increased dietary potassium levels lessened vascular calcification and aortic stiffness. The team said that the findings emphasised "the need to consider dietary intake of potassium in the prevention of vascular complications of atherosclerosis" and could be useful "for potential therapies to prevent or treat atherosclerotic vascular calcification and arterial stiffness".

However, this does not mean that we should all begin popping potassium pills or deliberately taking in high-potassium foods. Many foods contain potassium, so a varied diet should give us what we need. Although it has been found that potassium may help lower blood pressure "(by a few mmHg)" this effect has only been found in individuals who already have high blood pressure.³ Excessive potassium can be harmful, especially for those who suffer from kidney disease or who are taking blood pressure drugs. If you are concerned about your potassium levels, consult your GP.

Yabing Chen of UAB told *Optimum Nutrition*: "Basically, hyperkalemia (serum potassium levels higher than normal physiological range) or hypokalemia (serum potassium levels lower than normal physiological range) are conditions often associated with failed renal function, and have been linked to increased cardiovascular risk.

"Our studies investigated how low dietary potassium diets, compared with standard potassium diets, resulted in a small reduction of the serum potassium level to the lower physiological range (3.70 ± 0.21 versus 4.27 ± 0.23 mEq/L), and thus increased vascular stiffness and calcification. We also found that high potassium diets resulted in a small increase in serum potassium concentration (4.73 ± 0.15 mEq/L; still in the normal physiological range) and was sufficient to reduce vascular calcification in atherosclerosis.

"Accordingly, our studies suggest that nephrologists may need to carefully select the 'targeted potassium levels' when treating hyperkalemia patients, as reducing potassium levels to the lower end of the normal range may also increase the risk for cardiovascular disease."

References:

1. Hansen J (2017). A need for bananas? Dietary potassium regulates calcification of arteries. uab.edu/news/innovation/item/8773-a-need-for-bananas-dietary-potassium-regulates-calcification-of-arteries
2. Sun Y *et al* (2017). Dietary potassium regulates vascular calcification and arterial stiffness. *JCI insight*. 2(19).
3. www.nhs.uk/news/food-and-diet/can-potassium-in-bananas-cut-your-stroke-risk

Stress impact on gut similar to high-fat diet

The effects of stress have been found to have an impact on the gut microbiome, showing that it can be as bad for our gut as an unhealthy diet.^{1,2}

Although conducted on mice, the study, which was carried out by scientists from Brigham Young University, USA and Shanghai Jiao Tong University in China, could lead to further understanding of human health and risk factors for obesity.

The team took a large group of eight-week-old mice and exposed half of the males and half of the females to a high-fat diet. After 16 weeks, all of the mice were exposed to mild stress over the course of 18 days.

Mice faeces before and after the stress were examined to see how the microbiota (gut microorganisms) were affected. Anxiety was also measured based on how much and where the mice travelled in an open field arena.

Despite the males and females being exposed to the same conditions, a difference between the sexes was found, with the gut microbiota changing to look as if the mice had been eating a high-fat diet. And although male mice on the high-fat diet exhibited more anxiety than females on the high-fat diet, it was only in female mice that stress caused the gut microbiota composition to shift as if the animals were on a high-fat diet. (Male mice on the high-fat diet also showed decreased activity in response to stress.)

Although it is not possible to make direct comparisons between rodents and humans, lead author Laura Bridgewater said: "In society, women tend to have higher rates of depression and anxiety, which are linked to stress. This study suggests that a possible source of the gender discrepancy may be the different ways gut microbiota responds to stress in males versus females."

References:

1. news.byu.edu/news/study-shows-stress-could-be-just-unhealthy-junk-food-women
2. Bridgewater LC *et al* (2017). Gender-based differences in host behavior and gut microbiota composition in response to high fat diet and stress in a mouse model. *Scientific Reports*, 7 (1) DOI: 10.1038/s41598-017-11069-4.

Serious injury or trauma linked to major changes in gut bacteria

Major changes in the balance and make-up of gut bacteria occur within 72 hours of serious injury/trauma, according to a study published online in *Trauma Surgery & Acute Care Open*.¹

The composition of gut bacteria (the microbiome) has been linked to various aspects of human health such as the immune system, leading the study's authors to note that changes to gut bacteria may even influence the chances of recovery or death. However, until now, it has not been clear what changes occur in the guts of people who have been seriously injured.

In a small study, the authors assessed the numbers and types of bacteria in the stool samples of 12 critically injured patients, all of whom had been admitted to intensive care at one major trauma centre after sustaining serious and/or multiple injuries.

The samples were collected on admission, and then again 24 and 72 hours later. These were compared with stool samples taken from 10 patients treated at the same trauma centre, but all of whom had not been seriously injured and did not require intensive care.

Whilst the first of the samples taken showed comparable numbers and types of gut bacteria in the two groups of patients, substantial differences began to emerge by the time the second sample was taken.

After 72 hours, the samples showed that *bacteroidetes* and *verruccomicrobiaceae* (generally considered indicators of a healthy gut), and *fusobacteria* bacteria were all depleted, whereas *clostridia* (some strains of which are associated with inflammation of the colon) and *enterococci* species (some strains of which are associated with clinical infections) had all increased.

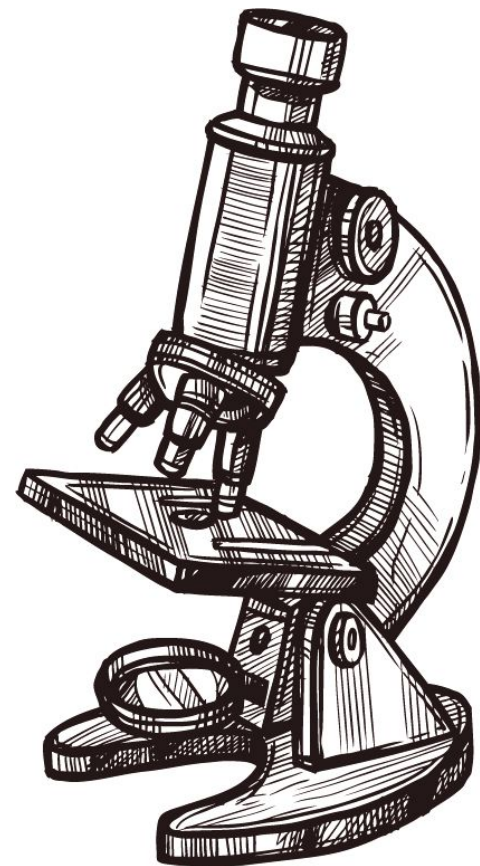
The authors wrote: "The short time course in which such alterations occur is also notable — such relatively rapid alterations in intestinal microbiota represent a critical and previously unrecognised phenomenon that may influence clinical course and outcomes after severe trauma."

Although they said that larger studies would be required before any firm conclusions could be drawn, the authors also pointed to other relevant research, including laboratory studies suggesting that critical illness may be linked to clinically significant changes in the microbiome, and recent research of burn injury patients showing major changes in the composition and number of gut bacteria that may be associated with a heightened risk of sepsis.

"The gut bacterial community is known to modulate inflammation, and is related to a range of clinical outcomes in the patient who is critically ill," they said. "Implementing a probiotic regimen or guiding the microbial composition changes after trauma might prove a powerful tool in the critical care arsenal."

Reference:

1. Howard BM *et al* (2017). Characterizing the gut microbiome in trauma: significant changes in microbial diversity occur early after severe injury. *Trauma Surgery & Acute Care Open*, 2(1), e000108.





DETOX OR NOT?



January is boom time for the weight-loss industry. If you are wondering whether a detox product might help you get back your mojo, read on. **Alice Ball** and **Maggie Charlesworth** write

Ahh, January — the month of tight-fitting trousers and unkind bathroom scales. There's hardly time to eat up the leftovers before we're bombarded with adverts for miracle teas and peculiar-looking juices that are claimed to 'cleanse' and 'detox' our post-Christmas bods. But to detox or not? That is the question.

What is detoxification?

Detoxification is the body's process of neutralising and eliminating toxins — harmful substances which are thought to contribute to weight gain, bloating, fatigue and ill health. It's something our body does every day, with our organs working together to transform these toxins into less harmful matter and excrete them

from the body. A detox product or plan is supposed to aid this natural process. However, with no set definition as to what a detox is, or what standards it should meet, experts are divided over whether detox products and plans have any health benefits.

In 2009, even Duchy Originals, the label founded by Prince Charles, was criticised when it launched Duchy Herbals Detox Tincture, a product combining artichoke and dandelion and marketed as "a food supplement to help eliminate toxins and aid digestion". At the time, Edzard Ernst, then a professor of complementary medicine at Exeter University, was widely-reported as stating that any health claims for the tincture were based on "outright quackery". Duchy Originals defended

the product on the grounds that no health claims had been made, and that the ingredients had long been used in traditional remedies for aiding digestion.¹ However, the incident shows how the concept of eliminating toxins can be met with suspicion and derision.

Because there is no single definition of what a detox should be, anyone can devise a plan or product and say it is to aid detoxification. However, generally, detoxes will involve abstaining from processed food, alcohol, caffeine and sugar; and plans can range from fasting to liquid-only diets. Some detoxes may involve taking supplements or meal replacements.

And it's easy to be lured in — especially if you are feeling bloated and tired. But when should you part with your cash?

Throughout history, humans have tried various ways to speed up the process of letting out the bad stuff; purging, leeches, blood-letting... the latter commonly used up until the late 19th century — so the concept of detoxing is not new. But it is the liver that is our internal detox expert — breaking down toxic substances like ammonia, metabolic waste, drugs and alcohol, so that they can be excreted. As it usually does this job without complaint, there are some who argue that it doesn't need any additional support. But after a period of over-indulging, when we might not be feeling so good, it is easy to see the allure of a detox product or supplement.

What to buy?

Last year we reported that the Medicines and Healthcare products Regulatory Agency (MHRA) had warned against the dangers of buying fake diet pills online. Called FakeMeds, the campaign aimed to warn would-be slimmers against shelling out for useless or dangerous products sold by illegal online suppliers. The same warning goes for online sellers offering so-called detox products. If you do feel that you might benefit from a detox product, always ensure that it is from a reputable supplier so, at the very least, it should be safe to use; and only use it in accordance with the instructions. (It is always advised to use dietary products or supplements under the guidance of a healthcare professional.) However, you may actually want to put your money away.

If a product seems too good to be true,

then it probably is. There are strict EU rules in terms of nutritional claims and packaging information, so any health claims on the packet must be backed up by evidence. Always check the packaging and, if possible, speak to a qualified healthcare professional. Some detox products may be nothing more than glorified laxatives, containing natural ingredients such as senna. However, any laxative should be taken with caution. The NHS advises that they should only be used for short periods of time, and only as relief from constipation. If you are already having regular and comfortable bowel movements, you do not need any extra help! If you are suffering from constipation, you can naturally increase bowel movements by drinking plenty of water, exercising and including more fibre in your diet.

Products vs. healthy diet

Ian Marber, nutritional therapist, author, and founder of The Food Doctor, says that the term 'detox' is misleading because it implies "a beginning, middle and an end" which means people can return to any bad habits. "If it's sold to you, you don't want to do it for too long, so when it ends people will go back to normal eating and may do the detox again in two months."

Instead, a good 'detox' diet should contain lean protein, nuts, seeds and plenty of fruit and vegetables. Food plans can also be successful because of what you exclude: excess alcohol, refined sugars, high salt food and processed food.

And a diet with lots of fruit and vegetables will be naturally higher in fibre. We need to consume around 30 g of fibre a day — most Brits only get 18 g. If you eat more fibre, you may notice more frequent bowel movements. This feeds into the idea of being 'cleaned out' by the detox.

Marber also says that a detox diet can have important psychological effects by making you pay attention to what you're eating. "It's not a bad way of following a food plan," he says. "They're an extreme diet so they can help to break bad habits or draw attention to them. You may feel better having lost weight or you may try foods that you haven't previously and find that you like them." A detox could, therefore, have long-term benefits by changing the way that we perceive and consume food.

But can a detox diet make a healthy body work even better? Marber doesn't think so. "There are all sorts of side effects that have got nothing to do with this promised detox; what you're feeling is nothing more than the good effects of a good diet," he says.

However, if you do feel that you need extra guidance, Marber says the best solution is to go and see a nutritional therapist or dietician. "What you spend on consultations you'll save ten times over in the coming years by not falling for all the hype."

Reference:

1. www.nhs.uk/news/medication/detox-tincture-qa/

Three approaches towards a detoxification protocol

We speak to three practitioners who explain their approach towards the concept of a detox

FLEUR BROWN, DipLON mBANT
Functional nutrition practitioner and author of *Beat Chronic Disease: The Nutrition Solution* (see p.39)

"I use a detoxification programme only if a client needs to do this — I would not use it as a blanket process as not everybody needs to 'detox', as is sometimes claimed.

"Circumstances where I would recommend a 'detox' programme could include where there is evidence of an over-burden of heavy metals such as aluminium, mercury or cadmium in the cells; exposure to environmental toxins — such as eating a diet high in processed and junk foods... or working or living in an environment that is high in toxic exposure; or [where there is evidence

of] a compromised liver function; over-indulgence or long-term use of alcohol or recreational drugs; or high oestrogen levels. These issues can be checked by undertaking urine or blood tests.

"If a client has over-indulged during the Christmas festivities and feels sluggish, has gained weight, or is experiencing a backward slide in their health, I may recommend they follow a detox programme for just two to four weeks to rebalance the body.

"I would not use it as a blanket process as not everybody needs to 'detox', as it is sometimes claimed"

"I use a detox protocol which includes a nutritional programme incorporating dietary changes and supplements. I also recommend, where possible, clients regularly use an infrared sauna during the detox period and do gentle exercise such as jumping on a rebounder for 10 minutes daily, to stimulate the lymphatic system.

"Epsom salts baths are recommended, as well as daily skin brushing to stimulate the lymphatic system.

"I do not recommend long term protocols — the maximum would be four to twelve weeks, depending on the severity of the condition requiring a detoxification programme.

"Each client is assessed individually and the programme of detoxification is then personalised to suit their needs."

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FEATURE

JACKIE LYNCH DiplON mBANT
Nutritional therapist and author of *Va Va Voom: The 10-Day Energy Diet*

The body has its own in-built detoxification systems which can be highly effective. But like any effective engine, it needs the right fuel to activate these mechanisms.

"A healthy, balanced diet, rich in wholegrains, fruit and vegetables can keep the body nicely in tune; too much of the wrong type of foods can disrupt our internal engine.

"But beware the quick fix of the January 'detox'. There's absolutely no point in following an unhealthy lifestyle all year and assuming you can fix it all with a one-month drastic detox programme and then pick up your old habits again. All that's likely to do is wreak havoc on your system and it could make you feel very poorly indeed.

"The main culprits I will target with a cleansing programme are alcohol, refined sugar, caffeine and inflammatory foods such as some grains and dairy products. Eliminating these foods for a fixed period can be very helpful for some clients to reduce the potential load on the liver, improve digestion and enhance energy levels. It can also act as a useful 're-boot' which will make it easier to put healthy eating habits in place as a next step.

"I encourage my clients to start slowly and to reduce the target foods for about a week before embarking on any form

of cleansing programme. Anyone who's experienced the headaches, joint pain, bloating and fatigue that come with going 'cold turkey' will know just how unpleasant that can be. A successful change in regime is all in the preparation — having the right foods available and planning menus will make the process much easier. Eating little and often can help to make a restricted regime easier, to avoid a drop in blood sugar that will lead to sugar and carb cravings. And it's all in the timing — stricter days should definitely happen over a weekend, so that you can take things easy.

"As clients emerge from a 'detox' we'll work together to create some healthy eating goals to help them sustain the health benefits they've acquired."
www.well-well-well.co.uk

"...beware the quick fix of the January 'detox'. There's absolutely no point in following an unhealthy lifestyle all year and assuming you can fix it all with a one-month drastic detox"

Va Va Voom: The 10-Day Energy Diet by Jackie Lynch is out now (£14.99)

WHAT IS AN INFRARED SAUNA?

Whilst a traditional sauna uses heat to warm the air, an infrared sauna uses light — heating your body directly without warming the air around you.

Because an infrared sauna encourages sweating at lower temperatures, it is an option for people who cannot tolerate the heat of a traditional sauna.

SKIN BRUSHING

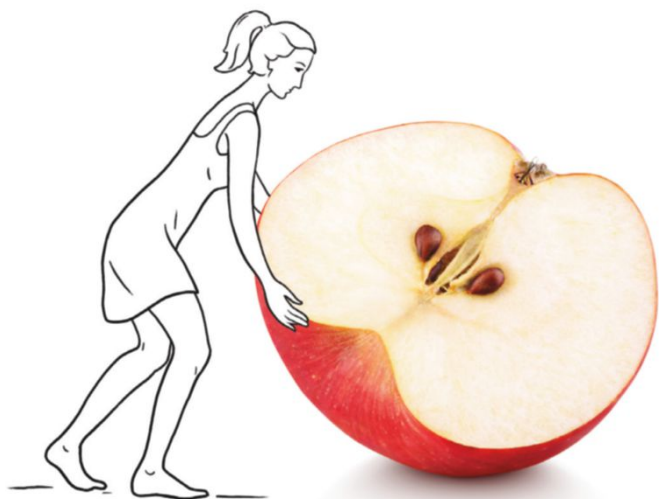
Fleur Brown says: "I do [skin brushing] regularly and recommend my clients to do it, too, to just help smooth the skin and get the lymph flowing to improve health. Just three times per week is good.

"Skin brushing is done with a special brush you can buy at health food shops. Skin brushing should be done on dry skin BEFORE going into the shower using a dry brush.

"Any irritated areas of skin should be avoided and also areas where there are lots of varicose veins."

Fleur recommends www.GreenSmoothieGirl.com/skinbrush as an instructional video, and that the brush should be washed out once per week using a mild soap and left to dry naturally.





PETRONELLA RAVENSHEAR DipION mBANT
Functional medicine practitioner and nutritional therapist

“Our bodies are designed to detoxify naturally, primarily through our liver, and the orthodox view is that because detoxification is a natural process it doesn’t require any extra help in the form of supplements or special diets. But practitioners know that is a utopian view. In an ideal world, there would be no pollution and no junk food, we’d all have great nutritional status and nobody would ever suffer any kind of stress. And we’d sleep like babies every night. But that’s not the way it is.

“Two of the key minerals required for detoxification are the two minerals we are most commonly deficient in: zinc and magnesium. And it’s not just these minerals that are hard to come by on a diet of stress and fast food, but also antioxidants including polyphenols from fruit and vegetables.

“Dietary toxins such as excess fructose, carbohydrates and alcohol result in a fatty liver, which is less able to detoxify. Add to that household toxins... and environmental toxins including air pollution, pesticides and heavy metals... and that’s quite a cocktail. We do need to detox and we need to give the liver the nutrients it needs for both its detoxification pathways.

“I use the Metabolic Balance detox protocol: the first two days are vegetables only, then it’s 14 days of eating three small meals a day, combining protein with vegetables. There’s a five-hour fast between meals, and the only compulsory fruit is an apple a day.

“The 16 days of the detox are oil- and alcohol-free. Lots of water is vital for the detox process and apple cider vinegar is helpful for digestion as well as food cravings. This protocol acts as a reset and people commonly report less hunger, clearer skin, enhanced energy and better sleep within two weeks.

