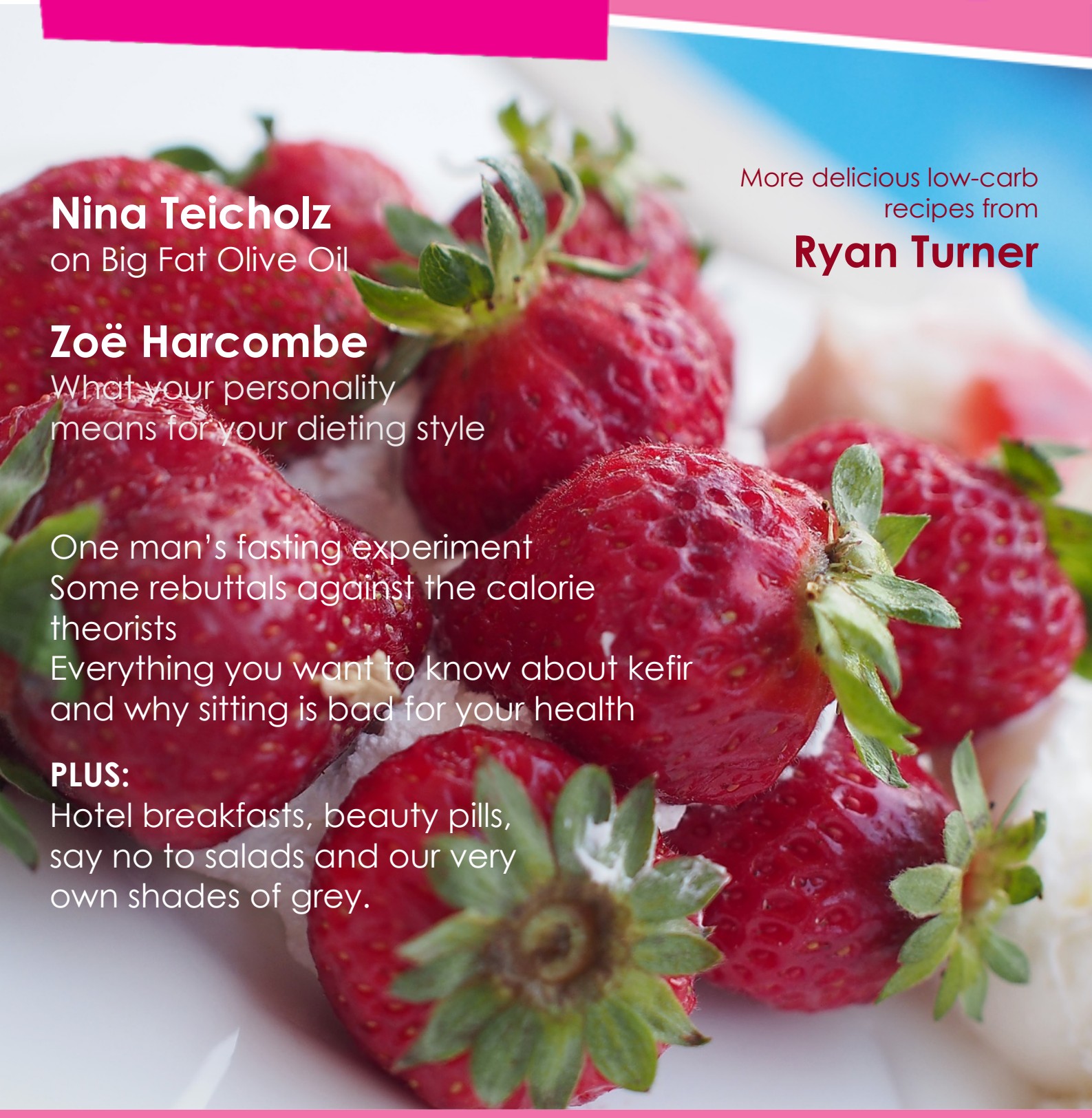
Diet & Health Today

July 2014



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Cover photo by Andy Harcombe

Diet & Health Today

Summer's here

This issue has turned out to be a bit of a bumper one, which is good news if you want to load some reading onto your tablet for your summer holidays.