“Some swear by a short sharp juice detox but I and other practitioners find ourselves wondering if it’s the juices that are making people feel better or the lack of refined grains, sugar and junk food.

“We need to eat proteins, and a long-term protocol would include daily brassica vegetables... as well as sulphur-rich foods such as garlic, leeks and onions... and deeply coloured fruit and vegetables to supply polyphenols as well as fibre for detoxification and to support the microbiome. Our microbes are vital for the health of the liver and gut — a probiotic supplement is also recommended.”

www.chelseanutrition.com

“In an ideal world, there would be no pollution and no junk food, we’d all have great nutritional status...”

Survive Winter

Beneficial bacteria play an essential role as our first line of defence, supporting efficient digestive function and gut immunity during the winter months.

Bio-Kult is a range of scientifically developed, advanced multi-strain formulas containing live bacterial cultures, proven to survive the high acidity of the stomach.

Ask your wholesaler for more information, or contact Bio-Kult.

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VITAMINS

One of the vital functions of B vitamins is to help us turn food into energy. However, as recent research shows, eating a range of foods rich in B vitamins can have substantial benefits, throughout our life, from the cradle to a healthy old age. **Lisa Patient** writes

Way back in 1970 the first study to conclusively confirm the link between folate (vitamin B9) deficiency and neural-tube defects such as spina bifida was published. This led to the now widespread practice of folic acid supplementation before and during pregnancy. However, emerging research points to lesser-known benefits of some of the other B vitamins during pregnancy.

Pregnancy

One such vitamin is vitamin B3, known as niacin, and found in fish, beans, nuts and mushrooms. An Australian study on mice found that higher intake of B3 may reduce incidence of miscarriages and birth defects in specific cases. The research followed observations of major birth defects in human babies with a specific genetic mutation that affects the body's ability to make a molecule called nicotinamide adenine dinucleotide

(NAD).¹ The team's subsequent studies on mice discovered that added B3 in the diet during gestation prevented the malformations in offspring. However, more human studies would be needed.

In the UK, scientists at the University of Southampton have also studied the impact of vitamin B3 during pregnancy, and found that women with a higher blood level of a particular type of B3 called nicotinamide (one of the components of NAD), were less likely to have babies with eczema than those with lower levels.²

While more research is needed to determine the safe dosage and any possible side effects of B3 during pregnancy, current advice remains to eat foods rich in B vitamins, and to take multivitamins especially formulated for pregnancy.

The importance of a good balance of B vitamins was also highlighted by a study published in the journal *Clinical*

Nutrition, which found that pregnant women with high levels of folate but low levels of vitamin B12 were significantly more likely to develop gestational diabetes.³ The study mostly observed this nutrient imbalance in vegetarian women, particularly of Asian descent. (Vitamin B12 is found in foods such as meat and fish. Vegetarian sources include fermented foods such as kefir, kimchi and Marmite, and some types of mushroom.)

Anti-ageing and mental health

A 2016 paper describes vitamin B12 deficiency as a "missed opportunity to prevent dementia and stroke";⁴ and research certainly shows a strong link between a good intake of B vitamins and the prevention of dementia and mental deterioration as we age. For example, a study from France evaluated the diets of around 1,300 people, and found that lower intake of folate was associated with higher

risk of dementia.⁵ In the UK, a study sponsored by the Food Standards Agency (FSA) and carried out over four years found that low vitamin B6 was linked to a 3.5 times higher risk of accelerated cognitive decline, and in February 2017 a review of studies by the University of Manchester found that high doses of B vitamins significantly reduced symptoms of schizophrenia.⁷

So why are B vitamins linked so strongly with anti-ageing and mental health? Some of the answers can be found from a major clinical trial undertaken at Oxford University in 2010, and findings on homocysteine — an amino acid derived from protein-rich foods such as meat, fish and eggs. Although homocysteine plays an important role in many metabolic functions, high levels are associated with cardiovascular disease and increased risk of dementia or Alzheimer's disease.

However, a good dietary supply of B vitamins, particularly B6, folate and B12, as found in foods such as almonds, eggs, wholegrains, green leafy vegetables, lean meat, fish and dairy products, can keep homocysteine in check. Data from the Oxford University study show that B vitamin supplementation for two years improved mental performance in people with high levels of homocysteine, and also that supplementation reduced brain shrinkage in areas particularly affected by Alzheimer's disease by 30 per cent.^{8,9}

Interestingly, there appears to be an added advantage to eating good fats with your B vitamins. Two studies found that the action of B vitamins to improve the mental health in the elderly was much more dramatic when the participants had good levels of omega-3 fats in their blood stream. This is a good reason to combine those oily fish, nuts and seeds with wholegrains and leafy vegetables.^{10,11} (For an exemplar serving suggestion: think of salmon, brown rice and spinach! Or a vegetable stir fry with nuts on brown rice!)

Lung disease

One area of research where the picture is less clear is that relating to lung health.

Many people may have taken fright at recent headlines claiming that vitamin B supplements increased risk of lung cancer in men. However, what those headlines did not mention was that the risk was specifically found in male smokers.

The story related to the findings of a study published in August 2017, which analysed data from a 10-year study of around 78,000 people. The analysis found that male smokers taking 20 milligrams (mg) of vitamin B6 per day for 10 years were three times more likely to go on to develop lung cancer, while male smokers taking 55 micrograms (mcg) of vitamin B12 per day for 10 years were around four times more likely to develop the disease.¹²

It should be noted that the study found that only smokers were affected, and that they were taking high doses of B vitamins: for adult men the NHS recommends 1.4 mg of vitamin B6 and 1.5 mcg of B12.

Further research is underway to find out why the B vitamins may have this effect, and there is no evidence that a diet rich in B vitamin foods has the same impact.

There is also some evidence to show that B vitamins protect the lungs against pollution, in particular a type of pollution known as particulate matter, which comprises tiny particles that can enter the blood stream via the lungs, and cause damage to DNA, leading to inflammation. One Canadian study found that a combination of folate, vitamin B6 and vitamin B12 protected the lungs by preventing the particles from causing damage to DNA.¹³

If you are concerned about your own vitamin levels, tests for deficiencies (e.g. vitamin B12) can be carried out via a GP or nutritional therapist. It is always recommended to seek professional advice as not all individuals will need to supplement above dietary intake.

EAT A VARIED DIET FOR A GOOD INTAKE OF B VITAMINS

SOURCES OF VITAMIN B3

Meat
Fish
Wheat flour
Eggs
Milk

SOURCES OF VITAMIN B6

Pork, poultry & fish
Wholegrain cereals, e.g. oatmeal, wheatgerm, and brown rice
Eggs
Vegetables
Soya beans
Peanuts (choose raw, unsalted as a healthier option)
Milk
Potatoes (choose sweet potatoes for extra nutritional value)
Some fortified breakfast cereals

SOURCES OF FOLATE (B9)

Broccoli, Brussels sprouts
Liver (not recommended more than once a week as this is rich in vitamin A, or during pregnancy)
Spinach
Asparagus
Peas
Chickpeas
Some fortified breakfast cereals

SOURCES OF VITAMIN B12

Meat
Salmon, cod
Milk, cheese
Eggs
Some fortified breakfast cereals and plant-based milks

Source: www.nhs.uk

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SAVE FOOD, SAVE CASH (AND HELP THE PLANET)

Once the last New Year firework has crackled and spluttered, January can suddenly seem very bleak — particularly when it is a long time until the next pay day. However, after the season of extravagance, getting the most out of our food budget not only makes sense for our wallets, but for the environment too

Every year the average UK family throws away an estimated £700 of food. According to the Food and Agriculture Organization of the United Nations (FAO) around a third of all the food produced in the world (about 1.3 billion tonnes) gets lost or wasted — to the value of around US\$680 billion in industrialised countries and US\$310 billion in developing countries.

Anyone who remembers news reports of butter mountains and milk lakes knows that the problem of food waste is not new. On a domestic front, it used to be common practice for supermarkets to pour detergents over thrown away, unsold food to deter any hungry homeless scavengers. In more recent years, however, there has been an effort to make the most out of waste. Many supermarkets and cafés now send their end-of-date stock to foodbanks and community kitchens: a spokesperson for Sainsbury's told *Optimum Nutrition* that none of its food waste goes to landfill and is either donated to food banks, recycled into animal feed, or converted to biofuel via anaerobic digestion.

However, "bakery products can't be donated to food banks as, due to the area in which they were created, they carry a risk of allergen cross contamination so we can't guarantee they would be suitable for allergen sufferers. But they will still be recycled or converted".

Although many of us won't have an eye on the bigger environmental picture, reducing the amount of food waste we produce could shave pounds off the weekly budget. It might seem a lot of effort just to save some pence here and there, but putting into action the — dare we say it — old expression 'take care of the pennies and the pounds will look after themselves', can be challenging and rewarding. So here are some tips on how to uninvite your kitchen bin to dinner.

Know your dates

'Use by' and 'best before' dates can be confusing, but the important one is 'use by' — food cannot be sold after this date. On its website, the Food Standards Agency (FSA) states: "Use by date is about safety... Foods can be eaten (and most can be frozen) up until the use by date, but not after. You will see use by dates on food that goes off quickly, such as meat products or ready-prepared salads. For the use by to be a valid guide, you must carefully follow storage instructions."

'Best before' is not an indicator of safety. Food is considered edible after this date, but may have lost some of its quality; a common example is spices, which many of us may have lurking at the back of the cupboard long after the best before date has passed into distant memory. The FSA does state, however, that: "The best before date will only be accurate if the food is stored according to the instructions on the label." So, the bottom line is: don't throw foods away if they are past their best before date and have been stored correctly.

If you want to think about how your actions impact food waste on a wider scale, try working with sell by dates. Shops have to operate within the law when it comes to sell by dates, and we can help by working with the supermarkets. This includes being willing to buy reduced items and just-in-date food with a bigger picture mindset. Or if you tend to search shelves for the longest expiry date, consider choosing food that has less time on it, with plans to eat it that night. Yes, it may be marginally older, but it's all safe and okay to eat.

Little and often

If soggy vegetables are regularly found composting at the bottom of your fridge, it could be time to change how you





shop, such as buying small amounts of fresh produce when you need it. Bulk-buying may be easy, time-saving, and cost-effective, but if your purchases end up rotting away, they are a false economy. Using the new smaller 'express' supermarkets is one way of buying what we need when we need it, and avoiding the temptation of large supermarket aisles that are designed to lure us in to buy more. If you need to buy food on a daily basis, write a list — and stick to it!

Plan ahead

If you are shopping for the week, make a list, and if you get drawn into buying additional items on offer (such as meat products), freeze the extras on the day of purchase rather than thinking you will use them that week.

Checking your diary can also help reduce food waste — if you are going to be out or away, do you need fresh produce at home? If not, frozen produce might be a better option. Because of farm-to-freezer times, frozen produce is a good source of nutrition, and will keep for when you need it. It can be cheaper, too. For example, if you like fruit with your porridge or in a smoothie, frozen mixed berries help provide a varied diet without committing to buying a pack of each type — and often cost less than buying fresh.

#FoodPrepSunday

Cook once to eat twice — or more. Batch cooking has many benefits that outweigh the initial outlay of time that it takes. The more you prepare, the more time you get back through the absence of daily cooking and making decisions on what to eat or buy. You also know exactly what you're eating. By spending a couple of hours batch cooking more than one kind of dish, you can get variety into your diet, too.

When cooking and freezing, divide the ingredients between two pots and use different seasonings to make something different: e.g. a large batch of lentils can be used to make vegetarian bolognese in one pot and spicy daal in the other; chickpeas can be divided to make a stew and falafel; or use different herbs and spices to turn minced meat into curry in one pot and the base for a cottage pie in the other (add frozen mash as needed).

Freeze it

Using the freezer is fundamental to reducing food waste. For example, freeze half your loaf of bread and use the frozen half for toast straight from frozen, and the fresh half for sandwiches. Freeze in accordance with your eating habits. Eat more toast? Freeze 70 per cent of the

loaf. (Although bread can be frozen and defrosted as needed — you just have to plan if you want a sandwich!) Some foods (e.g. cheese) may change slightly in texture but are perfectly edible.

If you have had fresh veg in the fridge for a couple of days and don't anticipate using it soon, clean it, cut it up (if necessary) and freeze it. Mushrooms can be sliced and frozen, even tomatoes that look too elderly for salads can be frozen to be used in a soup or stew. Fresh vegetables may not have the greatest texture after being frozen, but are usually good for the stew pot. Even leftover boiled potatoes and sweet potatoes can be frozen — once defrosted they will lose some of their water content and look a little sad, but they can be sliced and fried (lashings of oil not required!). Alternatively, they can be mashed before being frozen. Freeze bananas to make banana pancakes, banana bread and banana 'ice cream'. Bananas can be frozen in their skins but will need to at least partially defrost before being used (the banana can be removed by squeezing one end, and then the banana will usually plop out!); but it's much more convenient to peel and slice them before freezing!

Portion it

If it's your habit to defrost a packet of sausages just to use a couple and then leave the rest to go bad, take time to portion foods into wrappers or containers before freezing them. A general rule of thumb is, if it can be frozen then it can be portioned up first. Use containers, wrapping or bags to portion up cheeses, meat such as bacon, chops, mince and poultry, and other staples such as milk and bread.

Get creative

Don't be afraid to experiment and keep a supply of herbs and spices to jazz up your meals. Fresh herbs are very versatile: they can be washed and frozen as they are, creatively turned into butter cubes (using an ice cube tray) to be defrosted when needed for meat and fish dishes, or added straight from the freezer to use in cocktails. Spices such as chillies, peeled ginger, and garlic can all be used straight from the freezer.

Know what you have

Don't ignore mouldy veg at the bottom of your fridge because the mould will spread! Rummage at the back of cupboards, and the fridge and freezer to see what you already have. Check dates and if you know you won't eat something in time, freeze it. If you're a technophile, maybe

FEATURE

a fridge camera is the thing for you. Now you can remotely view the contents of your fridge via an app called FridgeCam. A wireless camera sits inside your fridge, automatically tracks and labels products in your fridge and sends you notifications about expiry dates so that you stop buying the same items you already have. Genius. Find out more at <http://smarter.am/fridgecam/>

Be sociable

If you are shopping for one and have a friend or relative who does the same, try shopping together and sharing packs of eggs, fruit and veg, etc. If you're hosting a get-together, instead of being responsible for providing all the food (which often means more shopping), suggest a pot-luck night and get everyone to bring food they've already got at home to create a buffet. Alternatively, be 'chef' for the night and get everyone to bring along ingredients that might otherwise go to waste — as well as their sous-chef skills!

Think before scraping and scrapping

If half of what you serve up goes into the bin, then it's time to rethink how much you are dishing out. Keep leftovers from the plate for next time. We commonly shove leftovers from the pot into tubs for lunch, but how about salvaging that untouched food on the plate? It all adds up. Or decant leftovers from dinner plates into a freezer container to use them later in soups, stews, curries, omelettes, or vegetable hash.

Keep leftover bread to make a savoury bread pudding, using odds and ends: e.g. brie and walnut, cheddar, date and spice, feta, pea and mint. Freeze bones from roasts until you have the time and inclination to make stock. Or make stock from bones/chicken carcasses and freeze it for later use.

Donate it

And if you really can't bear to eat food that is at its use by date, give it away. Community fridges are popping up in some areas. There may be an independent one near you, or you may be able to find one — or set one up through www.hubbub.org.uk/Event/community-fridge-network

And even if you haven't seen a food bank, an internet search may find one near you. There are some fantastic food waste projects nationwide, with one of the largest being The Real Junk Food Project. Visit: <http://therealjunkfoodproject.org>

Contributors: Virginia Blake, Shirley Briars, Maggie Charlesworth, Sally Lawson, and Jenna Sinclair.

MAKING TASTY STOCKS FOR SOUPS AND STEWS

A good stock is the starting point of many a warming winter supper, and is something that can be made out of just a handful of leftover ingredients. And the plus points to homemade stock don't end there: making our own stock enables us to save some pennies, reduce waste and, more importantly, be in control of ingredients and flavouring.

Author of tip-packed cookbook *Too Good to Waste: How To Eat Everything*, Victoria Glass, sets out her step-by-step guide to making stock, and gives us a tasty supper recipe in which to use it.

MEAT STOCK

MAKES 1-2 LITRES/35-70 FL OZ/4 $\frac{1}{3}$ -8 $\frac{1}{2}$ CUPS

Victoria says: "Meat stock cubes have nothing on homemade. As stock takes time to cook, large batches are more economical and eco-friendly. Freeze bones and trimmings until you're ready to go."

You need: for beef stock 2 kg/4 lb 8 oz beef bones, cut into manageable pieces (ask your butcher). For chicken stock, use chicken bones leftover from a roast, or raw bones. For ham stock, use ham bones from ham hocks or roast gammon, plus any scraps of ham.

INGREDIENTS FOR ALL STOCKS

- 1 large onion, cut into chunks, plus any allium trimmings (onions, spring onions/scallions, leeks)
- 1-2 carrots, cut into chunks, plus the trimmed ends
- 1-2 celery stalks, cut into chunks, plus the trimmed ends
- Any other odds and ends of vegetable peelings and trimmings (avoid brassicas, as they can smell sulphurous; swede and turnips, as they taste bitter; and beetroot/beets, unless you want pink stock)
- A few handfuls of herbs (flatleaf parsley and thyme pair well with beef and ham; rosemary, oregano and marjoram pair well with chicken)
- A scattering of black peppercorns
- 1-2 bay leaves

METHOD

To make beef stock, heat the oven to 200C/400F/Gas 6. Put the bones in a roasting pan with the onion and season with salt and pepper. Pour a mugful of water into the pan and roast for 40 minutes.

For all the recipes, put all the ingredients, including the roasted bones and any sticky bits from the roasting pan, in a large saucepan and cover with cold water. Bring to the boil, then turn the heat down, cover with the lid and simmer for 2-3 hours for chicken or ham stock, or 6-10 hours for beef stock, skimming off any scum that rises to the top.

Strain the stock (you can save the vegetables to add to a blended soup) and leave to cool completely before transferring to the refrigerator.

The stock will last for up to five days in the refrigerator (or longer if there is a seal of fat over the top), or for up to three months in the freezer.

FISH STOCK

Victoria says: "You can get fish bones for free from your fishmonger, who may also remove the gills (which make your stock bitter) for you. Only if you want a perfectly clear stock do you need to take out the eyes."

INGREDIENTS

- 1 kg/2 lb 4 oz fish bones (avoid oily fish, as they make the stock rather whiffy)
- 1 large onion, cut into chunks, or allium trimmings (onions, spring onions/scallions or leeks)
- 1-2 carrots, cut into chunks, or the trimmed ends
- 1-2 celery stalks, cut into chunks, or the trimmed ends
- Any other odds and ends of vegetable peelings and trimmings (avoid brassicas, as they can smell sulphurous; swede and turnips, as they taste bitter; and beetroot/beets, unless you want pink stock)
- A few handfuls of herbs — flatleaf parsley (stalks and/or leaves) and tarragon both pair very well
- 1 fennel bulb, cut into chunks, or fennel trimmings
- A scattering of black peppercorns
- 1-2 bay leaves

METHOD

Remove the fish gills. Put all the ingredients in a large saucepan and cover with cold water. Bring to the boil, then cover and simmer gently for 30 minutes, skimming off any scum.

Strain the stock and leave to cool completely before transferring to the refrigerator. The stock will last for two days in the refrigerator, or for up to one month in the freezer.

VEGETABLE STOCK

Victoria says: "A versatile base, vegetable stock is quick and easy to make and

enhances the flavour of a variety of vegetarian dishes.”

- 1 large onion, cut into chunks, or allium trimmings (onions, spring onions/ scallions or leeks)
- 1-2 carrots, cut into chunks, or the trimmed ends
- 1-2 celery stalks, cut into chunks, or the trimmed ends
- Any other odds and ends of vegetable peelings and trimmings (avoid brassicas, as they can smell sulphurous; swede and turnips, as they taste bitter; and beetroot/beets, unless you want pink stock)
- A few handfuls of herbs of your choice
- A scattering of black peppercorns
- 1-2 bay leaves

METHOD

Put all the ingredients in a large saucepan and cover with cold water, or you can use leftover cooking water from boiling or steaming other vegetables. Bring to the boil over a high heat, then turn the heat down to low, cover with the lid and leave to simmer for 1½ hours, skimming off any scum that rises to the top.

Strain the stock and leave to cool completely, before transferring to the refrigerator. The stock will last for three days in the refrigerator, or for up to three months in the freezer.

(*Optimum Nutrition* tip: remove only the bones and keep any scraps of meat and vegetables in the stock to make a hearty base for a soup. Blending these together with the liquid will make a thicker stock.)

FAUX PHO (above right)

You can use any leftover meat for this fit-all cheat’s pho. Vegetarians may want to add tofu or any other left-over meat substitute (veggie sausages/burgers) that can be sliced and added to a stock.

INGREDIENTS

- 2.5 litres/88 fl oz/10½ cups stock
- 1 onion, quartered
- A large thumb of root ginger, unpeeled, quartered
- 3 star anise
- 1 tsp black peppercorns
- 1 cinnamon stick, bruised
- ½ tsp fennel seeds
- 1 tsp coriander seeds
- 2 cardamom pods, bruised
- 1-2 red chillies (depending on how much heat you like), finely sliced
- 1 tsp rock sugar or dark soft brown sugar
- Leftover meat e.g. from a roast, or a boiled ham (throw raw meat into the



Image: Watkins Media Limited 2017

- hot stock at the last minute)
- 2 tbsp fish sauce, plus extra if needed
- 2 shallots, finely sliced into rings
- A little oil, for frying
- 400 g/14 oz flat rice noodles
- A good few handfuls of mixed Thai basil, coriander/cilantro and mint
- 200 g/7 oz/2 cups beansprouts, blanched
- 4 spring onions/scallions, finely sliced
- 1 lime, cut into wedges

METHOD

Put the stock in a large saucepan over a gentle heat. Heat a griddle or frying pan until almost smoking, then char the onion and ginger for a minute or so before adding them to the pan. Add the star anise, peppercorns, cinnamon, fennel seeds, coriander seeds and cardamom pods to the stock and simmer for 25 minutes.

Strain the soup into a clean saucepan. Lift out the ginger using a slotted spoon and, once cool enough to handle, scrape off the skin, chop the ginger into fine matchsticks and return them to the soup. You can rescue the soft onion to use as

the base of another blended soup, if you wish. Discard the rest of the aromatics

Add 1 chilli to the pan with the sugar, the pieces of meat and the fish sauce and simmer for 20 minutes. Fry the shallots in oil until golden and crisp.

Bring a separate pan of salted water to the boil, add the noodles and cook for about 5 minutes, or according to the packet instructions. Drain the noodles, then divide them among four warm bowls. Taste the soup, adding more fish sauce if needed. Ladle the soup over the noodles, then garnish with the fried shallots.

Serve alongside the herbs, beansprouts, spring onions/scallions, lime wedges and the remaining chilli, for people to stir into their bowls of faux pho at the table as they like.

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BANKING ON KINDNESS

Food banks around the UK work tirelessly to help alleviate food poverty. **Alice Ball** rolls up her sleeves to find out what they — and those who rely on them — need to keep going

I remember being seven-years-old and sat cross-legged on the cold floor of my school assembly hall. It was harvest time. The church bishop stood before a huge tower of food, constructed from many tins of soup, sardines and rice pudding. He explained that the items were to be donated to the local food bank to provide short-term support for people who couldn't afford to eat. However, I, in all my childhood naivety, had no concept of poverty outside of developing countries and couldn't see past the image of my mother's cottage pie on the dinner table.

In reality, an estimated 13 million people in the UK live below the poverty line.¹ Many of us have donated to a food bank, but what happens to our contributions beyond the supermarket collection bins and harvest festivals?

The food banks

Eastleigh Basics Bank in Hampshire has provided food for 13,806 people since it was set up six years ago and relies upon a team of 20 volunteers to open twice a week. I'm expecting a dull and shabby building, shelves stocked with a nostalgic display of tinned sardines, soup and rice pudding. But instead, visitors are seated comfortably on sofas whilst their food boxes are prepared, and in the back room there are fresh vegetables, pastries, and a crate of baking potatoes on the centre table. Several volunteers greet me with smiles and handshakes, ushering me inside for a hot drink. I learn my first lesson about food banks: they do more than just provide emergency food; they are a place for the community. As one volunteer tells me, anybody can drop by

for a "hot drink and a natter", regardless of whether they are in need of food.

Dom Hooley, the store manager, explains the process. Firstly, food is donated by schools, churches, businesses and individuals. Local supermarkets often donate any left-over fresh food that would otherwise be wasted, but this is dependent on stock rotation. I spot a pile of Danish pastries in the corner; it looks as if Eastleigh Basics Bank has struck lucky today — although as our article on food waste revealed, not all shops will donate baked goods because of potential allergies. Food is then date-checked and stored in the back room or external warehouse. Finally, those in need are referred to the bank through external services and organisations. These services issue vouchers which clients can

exchange for bags of food. Instead of it being a 'one size fits all' process, Hooley sits down with each client whilst they are made a hot drink and asked about their dietary preferences. Volunteers go about selecting items from the shelves and putting them into bags for the client.

I'm told that most customers are grateful for whatever items they receive, but others can be surprisingly specific.

"I once had a lady who made me go back to the shelf and select a different brand of cat food five times," laughs Ed Hooley, another volunteer. "She kept telling me, 'that's not good enough for my cat!'"

It would be easy for potential donors to be put off by this story, but any pet owner knows that if an animal is used to a certain food, it might not touch another variety — just like some children who might not understand that there is no choice.

Dom Hooley explains that many food bank charities have strict regulations and can only provide supplies for up to three days. Eastleigh Basics Bank is an independent charity, meaning it can give out seven days' worth of food. However, supplies are also dependent on the location of the food bank. "We're lucky that we live in an affluent area where lots of people donate," he says, perhaps explaining the surplus of croissants. "In some areas of the country food banks don't have enough supplies because there is no one to donate; everyone is struggling."

A few years ago, Stoke-on-Trent food bank started turning customers away because their supplies were so depleted. Families with children and those over the age of 65 were given priority, whilst individuals were forced to find other emergency aid. One volunteer at a Peckham food bank also spent £700 of her own money on supplies to ensure no customer was turned away hungry.²

Those who donate

Wildern School in Hampshire has donated to its local food bank for the past nine years. Alison Neasom chairs the Community Focus Group on the school council, which organises the collection. "Most charities have websites which tell us the best items to collect," explains Neasom. "We send lists off to every tutor group and encourage each child to

"There seems to be a perception that people who use food banks are all feckless idiots.."

pick one item off the list. This way, they can choose whether to donate a 20p tin of soup or a more expensive item."

According to Neasom, food banks have become more prescriptive over the years, asking that the school limits foods which they have in surplus, including dried pasta and baked beans. The school starts to collect supplies from the beginning of September, up until Christmas when the boxes are sent off to the food banks. "We try to highlight to the children that food banks are important all year round," adds Neasom. "However, it's difficult for schools because there are so many different charities that need our help and support."

According to Eastleigh Basics Bank, local schools provide the most support every year around the harvest period. They receive around 8,000-10,000 individual units of food from school and church harvest festivals, which are essential before the bank's busy winter period. "People assume that the school holidays are our busiest time because children aren't receiving school meals. However, when it is colder people have to spend their money on other things like heating bills," says Dom Hooley. "The colder the winter, the more in demand we are."

Charlene Simmonds from London has a creative way for families to donate to food banks in the winter period. "I make my children do a reverse advent calendar every Christmas," she explains. "Instead of opening a treat each day, they put an item of food in a box. Then, on Christmas Eve we take the box to our local food bank. It's a great way for the kids to help those less fortunate than them who might not be able to afford the same luxuries at Christmas-time."

However, amongst the dried pasta and tinned tomatoes it's easy to forget that food banks are in need of non-edible items too. Hayley Smith set up FlowAid in 2015, a campaign for free sanitary products for homeless women. Every month, FlowAid contacts food banks that are particularly short of sanitary products and donates a large box of them. "FlowAid opened my eyes to what was needed in food banks and the lack of sanitary donations," says Smith. "It is so important to donate these products because they're the last things people think of. They're so expensive and difficult to get hold of if you can't afford them."

Those in need

Single-mother Vicky Charles turned to her local food bank for help whilst on maternity leave from work. "There was a

"I had to choose between being homeless or going hungry"

delay with my benefit which meant I had no money," she explains. "The coordinator of my local Home Start called me to see how I was getting on and eventually got it out of me that I had no money for food. She offered to send a charity around with a food parcel." Like many others who have struggled financially, Charles initially refused help, believing that food banks were for people who "really needed them". However, when her Home Start coordinator asked her what she was having for dinner that evening, she was unable to reply and finally agreed to the food parcel. It also contained nappies and baby wipes which she found particularly useful. "I do think people are reluctant to use food banks," adds Charles. "There seems to be a perception that people who use food banks are all feckless idiots who have spent their benefits on flat screen TVs and alcohol, knowing that a food bank will pick up the slack. The reality is that most of the people using food banks don't want to use them."

Single-mothers like Vicky are frequent users of food banks, but single men are thought to rely on them most, contributing to 39 per cent of food bank users.³ Ian Burns felt helpless after being made redundant two years ago. "At first I managed to get by on a lower income," he says. "But then I started running low on money and had no one else to rely on. I had to choose between being homeless or going hungry." Burns stopped going out with friends because he feared they would find out about his situation. "I hadn't been down the pub in weeks so a mate came round to see what was wrong," he says. "When he saw my empty cupboards I decided it was time to swallow my pride and admit that I needed help. The food parcel turned out to be a great support until I could manage financially again."

As my day at the food bank draws to an end, I understand what my seven-year-old self could not comprehend. Anybody can find themselves in a period of financial difficulty, no person should go hungry and most importantly; there is no shame in using a food bank.

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For nearly three decades, the American scientist Ancel Keys spent half of each year in Pioppi, Italy — considered to be the birthplace of the Mediterranean diet. Dr Aseem Malhotra, a cardiologist, low-carbohydrate diet advocate, and straight-talking health campaigner, visited this picturesque town to film a documentary and research his book *The Pioppi Diet*. **Louise Wates** found out why

The Mediterranean diet is synonymous with good health; so much so that you may have seen those adverts for butter replacement olive oil spreads depicting active, saucy, pensioners in Mediterranean-style backdrops, who are all active and saucy because of their diet. The evidence is there, too; a five-year study, published in 2013 and funded by the Spanish government, found that people who followed a Mediterranean diet supplemented with either extra-virgin olive oil or mixed nuts were around 30 per cent less likely to have had a heart attack or stroke, or to have died from one.

It is this very study that the NHS cites as it advises making our diet more “Mediterranean style” by eating “plenty of starchy foods, such as bread and pasta”; plenty of fruit and vegetables; some fish; less meat; and choosing products made from vegetable and plant oils, such as olive oil.¹ But cardiologist Dr Aseem Malhotra doesn’t entirely agree.

In 2017, Malhotra’s book, *The Pioppi Diet. A 21-Day Lifestyle Plan*, written with film maker Donal O’Neill, was published by Penguin. And apart from proposing

its own Mediterranean-style diet and lifestyle plan, it also unpicked some of the entrenched assumptions about the Mediterranean diet, and chronicled how a complete lifestyle incorporating diet, movement, and social interaction had morphed into the low-fat, starchy-carbohydrate recommendations that have dominated health guidelines for the last four decades.

Unpicking conventions

There are many aspects of the Mediterranean diet that *The Pioppi Diet* picks apart, including the scientific assumptions upon which it is based,

...it is such Anglo-American tweaks to the original diet, he believes, that are helping to drive the obesity crisis and cause inflammation

but starchy carbohydrates are one of Malhotra’s biggest bugbears.

“In Pioppi, pasta was always a starter,” he says. “From all the Italian people I have spoken to, in the traditional Italian diet, pasta was never a main course.” Yet it is such Anglo-American tweaks to the original diet, he believes, that are helping to drive the obesity crisis and cause inflammation, which underlies many diseases.

Malhotra explains that while death rates from heart disease in the USA and UK were peaking in the ‘50s and ‘60s, several Mediterranean regions appeared to have very low rates; around the same time that Ancel Keys, a prominent scientist, was working on his Seven Countries study.

“[Keys] spent six months a year for almost 30 years of his life living in Pioppi because he loved the place,” says Malhotra. He adds that Keys also befriended many of Pioppi’s residents (some of whom Malhotra met) and conducted a lot of his research from there.

Keys’ research led to the belief that cholesterol was the main driver for

heart disease. The rest is history. Public health campaigns focused on lowering cholesterol; primarily through reducing consumption of fat, particularly saturated fat. This was because Keys' observations had associated high cholesterol with diet and heart disease.

"It was only an observation at the time," says Malhotra. "It's very difficult in nutritional science to prove cause and effect because there are so many confounding factors. The only way to do that is to have lots of very high quality observational studies that show such strong correlations — with no evidence to the contrary."

In *The Pioppi Diet*, Malhotra points out that one major confounding factor that Keys did not consider, was smoking. "The biggest decline in death rates from heart disease happened with the reduction in smoking, but obviously they were not aware of that in Ancel Keys' time. Also, we didn't know about trans fats and how harmful they were."

He believes it is "nonsense" to suggest that heart disease may have lowered because of a reduction in saturated fat consumption. "The totality of evidence shows us that's not the case." He adds that whilst Keys influenced dietary guidelines in the USA in 1977 and the UK in 1983, "which was to say we should get less than 30 per cent of our calories from fat and less than 10 per cent from saturated fat" we began eating more refined carbohydrates and sugar instead.

"People were thinking low fat, less cholesterol, less heart disease." Yet, he says, studies have shown that reducing fat intake and lowering cholesterol has "no benefit in preventing death, stroke, heart attack, anything of any importance".

Inflammation and disease

As a medical student, Malhotra received no nutritional or dietary training; what he has learnt he has had to find out for himself — studying the science that nutritional therapists cover as a matter of course.

"Most doctors' nutritional understanding comes from TV and magazines," he says. "Most doctors, when asked, want more training because they think it's important — because the biggest challenge in modern healthcare is dealing with lifestyle-related disease. What's driven that has been bad food, predominantly, and so the solutions are going to be through food."

Because of this, whilst he sees the importance of specialists such as nutritional therapists and dieticians, he



Dr Aseem Malhotra

"What we do know... is that there are foods that are clearly shown to have some anti-inflammatory properties. If you look at the data, bread and pasta don't have any of that"

believes GPs should have some basic nutritional education to be able to deal with general diet-related problems.

"What we do know... is that there are foods that are clearly shown to have some anti-inflammatory properties. If you look at the data, bread and pasta don't have any of that." Any likely benefit to the Mediterranean diet, he says, comes from "anti-inflammatory foods... lots of vegetables — non-starchy, ideally — oily fish, omega-3s, the nuts, the olive oil".

Whilst the concept of inflammation underlying disease is still recent in the public consciousness, Malhotra is not the only doctor to describe it as being associated with heart disease. "When you look at what causes heart disease, it's not high cholesterol as such. It's an inflammatory condition mixed in with insulin resistance, which is basically another way of saying pre-diabetes in some respects."

Insulin resistance, he says, is responsible for "50 to 70 per cent" of people with high blood pressure, and is linked to heart attack, cancer and dementia. "So, insulin resistance is what the focus should be. When you look at what are the type of foods that are most likely to contribute to insulin resistance, it's all the refined carbs and sugar — therefore, you can't say that the Mediterranean diet's benefits are because of lots of starchy carbohydrates,

it's going to be the other stuff."

Yet doctors around the world have been criticised for advocating a low-carbohydrate diet. In Australia, Dr Gary Fettke, an orthopaedic surgeon — about whom Malhotra has spoken publicly — was reprimanded by the Australian medical watchdog AHPRA for recommending a low-carbohydrate diet. Fettke, a surgeon whose work had included removing limbs from diabetic patients, had become a firm advocate of cutting down on sugars, especially the refined variety, to reverse type 2 diabetes. And here in the UK, Dr Rangan Chatterjee's recommendation of a low-carbohydrate diet to reverse a case of type 2 diabetes on the BBC programme *Doctor in the House* caused the British Dietetic Association to issue a press release criticising his advice. But criticism doesn't really worry Malhotra and he says he does "walk the walk". He chooses to avoid refined sugar and carbohydrates such as bread, rice, and potatoes. In his and O'Neill's documentary *The Big Fat Fix*, partly filmed in Pioppi, he is seen — albeit seemingly reluctantly — biting into a cream-filled pastry, and being served a dish with thinly-sliced potatoes, but these are not foods that he seeks out. "I used to be a massive carb-loader, loads of sugar you wouldn't believe."

Being canny with carbs

Despite this, however, and while being known for saying fat is our "friend", he doesn't say everyone should cut out carbs completely.

"I think it depends where you're starting from and what your current health status is," he says. "If you are not prediabetic... no family history of type 2 diabetes, or even heart disease, then providing you're not eating processed food, lots of sugar, then having a little bit of pasta is not going to be a problem."

In Pioppi, he says, when Keys lived there, bread was not eaten in large quantities. "We found bread was eaten when there was an opportunity to make bread at home — usually involved the mum taking 48 hours making and fermenting it [like a sourdough bread], so it had a much lower glycaemic index, and the pasta was always a starter.

"The traditional Italian diet, certainly in Pioppi, sugar was rare and dessert was eaten only on Sundays, pizza once or twice a month, and the bread was a different type of bread. Red meat was expensive so wasn't eaten that often, and that's fine."

What Malhotra also discovered in Pioppi was that to the town's residents,

INTERVIEW

the word “diet” did not just mean food: it meant lifestyle. During Keys’ time, the people of Pioppi were physically active, had a strong community, and made time to relax. Transporting those factors to busy, isolating cities is more of a challenge, but what he emphasises in the book is their importance to health.

Health before weight

“For me, as a doctor, it’s about health first and foremost. Weight-loss, or not gaining weight, is a side effect.”

Malhotra believes that the public health focus on weight has come about because of the health problems associated with obesity and an assumption that solving weight problems will solve health problems. “But the other thing that is missed often is that there is no such thing as a healthy weight,” he says. “That is complete and total unscientific nonsense... about a third of type 2s have a normal BMI, and about 40 per cent of people who develop what we call metabolic syndrome, which is what is causing the biggest demand on our healthcare resources, have a normal BMI.” In other words, it is possible to be a so-called ‘healthy’ weight but have high blood pressure or insulin resistance.