On the food front, Nina Teicholz takes a look at how olive oil has become so popular and Shann Jones shares all she knows about Kefir. Clare Hargreaves will make you think about your hotel breakfast and Chris Packe tries a bit of diet and exercise.

We have regular thoughts on activity from Olly Selway and Tara Wood and Sam Feltham helps us rebut the arguments of the calorie theorists.

Add to this the usual thought provoking articles from Zoë Harcombe and Kate Jones, some great humour from John Nicholson, delicious recipes from Ryan Turner and a guest piece by beauty journalist Alice Hart-Davis and you really do have some great articles to keep your mind active.

We'd like to thank everyone who has taken the time to drop us an email with suggestions and comments. We'll be looking to see how we can expand the articles in the future and we welcome your suggestions.

If you'd like to contribute to this magazine with an article, recipe or a real-life health story, please send in your submissions to editor@dietandhealthtoday.com.

Very best wishes

Andy & Zoë Harcombe

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What your personality means for your dieting style

Zoë Harcombe

Introduction

Many of you will know that I was an HR Director in my previous life. During my time in HR I came across many different techniques collectively termed “occupational profiling”. It is useful in organisations to be able to profile people to see who brings what to a role and/or to a team. From the many systems I came across (LIFO, Herman Brain, Behavioural matrix and many more), the one I rated was Myers Briggs.

Isabel Briggs Myers and her mother Katharine Briggs took the work of Carl Jung to a new and incredibly successful dimension. Myers Briggs is the most widely used occupational profiling tool. You can meet a fellow HR person almost anywhere in the world and ask them their Myers Briggs profile and they will know it.

While Freud was working out why he wanted to sleep with his mother, Jung was doing far more useful work! Jung set about trying to understand traits of personality. Could we categorise characteristics of personality? Could we understand why people behaved in a certain way? Could we explain why some people got on better with some people than others?

Jung identified three personality dimensions:

1) How do people interact with their world?

2) How do people take in information?

3) How do people use that information?

The reason I value Myers Briggs so highly it that it is about preferences and not skills. When shown questions related to skill – people want to be one thing rather than the other (people usually want to be seen as strategic rather than detailed; a leader rather than an analyst – judgement creeps in).

Expressing a preference for one Myers Briggs dimension as opposed to another (and we’ll come to the dimensions very soon) is little different to sharing – do you prefer coffee or tea? Red wine or white wine? Skiing or beach holidays? You can like both, but you should prefer one to the other. Myers Briggs then captures the strength of preference. You might like red wine over white wine 95 to 5; but you may like skiing more than the beach 51:49. The preference and the strength both tell us so much.

The Jung Dimensions

1) The starting point for Jung was: How do people interact with their world? From this came the concept of extroversion and introversion – captured in Myers Briggs by the letters E and ‘I’ respectively. Extroversion is not to be confused with extravert – people with a preference for extraversion prefer to interact externally with the outside world – they are not necessarily the life and soul of the party. Similarly people with a preference for introversion are not necessarily quiet. They are simply more self sufficient – better on a desert island and less dependent on the outside world for their functioning and well being.

I’ll present a few headlines to give you an idea of which dimension you prefer. For some of you this will be immediately easy (this will also mean that the strength of preference that you have for E or I is clear). For others this will be a difficult call – you will have a preference for one over the other, but it may not be strong.

If you have a preference for Extraversion (E), you:	If you have a preference for Introversion (I), you:
Recharge batteries externally	Recharge batteries internally
Learn best through doing or discussing	Learn best through reflection or thinking
Tend to speak and act first, think later	Tend to think first, speak and act later
Would welcome a night out at the end of a tough day	Would welcome a night in at the end of a tough day

2) The second dimension that Jung came up with was: How do people take in information? Jung hypothesised that – whether externally or internally focused – people took in information quite differently. The ‘Sensing’ types needed to see/feel/touch/experience something before they really understood it. The ‘iNtuiting’ types seemed happy to be given concepts – indeed, as this is all about preferences – they preferred to have concepts. If something was spelled out in too much detail for these people they didn’t like it. Sensors, on the other hand, couldn’t get enough detail – they loved as much practical information as possible.