So for Malhotra, focusing on health should come before weight. “If you concentrate on weight, everyone will do what they can to calorie restrict without focusing on, well, what are you actually eating? There’s a whole processed food market that’s developed around low-fat foods, which is loaded with sugar and all sorts of junk that people buy [because of] the marketing and not the nutritional value.”

He’s not a fan of artificial sweeteners either and compares them to methadone. “Methadone for heroin addicts is great but most people don’t touch it.

“Part of quitting sugar means de-sweetening your sweet tooth. You’re still going to crave sweet things if you have artificial sweeteners. There [also] seems to be emerging evidence — and certainly it seems for me, anecdotally, and other people I speak to — that it seems to be an appetite stimulant.

“You can tell people to eat less, you can’t tell them to stop feeling hungry. So, when people approach their food they should think: ‘how is this food going to help my appetite, my satiation as well as nutrition?’. I’m not against the occasional treat but make it the occasional treat.”

Malhotra wants people to be encouraged to think about the effects of what they eat on their long-term health. However, he acknowledges that *The*

What doesn’t help is when news reports of research saying to include fat in the diet are accompanied by images of a burger and chips, he says

Pioppi Diet may not appeal to everyone who might benefit from its advice. But that doesn’t worry him.

“I would rather this book sells 10,000 copies and influence policy and help [people] than sells a million and that not happen.

“For me the priority is population health and policy change.” For that, he says, legislation such as the tax on sugary drinks is needed. “Because the education is going to be ineffective when the food environment is working against you.”

Obesogenic environment

Malhotra believes it’s becoming almost impossible to avoid sugar and processed foods. “We are using our hospitals as branding opportunities for junk foods — in hospitals, there are contracts that deliver sugary drinks, crisps, chocolates to people who are bed bound.

“So the important thing that’s going to have the biggest impact on population health is when we improve the food environment to help people make healthier choices.”

He compares today’s food industry with the tobacco lobby which stalled anti-smoking legislation for decades, saying that smoking only dropped off after legislation “but 50 years from when the first links between lung cancer and smoking were published... because big tobacco was very powerful and adopted a strategy of denial, buying the loyalties of scientists, confusing the public”.

Because of this, he says nutritional science needs to be transparently independent of the food industry, and for there to be a public enquiry into how advice is determined and how rigorous and independent the science is.

The media have their part to play, too. What doesn’t help, he says, is when news reports of research saying to include fat in the diet are accompanied by images of a burger and chips. “Refined carbohydrates in the bun, processed meat, vegetable oil — cooked, refined carbohydrate. It’s exactly the opposite of what we’re promoting.”

Belief and blame

Campaigning and writing now take up a lot of Malhotra’s time. *The Pioppi Diet* was mentioned in Parliament, he says, and he’s happy about that. He’s also hopeful that the tax on sugary drinks will lead to more change in public policy.

“For such a long time, people believed that their weight issue was because of a lack of exercise. The science is very clear — exercise is great for health, yes. But when it comes to [weight-loss] all this was being pushed through by the food industry for obvious reasons — you can have our kind of product and if you burn it off it’s fine.”

Despite obesity-related diseases crippling the NHS, he doesn’t think people who are obese should be blamed. “People who fat shame should be ashamed themselves,” he says.

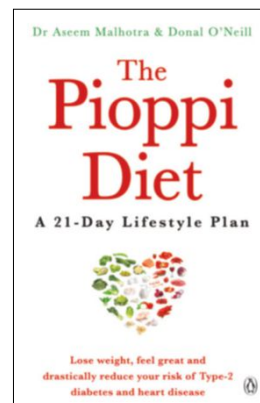
“We all exercise personal responsibility and individual choice. Two important components of personal responsibility are having the right knowledge and information, and having choice. But the food environment and the advice mean we have neither. The information is corrupted, and we have less choice. You go to some deprived areas of London it’s like a fresh food desert.

“We can’t blame people if they only have access to processed food and nothing else.”

But for the future, he doesn’t see the answer in the food industry. “They’re not there to look after your health at all, they’re there to sell food.”

Visit Dr Aseem Malhotra’s blog at:

<http://doctoraseem.com>



The Pioppi Diet by Dr Aseem Malhotra and Donal O’Neill is published by Penguin.

Reference:

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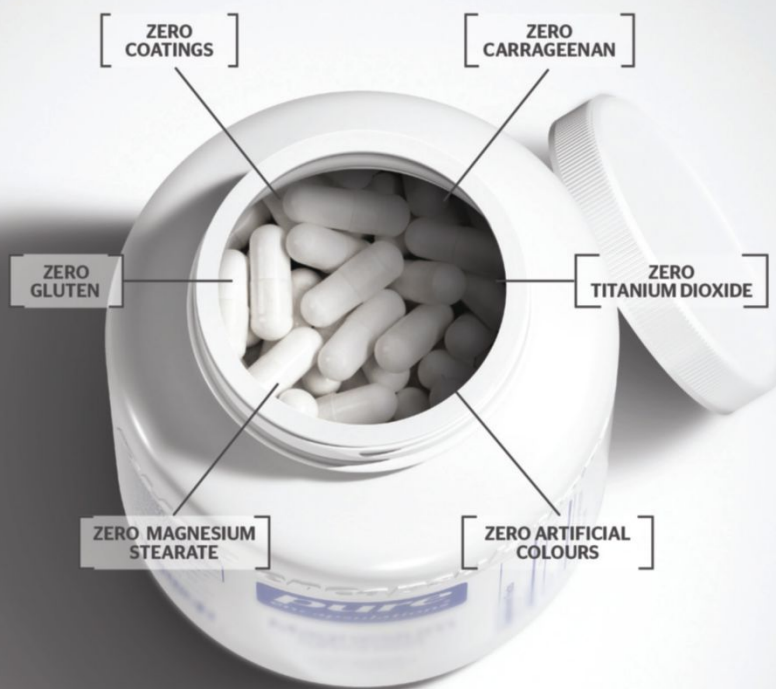
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ON YOUR PLATE

We looked for inexpensive, simple, and warming dishes to keep us satisfied this winter, and think that these recipes from *The Flexible Vegetarian* by Jo Pratt fit the bill! Loaded with delicious ideas, Jo's book offers solutions to keep both vegetarians and meat-eaters happy

Published by Frances Lincoln (£20)
Photography by Susan Bell
ISBN: 978-0711239043



CAULIFLOWER CREAM CHEESE SOUP WITH SWEET ROASTED ONIONS

Jo says: "This is a contender for my favourite recipe in the book — just looking at it makes me want to polish off the whole bowl. It's mellow and cheesy and so lovely eaten on its own, but the meltingly soft, sticky, sweet roast onions piled in the middle really make it something super special. It's very difficult to stop at just one bowl, which is why I've made the recipe big enough for eight portions."

TIME TAKEN 1 HOUR / **SERVES** 8

INGREDIENTS

- 50 g/2 oz butter
- 1 onion, chopped
- 2 cloves garlic, peeled and roughly chopped
- 1 bay leaf
- 1 large cauliflower, broken into small florets (you need about 800 g/1 lb 12 oz florets)
- 1 baking potato, peeled and chopped
- 500 ml/17 fl oz/2 cups milk
- 750 ml/26 fl oz/3 cups vegetable stock
- 300 g/10½ oz cream cheese

- 1 tsp English mustard
- Flaked sea salt and freshly ground black pepper
- 1 tbsp nigella seeds, to serve

For the onions

- 4 large onions, peeled and each cut into 8
- 3 tbsp olive oil, plus extra for serving
- 50 g/2 oz butter
- Handful thyme sprigs

METHOD

Heat the oven to 200C/400F/gas 6. Put the onion wedges in a large roasting tray. Trickle over the oil, dot with butter and scatter around the thyme sprigs. Bake in the oven for 30–45 minutes until the onions are golden and sticky, turning and basting in the butter a few times.

To make the soup, melt the butter in a large saucepan. Add the onion and cook until it is softened but not coloured.

Stir in the garlic, bay leaf, cauliflower and potato. Reduce the heat, cover with a lid and leave to cook for 15 minutes, stirring

occasionally. Make sure the vegetables don't brown, and if they are sticking add a splash of water to the pan. Remove the lid and pour in the milk and the stock. Simmer for 15 minutes, or until the cauliflower and potato are tender and beginning to break up.

Put the cream cheese in a bowl with the mustard and beat with a wooden spoon to give you a whipped cream consistency. Remove the soup from the heat and take out the bay leaf. Stir in around two thirds of the cream cheese and mustard.

Cool slightly and then blitz in a food processor or blender until velvety smooth. You'll probably have to do this in two batches. Season to taste with salt and freshly ground black pepper.

Serve the soup hot with a dollop of the whipped cream cheese, some sweet sticky onions piled in the middle, a sprinkle of nigella seeds and a drizzle of olive oil.

Flexible

"Add 75 g/2½ oz diced pancetta to the onions halfway through their cooking time and serve both on top of the finished soup."

PANEER AND TURMERIC CORNCAKES WITH ROASTED MUSHROOMS, TOMATO, AND POACHED EGGS

Jo says: "A colourful dish that will wake up your taste buds. The mushrooms and tomatoes are roasted until juicy and tender — it's the corncakes that give the big hit of spice. Turmeric, ginger, cumin, fresh coriander and spring onion are all combined with crumbly paneer cheese and sweetcorn to make these corncakes the star of the show."

TIME TAKEN 30 MIN / **SERVES** 4

INGREDIENTS

- 4 large flat or portobello mushrooms
- 4 ripe tomatoes, halved
- Olive oil
- 225 g/8 oz paneer cheese, grated
- 150 g/5 oz sweetcorn
- 4 tbsp plain (all purpose) flour
- 2 spring onions (scallions), finely chopped
- 1 cm/½ inch piece ginger, peeled and grated
- 2 tsp ground turmeric
- ½ tsp ground cumin
- Small bunch coriander (cilantro), roughly chopped

- 6 eggs
- 2 tbsp white wine or malt vinegar
- Flaked sea salt and freshly ground black pepper

METHOD

Heat the oven to 200C/400F/gas 6. Sit the mushrooms and tomato halves in a roasting tray.

Drizzle fairly generously with olive oil and season with salt and pepper. Put in the oven to roast for around 20 minutes until the mushrooms are golden and tender, turning the mushrooms over halfway through.

Put the grated paneer, sweetcorn, flour, spring onions, ginger, turmeric, cumin, coriander, 1 tsp of salt, and a really generous twist of black pepper in a bowl. Lightly beat together two of the eggs and add to the bowl. Mix everything together really well. Using wet hands, divide the mixture into four and shape into thick round cakes.

Heat a medium-large frying pan over a medium heat with enough olive oil to coat the base. Add the corn cakes, and cook for around 3 minutes each side, until golden and

firm.

While the corncakes are cooking, bring a pan of water to a simmer.

Add the vinegar, then break in the remaining four eggs. Simmer for 3 minutes to poach the eggs.

Place the corncakes on plates, top with a roasted mushroom, tomatoes, and finish with a poached egg each. Add a twist of pepper and a pinch of salt, and enjoy.

Flexible

"There are a few ways you can be flexible with this recipe. Firstly, you can turn this into even more of an Anglo-Indian brunch by serving fried bacon or sausages on the side.

You could also fry some sliced black pudding to serve with the corncakes. Or to make the corncakes themselves a bit different, add 75 g/2½ oz of thinly-sliced ham or pastrami into the mix before shaping and cooking."

Optimum Nutrition tip: If you are not used to the taste of turmeric you may find it a bit bitter, so try using ¼ tsp the first time you make this.





COURGETTE FRITTI WITH GOAT'S CHEESE AND TRUFFLE HONEY

Jo says: "I got the inspiration for these from one of my favourite restaurants in London called Salt Yard, which serves Spanish- and Italian-style tapas. I just love the combination of lightly battered crisp courgette dipped in creamy goat's cheese and generously drizzled in honey flavoured with truffle oil. I'm pretty sure you'll love them too."

TIME TAKEN 40 MIN / **SERVES** 4

INGREDIENTS

- 150 g/5½ oz plain (all purpose) flour
- 3 tbsp olive oil
- 200 ml/7 fl oz/scant 1 cup water
- 150 g/5½ oz soft goat's cheese
- 50 g/1¾ oz cream cheese
- 1 tsp fresh thyme leaves, roughly chopped
- 2 tbsp runny honey
- 2 tsp truffle oil
- 2 egg whites
- 4 medium courgettes (zucchini)
- Sunflower oil, for deep frying
- Sea salt and black pepper

METHOD

Put the flour in a mixing bowl and pour in 2 tbsp of olive oil plus a pinch of salt. Whisk in the water until you have a batter that is the consistency of double cream.

Cover the batter and put it in the fridge to rest while you prepare everything else.

Beat together the goat's cheese, cream cheese, thyme leaves and 1 tbsp of olive oil with an electric whisk until light and airy. Add a pinch of salt if needed and keep it chilled until you are ready to serve.

To make the truffle honey, simply mix together the honey and truffle oil. Have a taste, adding more oil if you prefer a stronger truffle flavour.

Cut the courgettes into 1 cm/½ inch thick slices or chip shapes. Whisk the egg whites until they are starting to hold their shape, then fold into the rested batter mix. Heat a pan or a deep fat fryer no more than one-third

full of oil to 180C/350F. If you don't have a thermometer, you'll know it's hot enough when a small piece of bread dropped in becomes golden in 30 seconds. Working in batches, dip the courgette pieces into the batter, allowing the excess to drip back into the bowl, then fry in the hot oil for 2-3 minutes until lightly golden. Drain the courgette fritti on kitchen paper before dividing between plates. Add a spoon of the whipped goat's cheese and finish with a generous drizzle of the truffle honey and a twist of black pepper.

Flexible

"As well as courgette fritti, you can make sardine fritti. Dip cleaned and deheaded fresh sardine fillets into the batter and deep fry in the hot oil for 2-3 minutes until golden."

Optimum Nutrition tip: Try balsamic vinegar if you don't have honey and oil to hand.

SHAKSHUKA

Jo says: "Shakshuka, a classic Middle Eastern breakfast dish, is a go-to recipe that works well for any meal of the day or night. It's quick, simple, uses everyday ingredients, and it's really easy to scale up or down in quantity. The key to the ultimate shakshuka is to avoid overcooking the eggs. You want the whites to be just set and the yolks to remain runny. Keep the pan on a low heat and cover with a lid once you add the eggs, then make sure you leave it to rest for a couple of minutes before spooning onto plates. Serve it with some crusty bread or charred flatbread to mop up all of the runny yolk and spicy tomato juices."

TIME TAKEN 1 HOUR / **SERVES** 4

INGREDIENTS

- 1 tbsp olive oil
- 1 onion, finely sliced
- 1 green (bell) pepper, diced
- 1 red (bell) pepper, diced
- 4 cloves garlic, peeled and crushed
- 2 tsp paprika
- ½ tsp cumin seeds

- 2 tsp harissa paste
- 2 x 400 g/14 oz tins chopped tomatoes
- 1 tbsp lemon juice
- 2 tsp caster sugar
- 4–8 eggs, depending on how hungry you are
- Small bunch coriander (cilantro), roughly chopped
- 100 g/3½ oz crumbled feta or labneh, optional
- Flaked sea salt and freshly ground black pepper

METHOD

Heat the olive oil in a large lidded frying pan over a medium heat and add the onion. Cook gently until golden, then add the diced peppers. Fry for about 5 minutes until they are softened, then stir in the garlic, paprika and cumin. Cook for a couple of minutes to release their flavour and aroma.

Stir in the harissa, chopped tomatoes, lemon juice and sugar. Bring to a simmer and gently cook for about 30 minutes until the sauce has thickened. Have a taste for

seasoning and adjust if necessary.

Make 4–8 (depending on how many eggs you are using) craters in the sauce and break in the eggs. Season them lightly, then turn the heat right down, as low as possible.

Cover with a lid and cook for about 5–6 minutes until the egg whites are only just set but the yolks are still nice and soft. You may need a little longer if you are doing two eggs per person. Remove from the heat, keeping the lid on and let it sit for a couple of minutes for the whites to cook a little more. Scatter with coriander, and some feta or labneh if you want an extra savoury boost, and enjoy.

Flexible

"It's not a traditional ingredient to use in shakshuka, but adding some diced chorizo in with the onion is really good. Not only does it give a lovely smoky flavour, but it enriches the sauce with its vibrant red oil."

Optimum Nutrition tip: Treat sugar as optional as this should work unsweetened.



MAKING A 'MAGICAL' ELIXIR



The Berlin winter has been hitting **Hannah Robinson** hard, so she's started fighting back with cold-busting homemade herbal teas and hot toddies

My apartment in Berlin's Friedrichshain is all old-school charm. High ceilings and giant windows let in plenty of light — but also some brutal drafts, while my retro coal fireplace keeps the place only intermittently warm. Since there is no quicker route to thawing out than getting your hands around a mug of something hot, I've opened myself up to a world of homemade teas and hot toddies that make me almost happy about the plunging temperatures.

The classic hot toddy has its restorative reputation for good reasons. According to online chatter (we couldn't find the research to back it up), hot water and whiskey both act as decongestants; dilating blood vessels and allowing the mucus membranes to better deal with the infection. Lemon also adds a vitamin C boost, while the squeeze of soothing honey can ease scratchy throats. Taking the time to make one is also a powerful ritual in self-care, one that I presume sends signals to your lurgy that it's high time to get going.

I prefer to start with a big pot, lightly toasting dry spices (nutmeg, cloves, cardamom and cinnamon), before adding water and lemons. Because of their warming kick (and use in traditional medicine), grated fresh ginger and turmeric are two of my favourite additions. Just throw in a bag of your preferred herbal tea and let your elixir simmer for about 10-20 minutes, before serving with the sweetener of your choice — if required.

Then there's the optional tipple. Whiskey, brandy, and rum are perfect for the classicists, though if you're feeling experimental sambuca, tequila or vodka work nicely. Bourbon is a dream in a milky hot toddy — but for this, lose the lemon and add in vanilla, a chai tea bag, and your preferred milk. Rum is particularly delicious when you swap out the water for pear or apple juice (and as these are both high in sugar, just leave out any additional sweetener).

But go easy on the booze: while it might lull you into some restorative shut-eye, alcohol is a sleep-interrupter and a hangover isn't going to make you feel better either, so take it easy.

If you're all about kicking your cold to the curb, a little cayenne pepper can help clear those sinuses (seriously, your nose will be running faster than Usain Bolt). For a truly supercharged brew, try simmering up a knob of freshly grated ginger and turmeric with a few cloves of cold-busting garlic. If you have any tea left over, I can confirm that it also makes a delicious soup stock.

To me, a good herbal elixir is just like a good soup. There are endless variations, and you can adjust and experiment with your recipe depending on what you like and what your body needs. It's also something to make a ton of, to leave on the stove for yourself and any co-habitants to heat up at will. And once you've got a hot mug of it in your hands, in the depths of winter, it can make the worst sniffles subside and even the chilliest flat feel cosy.

BUTTER YOURSELF UP!

A friend once mentioned that as a child, she would churn little jars of butter for fun. I was instantly surprised and jealous. How was it possible for a child to churn butter and why hadn't I been told of this game? (Incidentally, my friend was from Devon and, to me, her beautiful west country accent made the activity sound even more delicious.)

So a couple of decades later, after watching a YouTube demo of butter-churning using just a plastic water bottle, I had to try. In the film, a man shook a plastic water bottle filled with cream for several minutes, drained off the butter milk, and then sliced through the bottle to release the butter. Easy!

For my churn, I found a wide-necked bottle — according to the demo, I expected to have butter within minutes. My toast was on standby... Yet after 25 minutes, my toast long forgotten, despite shaking the bottle so much and so vigorously that it felt as if my brain was rattling, all I had was very thick cream.

Disappointed, I abandoned the idea of totally handmade, so-called artisan butter; spooned the cream into a bowl, and attacked it with an electric whisk. And soon, to my delight, I had what looked like cottage cheese, whilst the kitchen and I were lightly decorated with splatters of buttermilk. (Tip: partially cover the bowl with some plastic wrap but keep it away from the mixer beaters.) After a bit more beating, there was the satisfying sight of butter blobs.

What the film didn't show but an internet search revealed, is to use very cold water to wash the butter to get rid of any buttermilk, which will go sour. I have read this can be done with a food mixer, but I used a spatula to knead the butter in the water — refreshing the water several times. Then, as I don't have wooden paddles, I used my hands to squeeze out any remaining liquid before using my hands to mix in a sprinkle of Himalayan salt.

Later, my arms still aching, I tucked into homemade soup with a slice of dense, chewy sourdough topped with MY butter, and felt immensely satisfied. And what struck me, was I felt like I really knew what butter was. And I really appreciated it, too.

Unless one has a pet cow, shop-bought butter is cheaper. But if there is any cream going to waste, I'll do again. However, whilst I do love handmade foods, I can see why someone invented the churn.

Louise Wates

SURPRISE! THE HIDDEN SUGAR IN OUR FOOD



If you want to know how much sugar you are eating, always check the label. But sugar-related claims can be confusing. We look at why we should always check the small print

Unless we make everything from scratch it is very hard to know how much sugar we are consuming. Food labelling can be confusing, too — so here are some things you may want to consider...

What counts as sugar?

Sugar is found in different guises and under different names; sucrose, cane sugar, jaggery, agave syrup, honey... to name a few, all of which contain types of sugar molecules that will break down to become glucose, a source of energy. How quickly or slowly any sugar breaks down depends upon its chemical construction; whether it is made up of mono- (one), di- (two), or poly- (many) saccharides — which crudely translates as single, two, or many sugars. Polysaccharides (such as starchy carbohydrates) will break down more slowly than a monosaccharide because the different molecules need to be broken apart first, which is why current government dietary guidelines recommend we eat plenty of starchy carbohydrates.

How much sugar should I eat?

When it comes to how much we 'should' eat, current public health policy focuses on added/free sugars; i.e. the sugar that we add to our food, such as sugar in coffee, or the sugar that manufacturers add to products that we buy. But rather than thinking that we must eat a daily amount of sugar, the guideline should be viewed as a maximum rather than a target to be met. A healthy individual does not need sugar — and the less we eat the better.

Try thinking about sugar in terms of a teaspoon (4.2 g). Current advice is that four- to six-year-olds should consume no more than 19 g (4.5 tsp) a day; seven to 10-year-olds should consume no more than 24 g (5.7 tsp) a day, and anyone aged over 11 years old should consume no more than 30 g (7 tsp) a day.¹

To put this into context, a mini (14.4 g) bag of chocolate buttons contains nearly 2 tsp of sugar (8.1 g); a can of regular cola contains more than 8 tsp of sugar (35 g); a single chocolate Hobnob about 1.5 tsp of sugar (6.2 g).*

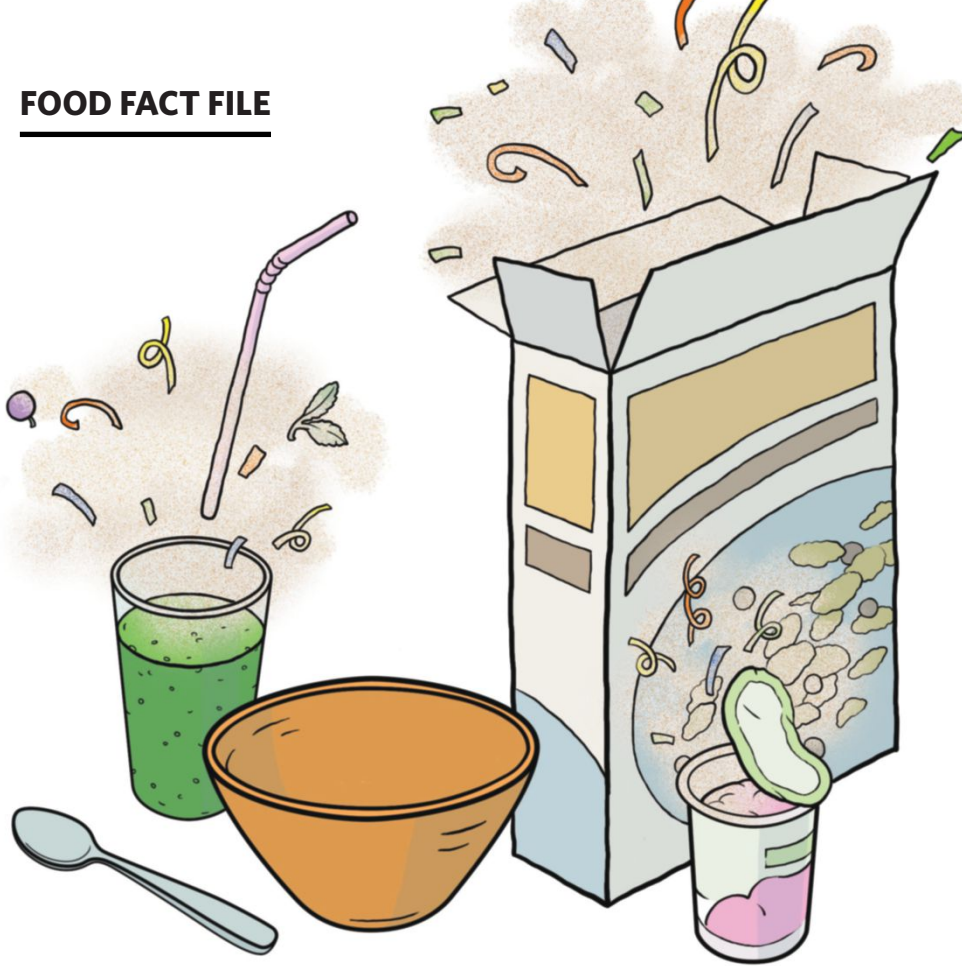
What counts as added/free sugar?

Health guidelines differentiate between 'naturally-occurring' and 'added' or 'free' sugars. Naturally-occurring sugars are those that are present in the whole food; i.e. the sugars that make fruits, vegetables and milk taste sweet. But in labelling terms, these are only considered naturally-occurring when they are part of the whole food. Once extracted, they are 'free' sugars — think of them as being released! So fruit juice, for example, is a free sugar and counts as an added sugar if used as an ingredient in another product.

What do the terms 'carbohydrate' and 'of which sugars' mean?

Carbohydrates exist in various forms. On food labels, the 'carbohydrate' figure includes all types present in the food. This will include starchy carbohydrates, which break down slowly into glucose, and any simple sugars that break down quickly.

The 'of which sugars' figure refers to all simple sugars. These can include any naturally-occurring simple sugars and any added/free sugars. But to know if there



part of the daily allowance, because it is part of the whole food.

'Low sugar'

According to EU regulations, a 'low sugar' product should contain no more than 5 g of sugar per 100 g/2.5 g per 100 ml — just over one teaspoon of sugar.² It may contain artificial sweeteners.

'Sugar-free'

EU regulations state that a sugar-free food must not contain more than 0.5 g of sugar per 100 g or 100 ml.² However, it can contain artificial sweeteners.

'With no added sugar'

According to EU regulations, these products should not contain any added mono- or disaccharides or any other food used for its sweetening properties. If sugars are naturally present in the food, the label should say the product contains naturally occurring sugars.²

However, the difficulty is knowing whether an ingredient — such as fruit juice or naturally-sweet foods such as dates — has actually been used as a sweetener. We contacted one company about their product that was labelled as containing "no added sugar" even though it contained apple juice. They told us that the apple juice was used to "enhance the overall flavour" of the product, and not as a sweetener.

No refined/processed sugar

Although it may be legal to say that a product contains no refined or processed sugar (as long as any added sugar is included in the listed ingredients), some consumers may assume that it means the product is sugar-free. Whether refined or unrefined, sugar is sugar — so always check the label.

Sweeteners

Current government advice remains that sweeteners are safe for consumption and calorie restriction. Some small studies have indicated that artificial sweeteners may increase the risk of obesity or diabetes. But until all sweeteners are tested and compared, and as most studies have been conducted on mice, it cannot be said that sweeteners are made equal, or are harmful.

In 2017, the results of a small, human study did link consumption of artificial sweeteners with increased risk of diabetes. Twenty-seven subjects were given a quantity of two different non-caloric artificial sweeteners (sucralose and acesulfame-K) or a placebo, in capsule form. At the end of the two

WATCH WORDS

Ingredients with names ending in 'ose' (e.g. dextrose, fructose) will be a form of sugar. Look out for any ingredients listed as a form of syrup, sugar, or nectar. Here are some common names to watch out for:

- Agave nectar
- apple juice
- cane sugar/unrefined cane sugar
- coconut blossom sugar
- coconut palm sugar
- corn syrup
- demerara
- dextrose
- fruit sugar
- ethyl maltol
- evaporated cane juice
- fructose
- fruit juice/concentrated fruit juice
- galactose
- glucose
- grape sugar
- honey
- maltodextrin
- maltose
- maple syrup
- molasses
- muscovado
- raw sugar
- rice syrup
- syrup
- sucrose

are any added/free sugars in a product, you have to check the list of ingredients.

So, for example, 100 ml of full fat milk contains 4.7 g of carbohydrate, but all of this will be listed as 'of which sugars'. This is because lactose, the sugar found naturally within milk, is a simple sugar that breaks down quickly. However, because it is part of the whole food, according to current guidelines, we would not include it in our daily teaspoons of added/free sugar, just as we would not include the sugar from a piece of fruit or a vegetable.

An imperfect system

However, there is a confusing flaw in this logic. If you buy a milkshake, for example, the lactose and any added/free sugar will be lumped together in one 'of which sugars' figure — and without a portable chemistry lab, it is impossible to separate the two. So in the case of our imaginary milkshake, we will not know how much of the 'of which sugars' number that we need to treat as part of our daily teaspoons.

There is the same problem with foods that are naturally high in sugar, such as dates and raisins. If they are eaten as a whole food, we do not have to include them as part of our daily teaspoons. Yet a 14 g mini snack box of raisins, usually aimed at the child's lunchbox market, contains 10.7 g of total carbohydrate, 9.9 g 'of which sugars' — just over two teaspoons of sugar (half of a small child's sugar allowance). This is still sugar, but current guidelines do not consider it to be

weeks, it was found that glucose responses were altered. However, it is worth noting that the subjects had been given on a daily basis the amount of sweetener that would be consumed with a large amount of diet drink (1.5 litres).³

Some sweeteners may also have a laxative effect, but in such cases a warning should be on the label. There is also concern that some artificial sweeteners may have a negative impact on the microbiome (gut bacteria). Researchers from the Weizmann Institute of Science in Israel found in mice that artificial sweetener consumption induces glucose intolerance by functionally altering the microbiome.⁴ However, further research is needed.

One argument for avoiding sweeteners is that they help to perpetuate a sweet tooth; and if you are trying to cut down sugar in your diet overall, it is helpful to get unused to sweet tastes.

If you don't agree with a label

In reality, it is the consumer's responsibility to read the product label.

A spokeswoman for the Chartered Trading Standards Institute said: "Our lead officer for food has advised that each item would be judged on its own merits — when dealing with complaints the guidance would be referred to and this would be used to inform the decision as to whether a food labelling breach has been committed."

Referring to our example of a product labelled as containing 'no added sugar' but that contained apple juice, she stated: "Our lead officer is of the opinion that the argument would be that consumers can read the ingredients list and see what is in it and apple juice has other nutritional properties as well as sugar... If they were trying to hide the ingredients that would be a different matter.

"If consumers feel they have been misled by a food product's labelling then they should report this to the Citizens Advice consumer helpline on 03454 040506."

Comments

Kawther Hashem, a nutritionist at the campaign group Action on Sugar, said: "Sugars are often disguised with names like 'evaporated cane juice' or 'organic raw sugar', however, they are still classified as added sugars which have no nutritional value whatsoever.

"Some tips about eating less sugar can be found on the Action on Sugar website... cutting down on white and brown sugar, honey, syrups and molasses from the breakfast table and trying to add natural sugars to food such as fresh fruit or dried fruit. Also instead of adding sugar to some recipes you can use extracts such as lemon, orange, vanilla and almond.

"At the end of the day, sugar is sugar no matter what form it comes in. So it is better to cut down all sugar including the use of sweeteners if possible and experiment with a variety of nutrient-dense alternatives."

A nutritional therapy approach, however, would advise moderation with dried fruit. Whilst it may be healthier than a sugar cube, it is still a source of sugar and can be easier to eat in large quantities than fresh fruit.

Nutritional therapist Virginia Blake said

that if something tastes sweet, then — unless it is sweetened with an artificial sweetener — it is sugar. "Sweeteners," she said, "including honey, syrups and dried fruit, should not be treated as a get out of jail free card.

"In clinic, if someone is craving sweet foods, I will look at balance of meals, particularly protein and fat. Also think about sources of magnesium — leafy greens, nuts and seeds. This is a long-term approach; it's not going to work if you are in the middle of a 4pm sugar crash, but by putting in these foods, you may find sugar cravings recede over time."

Takeaway

If you want to know how much sugar you are eating, always look at the nutritional information and don't take 'no added sugar' claims for granted. And, if need be, have your reading glasses on standby!

WHEN A SPOONFUL (OR FEW) OF SUGAR HELPS THE SNACK GO DOWN....

We looked at the nutritional information of a few popular snacks and treats to find out how many teaspoons of sugar are in a suggested serving

Serving size	Product	Of which sugars	Tsps of sugar
1 x 32 g	Cadbury Brunch Bar Chocolate Chip	12 g	2.85 tsp
1 x 32 g	Cadbury Brunch Bar Raisin	13 g	3.09 tsp
1 x 50 g	Belvita Soft Bake Chocolate Chip	10 g	2.38 tsp
1 x 21.5 g	Kellogs Special K Red Berry Cereal Bar	6.5 g	1.52 tsp
1 x 21 g	Tesco Healthy Living Chocolate & Caramel Cereal Bar	3.5 g	0.83 tsp
1 x 35 g	Go Ahead Fruity Bakes	9.9 g	2.35 tsp
1 x 35 g	Nakd Berry Delight Bar	16.6 g	3.95 tsp
1 x 25.5 g	Cadbury Fudge	16.5 g	3.92 tsp
1 x 40 g	Deliciously Ella Cacao And Almond Energy Ball	12.7 g	3.02 tsp
1 x 16.7 g	McVities Milk Chocolate Digestive	4.9 g	1.16 tsp
1 x 90 ml	Del Monte Raspberry Iced Smoothie	18 g	4.28 tsp
1 x 250 ml serving	Innocent Mango And Passion Fruit Smoothie	27 g	6.42 tsp
1 x 200 ml	Robinsons Fruit Shoot Apple Blackcurrant	15.4 g	3.66 tsp
1 x rice cake	Kallo Organic Milk Chocolate Thin Rice Cake	3 g	0.71 tsp

Note: Snacks are not direct comparisons in terms of size and nutritional content.

* Nutritional values checked against Tesco.com and manufacturer's websites where available

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EAT WELL FOR A HAPPY NEW YEAR

Friday 16 February marks the Chinese New Year and the beginning of the year of the dog. Kei Lum Chan, co-author of *China: The Cookbook*, told us about about his food inspirations and why the cookbook is only “the tip of an iceberg” for Chinese cuisine

Who is/was your biggest kitchen inspiration?

“My father, who was a gourmet, writer and newspaperman, was my inspiration initially, but when my wife and I got a chance to live and travel in China for several years, we were totally overwhelmed by the richness and diversity of the various regional cuisine across the country, and this became our major inspiration as we wanted to sample, test and write down as much as we can.”

Do you think you have been able to encapsulate all the flavours of China in one book?

“Absolutely not. What we did was showing only the tip of an iceberg. We feel that most of the regions we covered deserve a book of [their] own, a book as big as *China: The Cookbook*.

“If you go to any Chinese restaurant, you will find the number of dishes in the menus would go from 40, 50 to 100, and that represents only a very small part of food in that particular region. So, we have a long way to go.”

What home-cooked dish do you look forward to?

“Soy sauce chicken is the one we usually cook when we have guests because everyone loves it. However, we usually cook what ingredients are available, and this often brings surprises.”

In China, is there any street food that you look forward to?

“Rice noodles with beef brisket and tendons is the one we like very much, and we would go around to seek out the best ones.”

Which staples/spices do you always have at home?

“Sichuan peppercorns, star anise, five spice, cinnamon, cumin, dried chilli flakes and aged tangerine peel. All available from the nearest Chinese supermarket — which every UK city will have for their local Chinese community.”

How important to you are the health benefits of food?

“Very important. For the Chinese, the right kind of food is the same as medicine to the body, and a balanced diet helps to bring harmony to the body. This is why we insist on fresh ingredients in our cooking and our meals consist of a healthy balance of meat, vegetables and carbohydrates.”

What are your tips for buying good quality ingredients?

“I would select those ingredients that are in season locally. Out of season ingredients are usually grown elsewhere and have to be shipped long distance. This means the ingredients are no longer fresh by the time they reach the consumer’s kitchen. For meats and fish, I usually go to

the wet markets or farmer’s market rather than the supermarket as the meats and fish are usually fresher without having to go through the long distribution process in supermarkets.”

What would be your go-to dish for Chinese New Year, and why?

“The dishes vary depending on where one is in China, but fish, chicken, pork and a Buddhist vegetarian dish among others are what we usually cook at home for Chinese New Year. Fish is a must as the word for fish is the same phonetically as the word ‘excess’, so having fish means having excess for the next year. Steamed, whole chicken is the food that is usually served as offerings to one’s ancestors or to the gods. Pork, often cooked together with oysters and black moss, signifies good business and prosperity. A Buddhist vegetarian dish balances out all the meats one consumes on such an occasion.”

If you had to choose one recipe to pass on to others, what would it be?

“I am tempted to say scrambled eggs with shrimps as this was the example I used during numerous interviews and because it is easy to make. However, I would suggest ‘Pan-fried shrimps in sauce’ — page 200 in our book *China: The Cookbook* — as this is an easy to make and extremely tasty dish. It is one of the favourite dishes we do at home.”

SEA BASS WITH TOMATOES

REGION: Hong Kong
PREPARATION TIME: 15 mins
COOKING TIME: 15 mins
SERVES: 4

INGREDIENTS

- 1 tsp salt
- Pinch of ground white pepper
- 4 sea bass fillets, cleaned
- 2 large tomatoes
- 3 tbsp vegetable oil
- ¼ oz/ 10 g ginger (about ¾-inch/2 cm length piece), finely shredded
- ½ onion, thinly sliced
- 1 tbsp granulated sugar
- ½ tsp cornstarch (cornflour)
- 3 spring onions finely shredded
- Steamed rice, to serve

METHOD

Rub ½ tsp salt and white pepper over the fish and set aside for 5 mins. Pat dry with paper towels.