In the table that follows please note that Myers Briggs is summarised by letters so iNtuiting needed to become N, as the ‘I’ was already taken for Introversion.

Again – take a look at the two quick summaries below and see if you clearly or slightly prefer one or the other. By now you should have made a note of E or I and this will give you S or N and mark the preference e.g. E (strong); S (medium) or I (weak); N (medium) etc.

Sensing (S)	Intuiting (N)
Focus on what is real and actual	Focus on possibilities
Value practical applications	Value imaginative insight
Grounded, tangible	Blue sky, intangible
Live in the present	Look to the future
Want to see, touch, feel, experience things	Happy with concepts and abstract ideas

3) The final dimension that Jung came up with was: How do people use that information? This one, I think (big clue on my preferences there!) is the easiest one to understand and the easiest to spot in others. When you have information – what do you do with it? How do you come to decisions and actions? Are you driven by your head or your heart? Do you think or feel?

Take a look at the table below and see which side best describes your preferences:

Thinking (T)	Feeling (F)
Analytical	Sympathetic
Apply logic and reason	Assess impact on people
Tough minded	Tender hearted
Want to be respected	Want to be liked
Strive for impersonal objective truth	Strive for harmony & individual recognition

Jung stopped here. He thought he had answered what he set out to understand. He knew how people interacted with the world, how they took in all the information that their internal or external world gave them and how they then used that information. What else would one need to know?

The Myers Briggs contribution

Along came Isabel Myers and Katharine Briggs and they added the final critical dimension – time. Jung probably didn't need to think of this in his less hectic world. However, Myers and Briggs soon realised that the time dimension was vital – did people plan ahead? Were they more spontaneous? As this was all about preferences – how would people respond to something being sprung on them at short notice? How would people think/feel about their diary being mapped out for some time ahead? This gave us the final set of letters - the two dimensions added by Myers and Briggs were Judging (J) and Perceiving (P).

Judging (J)	Perceiving (P)
Scheduled, organised, systematic	Spontaneous, open-ended, casual
Like/comfortable with routine	Don't like/not comfortable with routine
Plan ahead	Lastminute.com!
Avoid last minute stresses	Feel energised by last-minute pressures

My advice would be - don't even try to make sense of these letters. They would have been much better called PA (Plans Ahead) instead of J and LM (Last Minute.com) instead of P – but we are where we are, so just get used to 'J' meaning scheduled and planned ahead and 'P' meaning the opposite. Remember always – this is about preferences. Your job may require you to plan ahead (being a parent demands that you plan ahead), but do you find this reassuring or stressful? Would you rather have the school play in your diary three months ahead or are you happy to be informed "the play is on tomorrow evening."

A more robust way of finding out your type

1) Use the official Myers Briggs site (http://www.myersbriggs.org/my-mbti-personality-type/take-the-mbti-instrument/) and find a practitioner in your area.

2) Do an unofficial questionnaire on line http://www.humanmetrics.com/cgi-win/JTypes2.asp or http://similarminds.com/jung_word_pair.html Please note that these are not terribly reliable – I did the humanmetrics one as a test and it suggested I have preferences for iNtuition rather than Sensing and this could barely be further from the truth!

3) Work out your best guess from the tables in this article and then use http://www.typelogic.com/ for confirmation. You are likely to have at least a couple of letters that you feel confident about and then look for the overall summary that best describes you. Be honest. This is not about what you think/feel you should prefer – but what you actually do prefer. E.g. if your notes read as follows E (strong), S (weak), F (weak), J (medium), then start off looking at the summary for ESFJ. IF you think "Oh my goodness – my mother/other half wrote this", then you've likely found the right profile straight away. If it doesn't sound like you – check alternatives starting with the option that is most likely wrong – the weak one(s). i.e. look at ESTJ and see if this seems like you. Then try ENFJ or ENTJ – you've covered your weak options by this point.