Score the base of the tomatoes. Bring a small saucepan of water to a boil, add the tomatoes, and heat for 1-2 mins. Immediately transfer to a bowl of ice water. When the tomatoes are cool enough to handle, peel away the skin and chop each tomato into 6 pieces.

Heat 2 tbsp oil in a wok or skillet (frying pan) over medium-high heat, add the fish, and pan-fry for 2-3 mins on each side until golden brown and cooked

through. Transfer to a plate.

Heat the remaining 1 tbsp oil in the wok over medium heat, add the ginger, and stir-fry for 1 min until fragrant. Add the onion, tomatoes, sugar and the remaining ½ tsp salt and stir-fry for 2 mins, put in the fish, cover, and cook for 2 mins over high heat. Transfer the fish to a plate.

Mix the cornstarch (cornflour) with ½ tbsp water in a small bowl and stir this mixture into the wok. Bring to a boil, stirring, for about 30 seconds to thicken the sauce. Transfer the sauce and fish to a bowl and top with the shredded scallions (spring onions). Serve with rice.

Note: Traditionally this dish is prepared with whole fish but fillets may be used instead. If using fillets, reduce the cooking time by 1-2 mins on each side.

PAN FRIED SHRIMP IN SAUCE

REGION: Hong Kong
PREPARATION TIME: 10 mins, plus 1 hour chilling time
COOKING TIME: 10 mins
SERVES: 6

INGREDIENTS

- 1 lb/450 g uncooked jumbo shrimp (king prawns), with shells

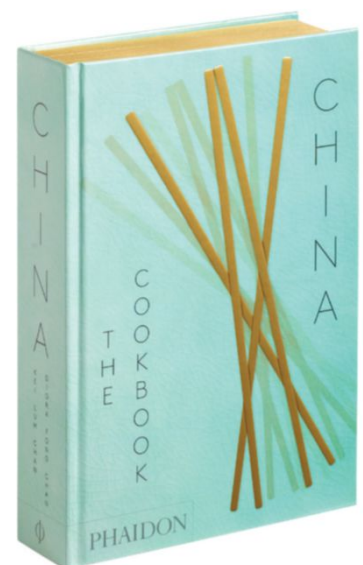
- 3 tbsp ketchup
- 1 tbsp granulated sugar
- 2 tsp Zhenjiang or balsamic vinegar
- 1 tsp light soy sauce
- ½ tsp ground white pepper
- 3 tbsp vegetable oil
- 1 tbsp cornstarch (cornflour)
- 2 shallots, chopped
- 1 tbsp chopped garlic
- ¼ tsp sesame oil
- Steamed rice to serve

METHOD

Using scissors, trim the sharp claws and the legs from the shrimp (prawns). At the back, cut open the shell from the tail toward the head, remove the vein, and then rinse and pat dry with paper towels. Cut each shrimp into 2 at the first abdominal segment. Wrap the shrimp in a clean dish towel and refrigerate for 1 hour.

Combine the ketchup, sugar, vinegar, soy sauce, and white pepper in a bowl and set aside.

Heat the vegetable oil in a wok or large skillet (frying pan). Lightly dredge the shrimp with the cornstarch (cornflour) and add them to the wok. Pan-fry over medium heat for 3-4 minutes until cooked through. Use your spatula (fish slice) to push the shrimp to the side of the wok, add the shallots and garlic to the centre of the wok, and stir-fry for another minute until fragrant. Toss well with the shrimp, add the sauce, and stir-fry for another 1-2 mins to reduce the sauce. Drizzle in the sesame oil, transfer to a serving plate, and serve with rice.



China: The Cookbook by Kei Lum Chan and Dora Fong Chan, features more than 650 recipes. Published by Phaidon, (£29.95)



Tuesday 20 March is International Day of Happiness when we are encouraged to make the world a happier place. So, how will you be celebrating? asks **Ellie Smith**

So will you be leaping out of bed with a spring in your step and a smile on your face, blasting out the Pharrell Williams hit *Happy* while skipping into work? Possibly not. For most of us, it's more likely it'll be a pretty average March Tuesday; but with all the talk about ways to enhance our happiness, it's easy to feel

bad about not feeling happy.

As a society, we seem to be obsessed with happiness — more than ever before. A quick Google search for the word yields millions of results, and there are thousands of books about the topic for sale on Amazon. Mo Gawdat, Google's chief business officer, recently created

the first equation for happiness, which requires balancing experiences and expectations, and his Channel 4 interview discussing it became the channel's most downloaded video ever.

But what is happiness? The Dalai Lama, who has spent a lifetime pondering happiness and suffering, defines it thus:

“Since our goal and the purpose of life is happiness, what is happiness? Sometimes physical suffering can even bring a deeper sense of satisfaction like with an athlete after a gruelling workout. So ‘happiness’ means mainly a sense of deep satisfaction. The object of life or our goal, then, is satisfaction.”¹

However it is defined, happiness is now seen as something we can measure. National leaders worldwide are giving it more recognition: since 2012, the UN has been producing an annual World Happiness Report, which ranks 155 countries by their happiness levels.

But has our pursuit of happiness gone a bit too far? Has the pressure of striving to be constantly content with our lives created a paradox in which, in a quest to be happy all the time, we might actually be making ourselves sad?

According to Sonja Lyubomirsky, psychology professor at the University of California, about 50 per cent of our happiness is down to our genes, while life circumstances account for just 10 per cent. So 40 per cent, she says, is up for grabs, meaning the intentional activities we can actively do to make ourselves happier.²

Yet psychologist Jamie Gruman says: “Although the current emphasis for happiness has given us a larger tool kit for cultivating joy, it may also cause us to focus on an end goal of happiness instead of enjoying life as it happens, however it happens.”

For centuries, philosophers have been trying to figure out what makes people happy. For the ancient Greeks, happiness was about doing good rather than feeling good: Aristotle defined it as the by-product of a life of virtue.

But since the American and French revolutions of the 18th century, which centred on happiness being necessary for the health of a society, the focus has shifted. With the intellectual movement of the Enlightenment came the idea that everyone in fact has a right to happiness. “Oh happiness! our being’s end and aim!” declaimed English poet Alexander Pope — and so began the idea of happiness as something we can actively seek out.

Has the pressure of striving to be constantly content... created a paradox in which... we might actually be making ourselves sad?

Yet the charge was double-edged. Not only was it now acceptable to pursue happiness, but not being happy was a problem to be avoided. Pope’s fellow Enlightenment poet John Byrom urged that “it was the best thing one could do to be always cheerful...and not suffer any sullenness”.

In the 1990s, Martin Seligman led the positive psychology movement, which focused on the study of human strengths and positive emotions. Since then, thousands of books have been published with the aim of showing people how to increase wellbeing. Self-help is now the world’s best-selling genre of books. So why aren’t we happier?

In his book *Beyond Happiness*, historian and political author Anthony Seldon writes that in the modern world we have come to define happiness as pleasure: the rush we experience when we buy a new pair of shoes. But, he says, this feeling is fleeting, and leaves us forever craving our next hit, creating an endless cycle of dissatisfaction.

The roots of this theory can be traced all the way back to Buddha, who taught that *dukkha* — which translates as suffering and pain — is caused by craving and grasping for external objects.

Psychologists today call this the hedonic treadmill theory, a concept based on the idea that humans have a set point at which they maintain their happiness, regardless of what happens in their lives. It compares happiness to the person on a treadmill who has to keep running just to stay in the same place, constantly coveting the next thing but never getting anywhere; chasing after pleasures rather than just living in the moment.

Mark Williamson, director of the non-profit movement Action for Happiness — the organisation responsible for co-ordinating the International Day of Happiness — believes we’re looking for happiness in the wrong places. “We end up chasing a shallow and commercialised happiness in the form of money, fame, success or the latest products and fashions,” he says.

“This materialistic quest ends up leaving us more stressed, anxious and unhappy. And our problems are exacerbated by a social-media culture where we tend to compare ourselves to unrealistic images of someone else’s ‘perfect life’.”

But if materialistic goods aren’t going to make us happy, what is? This is where the International Day of Happiness comes in. The day was established in June 2012 under a UN resolution as part of a global movement towards recognising the

... we have come to define happiness as pleasure: the rush we experience when we buy a new pair of shoes... this feeling is fleeting...

importance of happiness in public policy.

The proposal for the idea came from Bhutan, a country which measures prosperity not in terms of economics, but by looking at gross national happiness (GNH). Yet the day’s purpose is not just political: it is about reminding us of what is really important. On International Happiness Day in 2014, tens of thousands of people shared authentic pictures of what makes them happy as part of a campaign to reclaim happiness from the ‘commercialised happiness’ to which Williamson refers. In 2015, it focused on relationships, which is often cited as the most important factor for happiness. A study known as the Harvard Grant Study, which tracked the physical and emotional wellbeing of two populations over a 75-year period from 1938 to 2013, concluded that one thing surpasses all in terms of importance: good relationships keep us happier and healthier.³

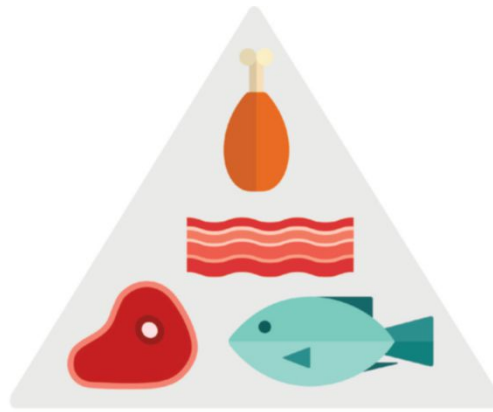
At time of writing, the theme for the 2018’s International Day of Happiness had not been revealed. But anyone signing up at actionforhappiness.org can receive downloadable pamphlets loaded with happiness tips. A spokesperson for Action for Happiness said “... it will most likely have something to [do] with encouraging people to take action to increase happiness for themselves and others”.

Anyone wishing to do so, can also make a pledge to create more happiness in the world — although (at time of writing) one pledge that said “Your Pledges Mean Nothing-Go Getshitdone F.” (sic) shows that there is probably a dose of scepticism out there, too.

www.happinessday.org
www.actionforhappiness.org
#InternationalDayofHappiness

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THE REDUCETARIAN WAY



If you want to cut down on eating animal products but don't think that being vegetarian or vegan is for you, then a reducetarian approach might be the right compromise. **Celia Jarvis** writes

In 2009, Sir Paul McCartney (music royalty and celebrity vegetarian) launched the Meat Free Monday campaign. His late wife Linda had built a thriving business out of vegetarian foods that can now be found on almost every high street, and was a prominent campaigner for vegetarianism.

In November 2017, the campaign was given a fresh re-launch with the release of a five-minute film about the impact of agriculture on the environment. Using a series of cleverly-shot moments worthy of a BBC documentary, it shows the beauty of the Earth, before ending with some statistics on the impact of meat and fish production.

Ultimately, those behind the campaign

would like to see people change to vegetarianism, but the polite and probably more realistic request is for meat-eaters to not eat animal products for just one day each week.

The campaign doesn't use the term 'reducetarian' but this is a new label being used to categorise someone like Cameron Deighton, a personal trainer and model, who has chosen to cut down on red meat without a longer-term view of vegetarianism.

Deighton doesn't hesitate when asked why he's cut down on red meat. "After eating it I'd feel sluggish and low in energy. It tasted alright, but I could feel that it wasn't doing much for my body," he says.

"Also, my family aren't keen on red meat so it wasn't hard to give it up."

Deighton may not consider himself a reducetarian but according to Brian Kateman, author of *The Reducetarian Solution*,¹ that's what he is, and one of a growing number of people who have consciously decided to eat less meat. Reducetarians aren't as rigid as vegetarians or vegans, but they are still committed to cutting down on meat, fish, and animal products.

Kateman describes the reducetarian ethos as: "Accessible, attainable and achievable. You don't need to become vegetarian or vegan — or feel like you're failing. You just reduce the amount of animal products you eat."

And, according to the Reducetarian Foundation's website www.reducetarian.org less meat and more fruits and vegetables mean reducetarians live longer, healthier, and happier lives. It's a bold claim but one that has, partly, been backed by research.

Various studies have shown a positive correlation between eating less meat and enjoying better health. In 2006, Dr Michael Orlich² of Loma Linda University, USA, studied the diet and health of over 70,000 male and female seventh-day Adventists. Six years later, he followed up with his participants and found that those who were vegetarian, vegan or semi-vegetarian were 12 per cent less likely to die from any cause, compared to those who ate meat.

However, Orlich did note that the vegetarian participants in his study chose other health supporting behaviours; they drank less alcohol, exercised more frequently and were less likely to smoke. In short, their overall lifestyle was wholesome — making it hard to attribute their longer lives completely to their vegetarian lifestyle.

In 2015,³ however, after the International Agency for the Research of Cancer (IARC) asked experts to review over 800 studies looking at the effects of eating meat on health, it was found that eating 50 g of preserved meat on a daily basis — the equivalent to two slices of bacon — increased the risk of colon cancer from six per cent to seven per cent. Preserved meat was eventually classified by the World Health Organization (WHO) as a 'group one' carcinogen — the same as tobacco and asbestos.

The review also looked at the health impact of eating unprocessed red meat, for example lamb, beef, pork or goat. Although the correlation was not as strong, the researchers found that eating

"...you need to eat a variety to get your full protein requirements which takes a little more thought"

"For me it's been a gradual process, I now eat meat two or three days per week rather than most days..."

50 g of unprocessed red meat a day was suspected to be carcinogenic to humans.

Together, these studies appear to make a compelling case for consuming less meat, although Kateman states: "Anyone in the developed world would benefit from eating more fruits, vegetables, whole grains, and legumes and fewer animal products. Of course, listen to your body and see how you feel and adjust accordingly, but the benefits have been demonstrated time and time again."

Nutritional therapist Bethany Cox, of St Albans-based practice Eat Breathe and Believe, agrees, but always urges her clients to plan for a meat replacement.

"Protein is one of the biggest healers; it supports everything, and any animal product is complete protein, it has every amino acid that the body needs," she says. "You can get protein from plant-based sources too, but they are incomplete proteins so you need to eat a variety to get your full protein requirements which takes a little more thought."

But if a reducetarian diet is beneficial for health, then it may be even better for our planet. A 2006 UN study⁴ revealed that agricultural farming is the number one cause of devastation to the environment. Raising livestock produces more greenhouse emissions than the entire worldwide transport industry — something that came to general awareness in 2014, after the Netflix film *Cowspiracy*⁵ was released.

This was followed in 2016⁶ when research revealed that reducing meat consumption created a hat-trick of benefits: improved human health, significantly decreased healthcare costs, and reduced greenhouse gasses.

Environmentally-conscious personal trainer Hannah Lewin recounts her route to becoming reducetarian.

"I was unpacking a weekly shop and sorting out packaging for recycling, and I suddenly became very aware of the amount of packaging for meat-based products versus loosely bought vegetables. This stayed with me for a little while, and I decided to explore the environmental effects of meat consumption. I was pretty shocked by what I read and the scale of the problem."

After discovering that global meat production involved the clearance of natural habitats to create pasture, and that CO2 emissions from cattle and sheep were a large contributory factor to global warming, Lewin changed her eating habits.

"For me it's been a gradual process, I now eat meat two or three days per week rather than most days, and I've had a mindset change — I couldn't go back."

REDUCETARIANISM MADE EASY

- Keep it flexible: The aim is to cut down, rather than out, on meat. If you manage only one meat free day a week it will still have a positive impact on the environment and be health supporting
- Embrace Meat Free Monday: By choosing meat free days, it's more likely to become a habit. Check out [#MeatfreeMonday](#) on Twitter and Facebook for ideas and support
- Plan vegetarian meals that will satisfy your taste buds as well as your appetite so that you aren't left craving meat
- Make use of resources: The reducetarian lifestyle is well established and there are lots of tasty and balanced recipes online reducetarian.org/recipes-all/ but if you have concerns, or want more support, find a nutritional therapist via the Optimum Nutrition Clinic at www.ion.ac.uk or www.bant.org.uk

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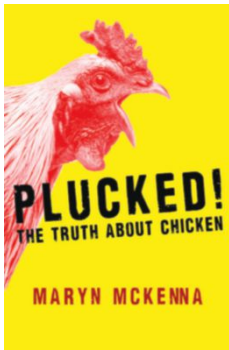
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Plucked! The Truth About Chicken

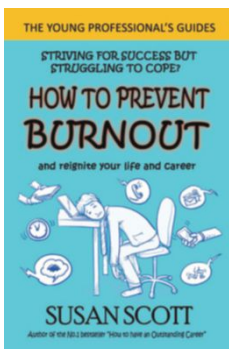
Maryn McKenna
Little Brown
ISBN: 9781408707920

Malpractices in agriculture are frequently documented but some uncertainty remains on the issues involved in industrialised farming. McKenna highlights some of these issues in *Plucked!*; a well told review of how the humble chicken rose from obscurity to become one of the most consumed meats worldwide. The relatively recent growth and profitability of chickens are analysed alongside the health consequences of these methods.

McKenna takes readers through the events that led to the chicken revolution and major players behind this change. Politics involved in the food industry, which eventually led to the misuse of antibiotics in agriculture, are showcased. And while the looming prospect of antibiotic-resistant bacteria may now be terrifying health practitioners, McKenna gives us hope for change as the movement for organic and free-range chicken gains traction.

Engaging interviews with farmers who desire a shift away from drug-dependent, genetically-bred, locked-up chickens also show a paradigm shift in the way we approach food. *Plucked!* certainly had the desired effect on me, and may lead to many thinking twice about how they source their meat; it may even motivate some to try alternative breeds of chicken.

Christian Billingham



How To Prevent Burnout And Reignite Your Life And Career

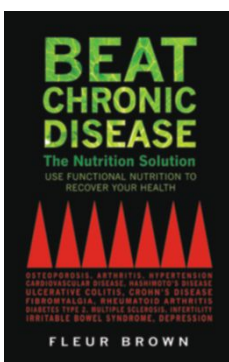
Susan Scott
Filament Publishing
ISBN: 9871912256365

One of the problems of being close to burnout — if one even realises it — is having the energy to pick up a book to try to do something about it, which is a pity. For the stressed and tired individual, there are plenty of self-defeating, self-medicating methods to get through a horrible day, including alcohol, caffeine, and comfort food, but ultimately these are just sticking plasters for a problem that is unlikely to disappear on its own.

This offering by Scott (who has an MSc in Organisational Behaviour and a diploma in nutritional therapy from our publishers, the Institute for Optimum Nutrition) takes a step-by-step approach to identify what stage of burnout the reader is at, the biological process of adrenal fatigue, potential stress triggers, and behaviours that are not helping. She then focuses on what to do about it.

There are plenty of questionnaires, which (should) encourage self-reflection; case studies to reassure you that you are not alone; and detailed, clear explanations of ways forward. Because Scott is a nutritional therapist, diet gets a great deal of attention. If you are feeling stressed, overworked, or constantly tired (or all of these) then this book may be for you. While it is aimed at 'young professionals', this shouldn't put off older burnout-ees who could do with some help, too.

Louise Wates



Beat Chronic Disease: The Nutrition Solution?