What your type means for your approach to dieting

Strictly speaking I should use the terms "people with a preference for...." every time I mention a letter, but this would make the article long and clumsy so when I refer to, say, E's – what I mean is "people with a preference for E".

E/I: The online world makes it easy to spot E's. Indeed the online world will have more E's than I's. I's don't have the need to share anything, let alone everything. E's are more than happy to share personal details. E's prefer to interact with the world around them; I's are happy in their own world. E's need external interaction to come to conclusions; I's need peace and quiet to come to conclusions in their own head.

Dieting E's are more likely, therefore, to need help and to ask for help and to get help. Dieting I's are more likely to try to work things out alone. If you have struggled with a weight/health problem for some time and know that you are an 'I', you may need to move out of your comfort zone a bit to get some help. You can always head back to your own internal world to process the information that has been given to you – but sometimes you may need help.

S/N: The S wants to see/touch/experience things first hand. The N can get the gist of things without needing firsthand experience. With any diet, the S is more likely to want the detail and the N is more likely to be fine with the principles. The S will want the "What do I have for breakfast?" The N will be fine with general principles to follow.

There are possible pitfalls for both types in terms of dieting:

- The biggest pitfall of the S is that their need to experience is likely to drive them to try something 'just to see.' If you haven't had (say) dairy for some time and can't remember how much of a problem it used to cause you, the S is at risk of needing to try some dairy just to remember the experience. You are likely to just reinforce why you gave up dairy in the first place – but the S needs to experience it first hand to have the proof right now.

I would expect S's to be the most likely to suffer complacency – "I'm sure I'll be OK with pasta this evening." They need the tangible reminder that they aren't OK with wheat, but this experience may still be short lived and they may find themselves 'testing the water' again all too soon.

- The biggest pitfall for the N is that they grasp the concepts, but don't get into enough detail of the diet they're following (let's assume The Harcombe Diet!) The N is most likely to say "Oh but I thought I could go back to sandwiches in Phase 2." When you point out that the book cautions against wheat particularly in a few places, that's news to them. They got the gist of the book and skipped over the detail.

T/F: is fascinating from a dieting perspective. The thinker wants a diet to be logical, rational, scientific and, if something ticks these boxes, they will embrace it. If anything seems illogical (don't I need fibre?) they will ask the question. If the answer satisfies them (how much fibre did cave man get? Could fibre be an excuse to promote carbs and demonise fats? Etc) then they carry on quite satisfied. The feeler wants to resonate with the diet, 'feel' that it understands them and even 'feel' like it was written for them.

The interesting bit from the dieting approach is in relation to comfort eating. Feelers are more likely to feel hurt (that will make sense to thinkers!) Feelers are at greater risk of reaching for food 'to cheer them up'. A thinker can be offended (perhaps by an offensive comment), but they are more likely to be angry and find the comment illogical and annoying than to be hurt by it. The thinker can still reach for the biscuit tin in anger or frustration, but the bigger risk is for the feeler to be comfort eating.

The best way to deal with this is to know if you are a feeler, if you 'take things to heart' and to be prepared for the inevitable reaction and to have a coping strategy. E.g. if a feeler is going to the mother-in-law for the weekend and knows that there will be an unnecessary personal comment or two, be ready for it. Try to laugh it off, ignore it, have a counter strategy with support from your other half ideally. Vow not to have an insensitive comment have you reaching for the biscuit tin. You must not let anyone else's appalling interpersonal skills have a bad impact on you. Don't allow anyone the satisfaction of hurting you – protect yourself.

The T/F dimension is also interesting from a 'slip-up' perspective. If a T eats something that they didn't intend to, they will be angry with themselves and find it illogical and inexplicable that they did such a thing. The F will beat themselves up and be hugely disappointed with themselves. They can literally feel pain as part of this experience. Both types must use what they think/feel to ensure that the slip doesn't happen again. The T needs to rationalise what happened – what triggered it? How can you avoid the same circumstance? How can you behave differently next time and so on. The F needs to feel the pain and disappointment and connect with it and vow not to feel that way again. Come up with some ways to help yourself to avoid having this painful experience again – and be nice to yourself.