By Fleur Brown
Hammersmith Health Books
ISBN: 9781781611043

This book offers a fabulous insight into the functional nutrition approach to chronic illness, which is being adopted by a growing number of nutritional therapists (and other health practitioners) in the UK. It guides the reader through what is, essentially, a nutritional therapy consultation, using four case studies to show how diet and lifestyle modifications can help alleviate and even resolve a wide range of symptoms associated with chronic health conditions. Brown, an alumna of the Institute for Optimum Nutrition, shows how functional tests and detailed case histories are utilised to identify the underlying causes of ill-health — such as poor diet, high stress, poor digestive health, an imbalanced microbial profile, etc. She also details the nutritional protocols that she used to get her clients back to better health.

Section one focuses more on describing the concept of functional nutrition and offering case studies. Section two is more a practical guide to help readers address their own health problems — a mini-consultation of sorts — with information on how to follow an elimination diet, a list of actions to consider, and an overview of the principles of a lifelong eating plan. The book is intended for anyone suffering with chronic health concerns who wants to take control of their health. As a nutritional therapist myself, I really liked the fact that the whole process of nutritional therapy was conveyed as a journey — not a quick fix; and I think the book does an exceptional job at showing how good nutrition (with other lifestyle factors) can profoundly benefit our health.

Catherine Morgan

A winter roundup of goods and goodies

Comvita has launched two new apple cider drinking vinegars with manuka honey: Natural, and Golden Kiwifruit. Made from New Zealand apples, the apple cider vinegar is sweetened with Manuka honey. Comvita's Manuka honey products are available to purchase from www.comvita.co.uk and are stocked in Holland & Barrett, Revital, Planet Organic, Wholefoods and Boots. *£2.99 for 250ml



Our tester really liked the Recap Mason Jars Fermentation Starter Kit. She said: "I wanted to do some fermenting for ages but felt a bit nervous of it — using this made me feel a bit more confident and it made the process really easy — with everything to hand, plus instructions too. It takes up little room in the kitchen and fits in the fridge. This could be the start of something and I have even ordered myself a recipe book!" **2tech is offering our readers 10% off their entire order.** Use the code FERMMENT. Shipping is free. <https://2tech.co.uk/products/ Recap-fermentation-starter-kit> *£24.99

Innate Squares come in three flavours: Beetroot; Butternut; Spinach and Coconut. Made from veggies and spices, they are free from added sugar, and are gluten-, dairy-, grain- and soya-free. Our tasters liked them as a snack alternative and for the 'no nasties' list of ingredients. Available through Ocado or www.innatefood.co.uk *£1.99 per 28 g pack.



Winter is when we should be thinking of our vitamin D levels. Free testing is available through GPs, but if you can't get to see the doctor, the BetterYou vitamin D testing service, in collaboration with Sandwell and West Birmingham NHS Trust, is a simple way of finding out whether your levels need topping up. Our tester was given a home pack with a blood spot collection device, labels and forms. The results were received by email five days later, along with a BetterYou voucher for a vitamin D spray based on the results (as his vitamin D was below the NHS-recommended level). BetterYou says that personal data is only shared with Sandwell and West Birmingham NHS Trust. Customers will be signed up to the BetterYou newsletter, but can unsubscribe. The kit is available via: <https://betteryou.com/vitamin-d-testing-service> priced *£28.00

We road-tested Ion8 drinks bottles; 500 ml and 350 ml. Given to teenagers to carry and use, these bottles held up well, with no leaks. The manufacturer states: "Ion8 drinks bottles are made of BPA- and phthalate-free, non-toxic Tritan by Eastman. Tritan is highly resistant to odours, can be easily cleaned and is dishwasher safe." The bottles fit easily into a car cup holder, and will take a hot drink (they will not keep them hot). They come with a hand-strap and have a clip lock to prevent leakage. Available on www.amazon.co.uk priced *£7.99

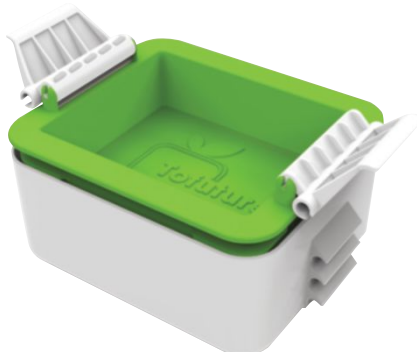


Free and Easy has launched a range of allergen-friendly cake mixes, which are free from gluten, dairy, and other allergens. For those cutting down sugar intake, the chocolate cake mix is made with xylitol. Our tasters liked the texture and found the mixes ideal for baking with children. Given a 'gold' award in the FreeFrom Food Awards 2017, the range is suitable for vegans, but can be made with egg and dairy if preferred. Available from Morrisons priced *£3.49

* Prices may vary

All reviews are based on individual opinion and do not reflect the views of ION or Optimum Nutrition

Our tester loved this! The Tofuture tofu press is a simple little gadget designed to squeeze excess liquid from tofu to improve its taste and texture. A block of tofu goes inside and an outer press is placed on top and locked into position. The tofu can then be left in the fridge until needed, while the outer container collects the liquid. Our tester also used it to squeeze whey out of a block of homemade paneer, bypassing the hassle of squeezing it out with a cheesecloth. www.tofuture.com/tofu-press-stockists and www.tofuture.com/product/tofu-press *£23.99



We met the Soul Food Collective at this year's Food Matters Live show, and found ourselves sneaking past their stall a couple of times so that we could swipe some samples. Their freeze-dried Amarena cherries coated in dark chocolate were a particular hit, although there were other delicious freeze-dried, chocolate-covered fruits too. (Note: these do contain fruit but should be viewed as a sweet treat.) Available from: <http://soulfoodcollective.co.uk> *£2.29 for 50 g.

WISHING FOR SOME GET UP AND GO



Nicola Moore looks at supporting Helen, who wants to lose a little weight and gain a lot of energy

Mum of two and part-time worker Helen would like to shift “a bit of excess weight” that she says she has struggled to get rid of since having her children several years ago. She doesn’t keep an eye on the scales but thinks she needs to lose about a stone.

She also feels tired, especially in the

morning, and would love to wake up feeling “raring to go”. She gets about six and a half to seven hours’ sleep per night, on average, and says the main problem is too many late nights. Now in her late 30s, she tries to juggle family, work and friends, and rarely takes time out for herself.

Helen’s day starts at 7am with a cup of coffee with almond milk “to get me going”. She usually has one or two coffees before midday but nothing after as it interferes with her sleep. If she doesn’t have her morning coffee (which is very rare) she will often get a headache towards the end of the day, and occasionally a migraine.

Day	Breakfast	Lunch	Dinner	Snacks/Drinks
1	Coffee with almond milk Smoothie with frozen mixed berries, frozen peas, cucumber, almond milk, chia seeds	2 waffles (made with flour, eggs, herbs, almond milk) with sliced cheese and ham	Spaghetti bolognese with courgetti A handful of blueberries and raspberries	3 pints water
2	Coconut latte Beans, egg, mushrooms	Thai green curry with rice and salad	Sweet potato with butter and tuna mayonnaise with salad leaves	3x chocolate truffles 3 pints water
3	Coffee with almond milk Smoothie with frozen mixed berries, spinach, frozen peas, cucumber, ‘superfood’ powder	4 oat cakes with sliced cheese, hummus and avocado	Take away chicken korma with rice	3 pints water 1 coffee with milk
4	Coffee with almond milk Pancakes made with flour, eggs and a mashed banana, with maple syrup	Scrambled eggs on 2 slices of toast with grated cheese and avocado	Chicken dinner with roast veg and gravy	Handful of chocolate coated nuts 3 pints water
5	Coffee with almond milk Smoothie with raspberries, frozen peas, cucumber, spinach & cacao	Leftover roast veg and chicken	Salmon with broccoli, leeks, and sweet potato chips	3 pints water

Helen’s pre-consultation food diary

Breakfast is usually a smoothie made with whatever fruit and veg she has to hand and some almond milk. She tries to avoid cow's milk as it gives her tummy ache and irritates her skin (although she does have cheese — which she loves). She also doesn't eat gluten. Sometimes she will add various 'superfood' powders to her smoothie, like chia, cacao, or various pre-prepared blends.

Lunch might be scrambled egg or cheese on toast, leftovers from the evening before, or waffles made with eggs and gluten-free flour. In summer she tends to eat more salads with chicken or a

piece of fish. She does feel like she rushes her lunch — and probably all her meals — and doesn't take the time to sit and enjoy them due to all the things she has to do. She makes a point of not eating her children's leftovers so doesn't think she is eating unconsciously.

Dinner is either with her children at 5pm or when her husband comes home around 7.30-8pm. She rarely snacks between meals, only drinks water (and wine on a night out — once or twice a month), and generally feels her meals are quite healthy. However, she does admit that her portion sizes are probably quite

big, and that she could do with eating more vegetables — plus, she doesn't manage to fit in any exercise into the day, "other than running around after the children".

Days are usually spent in a rush — juggling play dates, children's activities, the school run and work. Her evenings are usually focused on housework plus more work — she generally sits down around 9.30/10pm and feels that she then needs a couple of hours to relax, so will watch television until around 11pm — although she admits that she can end up going to bed even later.

NUTRITIONAL THERAPIST: NICOLA MOORE

It's so common for me to work with women who feel things have changed for them since having children, with weight often being top of the list in the things they would like to change. Currently, I do not know Helen's weight, and would like to make an assessment of where she is in terms of BMI and — importantly — waist-to-hip ratio. I am often as interested in seeing where the weight is sitting on the body as I am in the number on the scales. And body image confusion can sometimes mean that while a client thinks they have a lot of weight to lose, the reality is that they are actually fine. I would also like to find out more about Helen's relationship with food, how it fits into her day, and where pressure points are for her. I'd love it if we could work towards finding some time in the day for her to be able to sit down and eat her meals in a relaxed environment.

There can also be a difference between abdominal bloating and actual weight gain. I regularly hear back from clients that they feel more svelte and able to fit into old clothes again, not from focusing on weight loss, but due to the work we have done improving digestive function and managing inflammation. I would want to learn a little more about Helen's digestive health, not least because the gut microbiome appears to have links with weight management. She may suffer from bloating and pain, and is possibly constipated, for example. Working on improving digestion is always a top priority, as digesting and absorbing nutrients well would have a big influence on health, including energy levels.

It's good that Helen actively avoids snacking and picking on her children's food. Her approach to eating seems really sensible, and her food diary demonstrates

variety, and generally well-balanced meals that include some protein, some carbohydrate and some fat content too. I think she is doing an excellent job making so many meals for herself. However, she is concerned about portion size, and I think this can be a real issue for people. In general, we tend to over-consume and often don't need to eat as much as we do. I'd like to cover portion management with Helen if it proves to be relevant.

Using visual aids works well — I am not a fan of calorie counting. Instead, considering a cup size or using the hand to help clients understand what a portion is can be really helpful. A portion of protein might be something you can fit onto the palm of the hand, a cupped hand could equal the amount of carbohydrate needed, the oils or fats in a meal might equate to a thumb size, and vegetables could equal the sum of two cupped hands.

Helen wakes up feeling tired, and I think the sleep issue is an important consideration. Short sleep duration is linked with reduced levels of the hormone leptin (which decreases hunger) and higher levels of ghrelin (which increases hunger), as well as increased body mass index. I would like to explore appetite awareness with Helen; to start getting her to make more connection with feelings of hunger and fullness. Also, if she is eating quickly (as many busy people do) this may also encourage her to eat more than she needs to, so it would be a good thing for her to become aware of this.

We could look at the balance of power on each plate of food she has — including looking at her morning smoothies. I agree with Helen that she could increase vegetables, and these would help keep her full (especially if cooked with or drizzled in a fat such as olive oil) and assist

her gut microbiome to be happy and diverse — which is also great for weight management).

Her morning routine includes a coffee, which encourages release of glucose into the blood, and a homemade smoothie. While the smoothies have some great, fresh ingredients, she would benefit from adding some protein and a little fat, just to balance out the carbohydrate element — a handful of nuts, for example.

Finally, I think stress is often underestimated as a chronic problem for health. Helen's day reads as being pretty full-on, and she seems to be juggling lots of different things. It's no wonder she goes to bed late if she is working until 9.30/10pm at night. And if this work is at a computer, then I'd want to highlight the troublesome impact of blue lights from computer screens, tablets and mobiles on melatonin production. Melatonin is the hormone that works as a regulator of many of the circadian rhythms of the body, including the hormones that help us manage stress and enable us to wake up feeling well rested and bright.

Another hormone needed to help us manage stress is cortisol, but it plays other important roles in the body too, and is a crucial player in how energy is generated at the start of the day, not to mention how our body stores fat. It's likely that, in general, hormones might be playing a key role in how Helen manages her weight; from leptin and ghrelin influencing appetite, through to melatonin and cortisol impacting on fat storage and metabolism. Focusing dietary recommendations on balanced meals and mindful eating together with weaving in lifestyle recommendations that target good sleep hygiene would be a good place to start in helping Helen feel better.



INFANCY AND THE INNER ECOSYSTEM

Can how we are born really impact the diversity of our gut bacteria? **Catherine Morgan** writes

Research into the microbiome (our inner ecosystem of trillions of microscopic microorganisms and their collective genetic makeup) has revealed that the diversity and balance of microbes lurking within our guts could have long-term implications for our health — starting in infancy.

In 2016, a study published in *Nature Medicine* showed that new-born babies who had a particular pattern of gut microbes were three-times more likely to develop allergic reactions by the age of two, and asthma by the age of four.^{1,2} Babies in the highest risk group had lower levels of certain normal gut bacteria (e.g. *Bifidobacterium*, *Akkermansia* and *Faecalibacterium*) and abnormally high levels of certain fungal species (*Candida* and *Rhodotorula*).

The study is part of a growing body of evidence suggesting that developing a 'healthy' gut microbiome from birth is essential. This complex microbial system plays a key role in just about every aspect of our health, from digestion and vitamin production, to the regulation of our immune systems. A shift in microbial balance (i.e. dysbiosis) has also been associated with an increasing number of health problems, from allergies and gastrointestinal disorders³ to autoimmune diseases like multiple sclerosis⁴ and rheumatoid arthritis,⁵ and even obesity.⁶

Where does it all begin?

It has been commonly accepted that whilst in the womb, babies live in a sterile environment — receiving their first dose of bacteria from their mother whilst in the birth canal, and then through skin-to-skin contact, and breastfeeding. But there is now a view that we may receive bacteria from our mothers even before birth.^{7,8,9}

Compared with an adult's microbiota (the community of microbes), the infant gut typically has fewer species of bacteria, so less diversity, and is less stable. But it develops rapidly from birth until two to three years of age, when a more complex, stable, adult-like composition is established.

A number of factors reportedly contribute to this development.

Birth

Some studies have shown that babies born by C-section have a different microbial pattern to those born vaginally.⁹ Whilst it has been suggested that infants born vaginally have intestinal microbial content similar to the mother's vaginal and intestinal flora (i.e. *Bacteroides*, *Bifidobacterium* and *Escherichia coli*), C-section babies are instead colonised with microbes associated with skin surfaces and the hospital environment.^{10,11} A 2013 study, for example, reported lower abundances of *Escherichia-Shigella* bacteria and an absence of *Bacteroides* in babies born by C-section — although, interestingly, the findings also indicated that colonisation of the infant gut may be affected differently by elective or emergency caesarean.¹² A 2014 study also reported an association between caesarean delivery and delayed

colonisation of *Bifidobacterium* and *Bacteroides*.¹³ Despite these findings, however, more recent research, found no discernible differences in the microbiomes of babies born via vaginal or caesarean delivery at four and six weeks of age.¹⁴

Feeding patterns

Breast milk contains, amongst many other essential components, special sugars called human milk oligosaccharides (HMOs) which help feed the beneficial bacteria in the infant's gut, as well the mother's milk microbiome. A study published in *JAMA Pediatrics* reported that breastfed infants received almost 30 per cent of their gut bacteria from breast milk during the first 30 days of life, with a further 10 per cent coming from the skin on the mother's breast.¹⁵ Microbial differences have been reported in breast-fed versus formula-fed infants.^{10,12}

Antibiotic use

A 2015 review reported that: "Even short-term antibiotic treatment can significantly affect the evolution of the infant gut microbiota; in fact, the colonisation pattern of *Bifidobacterium* seems to be particularly disturbed up to eight weeks after treatment while *Proteobacteria* are increased".¹⁶ Two studies published in 2016 also found an association between antibiotic use during childbirth and dysbiosis of the infant gut microbiota; in both cases, breastfeeding modified some of these effects.^{17,18}

Supporting a healthy microbiome

So does this then mean that our microbial fate is sealed in the first years of life? No-one can predict what is going to happen at birth, or in the following months. And what if the mother's microbiome is less

Two studies... also found an association between antibiotic use during childbirth and dysbiosis of the infant gut microbiota

...eating fruit and veg, playing outside and getting dirty make sense when it comes to supporting a child's gut microbiome

than desirable to begin with? Will future generations be paying the microbial price for years to come? And what constitutes a 'healthy' microbiome anyway?

Dr Maya Shetreat-Klein, a paediatric neurologist and author of *The Dirt Cure: Growing Healthy Kids with Food Straight from Soil*, told *Optimum Nutrition*: "Certainly, there are window periods of development, such as birth, that confer specific risk or benefit for things like allergy and autoimmunity. For instance, babies who are born by C-section have a higher risk of developing asthma or coeliac disease later in childhood." But this may not be entirely due to birth. "On some level," she says, "these risks may be a result of epigenetic changes as well."

Diversity of microbiome may also be inherited. "It is very possible that less diverse flora, and the associated epigenetic risks associated with that, can absolutely be passed down through generations," she says. "Babies born by C-section, or to mothers who have been on numerous antibiotics, or who weren't breastfed, can have altered flora — and unless steps are taken to reverse this, they can eventually pass these less diverse flora to their children, and on, and on."

But the good news, she says, is that — as far as we know at this time — none

of this is set in stone. "This goes along with the idea that, like the brain, the body has the plasticity to adapt and change, depending on its environment. While a child may or may not start life from a position of microbial advantage, the possibility to become more microbially diverse is available."

Shetreat-Klein says that several studies show ways that children can restore their guts with diverse flora, including: "Eating fermented foods like sauerkraut, kefir, unsweetened yoghurt, kimchi and the like; eating plenty of prebiotic foods like onions, garlic, leeks, burdock, chicory, and banana, which nourish the gut flora; having a pet; washing dishes with a sponge rather than by dishwasher (at least occasionally!); playing outdoors, gardening, hiking in the forest and generally getting dirty; and being social with other children."

So whilst there is still much to learn about the microbiome, some experts agree that we can, to some extent, help nurture and balance the microbes within. Professor Tim Spector, doctor, scientist, and author of *The Diet Myth* told *Optimum Nutrition*: "The best way to improve a newborn's microbiome is to breast feed, avoid antibiotics and introduce diverse plants early". (Note, antibiotics are sometimes necessary, but appropriate use is key.)

There is also some evidence to suggest that probiotics (live microbes that act as temporary visitors to the gut) can help remodel our microbiome if we're recovering from antibiotic treatment, although further research is needed to better understand the mechanisms.¹⁹

Kate Delmar-Morgan, a nutritional therapist who specialises in children's

health, points to research showing that probiotic yoghurt can be effective in reducing the incidence of antibiotic-related diarrhoea in children.²⁰

However, when it comes to giving children probiotics to promote digestive health and immunity, and to prevent allergies, she says that the evidence is mixed — although there has been some suggestion to support the practice. She says that more research with standardised study designs is needed, and advises caution in giving probiotics to infants and children who are seriously ill or who have a compromised immune system.

A spokesperson from the American Gut Project, the world's largest crowd-funded microbiome project, also said that the age-old recommendations of eating fruit and veg, playing outside and getting dirty make sense when it comes to supporting a child's gut microbiome. And, well, it really does make sense: plant foods are an important source of fermentable dietary fibres that feed the beneficial bacteria in our guts, and contact with nature exposes us more to the microbial world around us. Writing in *Rewild*, a book that focuses on the microbiome, Jeff Leach, anthropologist and co-founder of the American Gut Project, states his belief that eating a greater diversity and quantity of whole plants is "the single most important dietary strategy for improving the diversity and health of your gut microbes".²¹

There are other research directions too: the benefits of early-life exercise,²² or the impact of having a pet.²³ But we are really only beginning to scratch the surface. There is perhaps one reoccurring idea, though, and that is: disease really can begin in the gut — and at birth.

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IS YOURS A WILD CHILD?

Forest schools can have benefits beyond getting the kids outdoors, writes **Catherine Morgan**

Spending a full day cooped up indoors with two energetic boys can be hard work, to say the least. They need to be exercised. They need fresh air. They need to let off steam. And they're not the only ones — especially on days when my patience and stamina have been tested.

It's not surprising, then, that the boys spend quite a lot of time running about in local parks, collecting 'treasures' from nearby woods, having adventures in the garden, or riding their bikes or scooters — all with mummy in tow, of course.

But as much as I appreciate this precious time spent outdoors playing, I am very aware of the challenges I face as the boys get older. The lure of screen-based entertainment will surely get stronger, and there will be other priorities to eat into our time — school, friends, homework... And then there's the fear; the parental fear that comes with allowing more independence in an environment that we often believe to be fraught with dangers. (I already have a hard time silencing the sometimes overly-protective warnings: "slow down", "be careful", "stop climbing", "not too high".)

Yet research tells us that if we don't encourage our children to connect with nature, and to explore it without constant direction from adults, then we are doing them a real disservice. A 2012 report from The National Trust warned that we, as a nation, and especially our children, are exhibiting the symptoms of a modern phenomenon known as 'Nature Deficit Disorder';¹ a term, coined by author and journalist Richard Louv in his 2005 book *Last Child in the Woods*, which describes the physical, mental and cognitive costs of human alienation from nature, particularly for children in their developing years.

The report added that, in addition to more obvious benefits such as better physical fitness, reduced risk of obesity, and improved mental wellbeing, there were educational benefits to learning outdoors, too. And it is for this reason that a rather different approach to education

is being championed, using the great outdoors as the classroom.

This 'forest school' concept, a '90s import from Scandinavia, is defined as "an inspirational process that offers all learners regular opportunities to achieve and develop confidence and self-esteem through hands-on learning experiences in a woodland or natural environment with trees".² Children learn through outside play, all year round, whatever the weather — all they need is season-appropriate clothing and their imaginations.

"It provides a space where classroom hierarchies do not exist," says Selina Hogarth, a forest school leader. "I have witnessed children who usually struggle in the classroom suddenly discover that they are naturally good at tying knots. The sense of achievement they feel is evident in their faces.

"Those same children will then delight in helping other children who are finding working with their hands difficult. It's a real shift in power."

"They brain-stormed, negotiated teams, tried lifting with and without gloves..."

It also encourages team work and social interaction, says Hogarth. "I witnessed a group of seven- to eight-year-olds working together to build a complicated pulley system with ropes strung over tree branches. They brain-stormed, negotiated teams, tried lifting with and without gloves and experimented with lifting different sized logs. It kept them captivated for over an hour. I was delighted to be told by one boy 'This has been the best day ever as we've not done any work at all'. If only they knew!"

There is some positive research, too. A small study carried out by researchers from the University of Loughborough

revealed that engaging in forest schools can contribute to the development of collaborative learning skills, by encouraging children to work with others on challenging outdoor activities.

"The findings show the important role that play and outdoor learning might have for children's development," says Dr Helena Pimlott-Wilson, a researcher on the project. "Particularly in terms of providing children with experiences and opportunities which take them out of the routine and pressures of the classroom; and give them the freedom to explore new and challenging environments."

There are many ways to bring nature's benefits into your child's life: nature trails, animal spotting, den building, scavenger hunts, mud painting/pies, mini-beast hunting (admittedly my least favourite activity and one which is to get a whole lot worse now the boys have magnifying glasses — Father Christmas, what were you thinking?)... the list goes on.

The Woodland Trust's website (www.woodlandtrust.org.uk) has an excellent activity section that's searchable by age range, key stage, activity type, topic and season. Making a simple bird feeder was a truly joint effort in our home: that is, I did all the work whilst Child One focused on spreading the peanut butter on his tongue instead of the intended loo roll inner. Still, I like to think he was being creative.

I want my boys to enjoy being outside, in an ever-changing playground dictated by the four seasons, to become immersed in their own adventures rather than those presented on a screen. For my part, this means taking a small step back (for now). The protective warnings will be there, of course — but hopefully not quite so loud, nor quite so frequent.

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JERUSALEM ARTICHOKEs



ROAST JERUSALEM ARTICHOKEs, SOFFRITTO AND HAZELNUTS

By Mike McEneaney

Serves: 4

INGREDIENTS

- 1 kg (2 lb 3 oz) Jerusalem artichokes
- 60 ml (2 fl oz/¼ cup) extra virgin olive oil
- ½ lemon, thinly sliced, plus
- ½ lemon, juiced
- 1 handful activated hazelnuts*
- 1 handful rocket (arugula) leaves

SOFFRITTO (MAKES 250 G/9 OZ)

- 60 ml (2 fl oz/¼ cup) extra virgin olive oil
- 1 large brown onion, chopped
- 5 garlic cloves, roughly chopped
- 4 red capsicums, roughly chopped
- 3 fresh long red chillies
- 3 purple shallots, roughly chopped
- 50 g (1¾ oz) tinned piquillo peppers
- 2 tsp caster sugar
- 2 tbsp sherry vinegar

INSTRUCTIONS

Jerusalem artichokes come in lots of odd shapes, so you may need to cook them in different ways. If they are shaped like an egg, you'll want to cut them in half. If they are the little knobby ones that look like ginger, break the nodules from each other and leave them as they are. The soffritto keeps well in the refrigerator for up to one week. It is also delicious with a fried egg for breakfast or as a dip with some nice crusty bread.

For the soffritto, warm two-thirds of the olive oil in a large frying pan over medium heat. Add the onion, garlic, capsicum, chillies and shallots and fry for about 5 minutes until golden. Keep stirring the mixture for another 5 minutes until it starts to caramelize. Add the piquillo

peppers — the temperature shock will release the caramelisation from the bottom of the pan. Add the sugar and stir until the mixture is a dark crimson. Add the vinegar to stop the cooking process. Remove the pan from the heat and add the remaining olive oil. Season to taste with two pinches of salt and set aside.

Preheat the oven to 200C (400F). Place the artichokes in a roasting tin and drizzle them with half the olive oil, tossing to coat. Add a generous sprinkling of salt and place the tin in the oven. The skin will start to blister and become crisp, while the inside will become soft and buttery. After 10 minutes, add a scattering of lemon slices to the pan.

Give the artichokes another 15–20 minutes or until (tested with a skewer) they are soft on the inside and beautifully caramelised on the outside. Remove the tin from the oven and allow the artichokes to sit for the flavours to develop.

Serve the artichokes warm from the oven or at room temperature with the soffritto, hazelnuts and the rocket, which has been tossed with the remaining olive oil and lemon juice.

*FOR ACTIVATED NUTS

- 2 cups raw hazelnuts, shelled
- 500 ml (17 fl oz/2 cups) water
- 2 tsp salt

Combine ingredients in a non-reactive (e.g. glass) container, cover/soak overnight. Preheat oven to lowest setting (50C/120F). Drain the nuts, rinse well, pat dry with a clean tea towel. Lay them on a baking tray, roast them for 24–48 hrs.

Real Food by Mike: Seasonal Wholefood Recipes for Wellbeing by Mike McEneaney (Hardie Grant, £20) Photography © Alan Benson

Possibly because they are not a common choice in our supermarkets, they are not a cheap option when compared with other tubers. However, nutritionally, they are a source of gut-friendly fibre inulin, which as a prebiotic is a good source of food for our gut bacteria.

They can be cooked much in the same way as potatoes, so slicing them before giving them a gentle coating of olive oil and mixed herbs is a great way of preparing them for roasting. They can also be sautéed or fried.

HEALTHY SOIL, HEALTHY YOU

The beginning of the year is a good time to think about the quality of the soil in our garden or allotment.

Much 'fresh' produce sold in supermarkets has been grown in soils that have been pulverised by machines and fed with synthetic chemicals. However, our own health begins with the quality of our food, and so growing our own produce from soils full of living organisms offers a variety of benefits — even in just encouraging us to get outside into the fresh air for some physical exercise.

Soils hold a store of water-insoluble nutrients, and soil organisms help the roots of plants to access these throughout the growing season. We can therefore feed plants through feeding the soil with organic matter — increasing the soil's nutrient store, its ability to store moisture, and the health and number of all the helpful soil organisms.

I have gardened on stony, clay and now silty soil. In all cases the results of applying compost mulches in autumn and early winter have been large harvests of healthy food. I am also sure that the food has plenty of healthy microbes, on the fresh leaves and roots.

Apply a mulch of organic matter to increase fertility cheaply and efficiently, enhancing natural processes. Earthworms, for example, come searching for organic matter on the surface and pull it down, which serves to maintain or create channels for air and drainage, which will prepare the soil for the planting season.

Seasonal updates available through www.charlesdowding.co.uk



TAKEN OVER BY
TECHNOLOGY?

Free to download and handy for smartphones, fitness tracking apps allow us to log and monitor foods with ease, with some doubling as exercise trackers. As the New Year resolutions kick in, **Amelia Glean** investigates the pros and cons to this kind of technology



Apps, or applications flood the market today and have become such big business that the number of mobile apps downloaded worldwide in 2016 was 149 billion — a number that is projected to more than double to approximately 353 billion by 2021.¹

With the rise of the wellness industry, there has been a significant increase in the popularity of healthcare apps.² MyFitnessPal, Pact, Loselt and CRON-O-Meter are the most high-profile examples. Typically, they are capable of logging calories burned from activity including running on the treadmill, aerobics in the pool, or doing squats in the gym, as well as everyday tasks such as cleaning the house.

And when it comes to nutrition, the majority not only track calories but also macronutrients, which are the three main food components in our diet: carbohydrates, fats and proteins. By enabling users to record and monitor this information, the technology provides a convenient and detailed breakdown of food intake, which can be tailored to suit individual goals, such as achieving an optimum body weight and composition.

Motivation in our hands

Monitoring our everyday eating habits in this way can be a useful method of keeping track of our diet. Jennifer Beecroft, a London-based nutritional therapist and founder of Bee Nutrition, says: “Using a fitness tracking app has the convenience factor and can provide an additional incentive to stay on track with a more balanced or active lifestyle.”

Furthermore, research has long indicated that self-monitoring our diet can speed up weight-loss results. A long-term study at Kaiser Permanente in Portland, Oregon revealed that participants who monitored what they ate lost twice as much weight as those who did not.³

Fitness tracking technology also takes the stress out of calorie counting. Instead of manually entering the nutritional information of a new food each time it is consumed, these apps allow the user to scan a product barcode, which will reveal a breakdown of minerals, salts,

“I realised that I was no longer eating fruits that I love, like bananas and apples, because they were much higher in carbohydrate”

carbohydrates, calories and so on.

But to find out more about what people thought of apps, we headed to a local gym. Demi Arnold started using fitness tracking apps only recently. So far so good as she says: “They have been great in helping me to become more aware of my calorie intake. It’s so easy to log everything I eat and keep track of it. I can see this being something that I manage to stick with.”

Aside from calories, fitness tracking apps may also encourage better eating habits. Jack Oughton, who also sees the benefits to the apps, believes the technology provides users with the necessary information to be more mindful about what makes up their meals. “My goal was to get more of an understanding of the macronutrients in the foods I usually ate, which is something I managed to achieve after a few months of using fitness apps,” he says.

Correspondingly, research conducted by the US National Library of Medicine, National Institutes of Health, found that fitness tracking apps can be a useful, low-cost intervention for improving diet and nutrition, and addressing obesity in the general population.⁴

But whilst Beecroft acknowledges fitness tracking technology is encouraging people to eat more mindfully and exercise more regularly, she also says it is important to recognise that these same apps have limitations — and that when tracking your diet through a fitness app, it can be hard to avoid associating health with numbers.

“Health is so much more than simply counting calories or weighing less on the scales,” she says.

“Placing emphasis upon calorie consumption alone is a concept that can negatively impact our relationship with food, if not monitored or understood properly. In this way, fitness tracking apps make it easier to perpetuate disordered eating patterns in some individuals.”

Katie Davis, another fitness app user, found that after she began to track macronutrients and calories on her smartphone, she started to develop a habit of opting for lower calorie foods over higher calorie options, even if the latter were more nutritious.

“I realised that I was no longer eating fruits that I love, like bananas and apples, because they were much higher in carbohydrate and calories than other snacks. I would choose a lightly-salted rice cake [36 calories] instead, because it was easier to fit into my macros,” she says.

Beecroft explains how, in the worst cases, overuse of wellness apps and

“One night I came home... to my brother’s leftover pizza. I... fit one slice into my daily macros, but this led me to finish the pizza”

obsessive tracking may lead to disordered eating behaviours in those with a history of food-related issues.

“The very nature of these apps can make it easier for dieting to potentially manifest into something unhealthy and be taken to extremes in susceptible individuals, such as those with a history of eating disorders or mental health issues. It is recommended that a health professional always be consulted in these circumstances,” she says.

Disordered eating may be exhibited in any number of ways, but the most common symptoms are when an individual unnecessarily restricts their food choices, which may lead to binge eating, exercising excessively, or becoming overly fixated and anxious about calorie intake.

Obsessive behaviour

For Davis, the daily tracking of precise macros and calories began to take its toll, as she began to notice the occasional urge to binge on junk foods.

“One night I came home from work to my brother’s leftover pizza. I managed to fit one slice into my daily macros, but this led me to finish the pizza and binge on everything else in the kitchen. Sometimes I would lose control and go over the top,” she says.

Beecroft says that while fitness tracking apps may not be the only cause, “anything done to excess can be harmful, and this includes using a fitness tracking app”.

More than 725,000 people in the UK are currently affected by a food-related disorder;⁵ in July last year, data revealed the number of adult men admitted to hospital with an eating disorder in 2016 rose by 70 per cent, and a 61 per cent increase was recorded for 19- to 25-year-old women.

Orthorexia, a condition that has gained media attention over the last year, is typically defined as an individual’s fixation with eating only food that they believe to be healthy, which may lead to an increasingly restrictive diet and a number of damaging health consequences.

According to Beecroft, a variety of factors are contributing to the rise of

MOVE IT

the condition, “from air-brushed photos on social media to the clean eating movement”. But she makes a point of emphasising the damaging potential of fitness tracking apps.

“Because more people are trying to achieve these impossible ideals and standards, more are developing extreme eating habits and exercise regimes, which leads to an unhealthy reliance on fitness tracking apps,” she says, leading to a risk of developing damaging health conditions, “from nutritional deficiencies or energy and mood fluctuations, to more serious issues like osteoporosis, anaemia or hormonal imbalance”.

This is something Davis experienced when tracking macros and calories, as she often made excuses to not see people for fear of a lack of control over her diet.

“I knew social occasions would involve eating or drinking. To save myself the anxiety, worry or embarrassment, I would just not go. This meant that I missed out on birthday events and special occasions.” Her experience shows that healthcare apps may not be for everyone, especially those with pre-existing food-related disorders or

a history of mental health issues.

But this is not to say that using fitness tracking technology will result in a disordered relationship with food for everyone. Ultimately, the apps aren't inherently bad or good, they are tools that can be used in different ways, with varying results and effectiveness depending on the user themselves.

For long-term health, however, Beecroft recommends a more flexible approach to dieting and “listening to our bodies own hunger signals again” instead of becoming too reliant on fitness apps. But she also acknowledges that maintenance of a healthy lifestyle requires that our goals — and methods of achieving this — are both manageable and enjoyable.

“Achieving a suitable balance which complements your individual dietary needs and activity levels should be the main focus,” says Beecroft, as well as “integrating the right types of foods to promote and maintain an optimal weight”. These may include “high-fibre vegetables, essential fats like oily fish, avocado, and quality protein sources including organic eggs and poultry”.

Encourage sport for activity into older age, study recommends

Men should be encouraged to take part in sports so that they are more likely to keep active in later years, according to the authors of a long-term tracking study published in *BMJ Open*.

Whilst it was found that men who were physically active in mid-life were more likely to continue the habit into older age, the team from University College London also found that playing sport was most likely to stand the test of time — leading to the suggestion that encouraging early and sustained participation in sports might help people to stay active.

For the British Regional Heart study, the behaviours of nearly 3,500 men were tracked for up to 20 years and were monitored after 12, 16, and 20 years.

It was discovered that although the proportion of men classified as active remained at around two thirds at each check-up, types of activity changed; e.g. the proportion of men who reported high levels of walking rose from just under 27 per cent at the start of the study to 62 per cent at the 20 year check-up. Sport remained the most stable activity, with just under half of men reporting playing sport at least occasionally.

Sport participation in mid-life predicted physical activity in old age more strongly than other types of physical activity. The odds were even greater for those who had played sports for 25 years or more — these men were nearly five times as likely to be physically active into older age.

However, the authors suggested there may be a number of reasons for this. “One possibility is that people's enjoyment of sport may be more likely to persist into old age than preferences for other types of activity,” they said.

“Sport participation in mid-life may help maintain physical function and [physical activity] self-efficacy in later life, increasing psychological and physical readiness for [physical activity] in old age.”

The benefits of sports participation could be wide-ranging, however, going beyond physical health, and offering social and emotional benefits too. Regular social interaction through a sports club can offer an important social network, particularly after retirement age.

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Link between excessive exercise and coronary risk factor in white males

A 25-year study has found that exercise may not guarantee protection against a condition known as coronary artery calcification (CAC), a risk factor for coronary artery disease, and that white males who exercise for seven hours a week may be more likely to develop the condition.

Carried out by scientists from the University of Illinois at Chicago and the Kaiser Permanente in Oakland, CA, USA, the study, which included more than 3,000 participants and was reported in the Mayo Clinic Proceedings, was designed to evaluate physical activity trajectories from young to middle age, and assess associations with the prevalence of CAC.

The researchers identified three levels of physical activity: 1, below guidelines (less than 150 minutes per week); 2, meeting guidelines (150 minutes per week); and 3, three times physical activity guidelines (450 minutes per week). But although the researchers expected to find a higher risk of CAC in individuals who exercised the least, it was found that white males in trajectory three were 27 per cent more likely to develop CAC by middle age, compared with those who exercised for less than the recommended time. No association was found for women or black males. The authors concluded that the findings warranted further exploration, especially by race, into possible biological mechanisms.

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A photograph showing a person's hands typing on a laptop keyboard in the background. In the foreground, another person's hands are resting on an open book, with one hand pointing to a specific line of text. The book has several green and yellow sticky tabs. The scene is brightly lit, suggesting a study or classroom environment.

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