J/P: This was the dimension that led to the planners and flexis in *Stop Counting Calories & Start Losing Weight*. The Js (planners) want to plan ahead, are quite happy with routine, are fine having the same things every day and like to start a diet knowing what they'll be having for the week ahead. The Ps (flexis) don't want to plan ahead, don't like routine, want variety in their eating and are quite happy to start a diet and work out what they're having each day.

The type most likely to be 'bored with the diet' is the P. Having said this, Andy and I are extreme P's and we never get bored with what we eat. We think that this is because we get so much variety and spontaneity in the rest of our lives, it is actually quite nice to have our food being somewhat predictable.

The main pitfall for each type from a diet perspective is as follows:

The J is more likely to see the world in black and white and to think that they have failed if they have one slip that wasn't scheduled. If the J has something that 'they shouldn't', they are the one most likely to think "I've blown it – I'll now have everything that I've been avoiding and start again tomorrow." Js are more likely to be perfectionists and can be very harsh on themselves. If you know that you have J preferences you need to keep this tendency in check and try to find more shades of grey in your world.

The biggest trick for the J is not to have something and think "I've blown it" but to realise that a new day can start any time (not just midnight) and start sticking to your plan again from the minute you slip. Your 'good' day can run from 2pm to 2pm just as easily as from dawn to dusk! Don't be too tough on yourself; don't be too rigid – don't set yourself an impossible plan to stick to and then beat yourself up if you fail to achieve your own personal high standards. Js are simply awesome to have working for you – but they can be so tough on themselves.

The P is most likely to fall for temptation and get caught out unprepared. Because the extreme P will work out what they are having for the next meal moments before the next meal, this is fine if there is plenty of meat, salad and veg in the fridge. Eggs are a marvel for Ps because one can always resort to an omelette. If, however, Ps get to lunchtime at work and haven't prepared anything then they can end up popping out for a sandwich or having the work canteen lunchtime special, which is not likely to be real food friendly.

The P is best advised to know that they are lastminute.com but to realise that dieting works better with a modicum of planning ahead. Even though it won't meet their preferences, the P does need to take a bit of time thinking about shopping to get the right stuff in the house, filling the freezer to have options available and working out the situations in which they do get caught out and planning for these, if nothing else (e.g. lunchtimes on work days).

I hope that you've enjoyed this journey into your preferences and I really hope it can give you an insight into your eating patterns or even a relationship that may have been bothering you. Sometimes one of the most baffling things is trying to work out why we do the things that we do. If this provides any insights at all, it will have been worthwhile.

Zoë Harcombe is an author and obesity researcher and creator of The Harcombe Diet®. Further information at www.zoeharcombe.com and www.theharcombediet.com Follow Zoë on twitter @ZoeHarcombe

A rude awakening

Clare Hargreaves

After the culinary fireworks of the night before, hotel breakfasts are all too often a disappointment. Clare Hargreaves asks if it's time to give the most important meal of the stay the respect it deserves.

We've all heard the counsel to breakfast like a king, lunch like a prince and dine like a pauper. So why do hotels get their kings and paupers so confused?

Picture the scene. You sit down to a dinner that's the culmination of a hard day over the stove by an army of chefs out to impress. Tight-lipped waiters regale you with canapés of foraged sea-beet, a mouth-amusing cup of soup "just because the chef felt like spoiling you," and a starter (or two) served with three fancy homemade breads. That's followed by an artfully arranged main (locally sourced, of course), then maybe a pre-dessert, dessert proper, a board of local artisan cheeses, petit-fours (painstakingly crafted by the pastry chef) and coffee. You then stumble upstairs and collapse into bed of the softest Siberian goosedown and Egyptian cotton.

Come down in the morning and what do you find? A predictable selection of sugar-laden Kellogg's cereals, long-life orange juice poured from carton (is squeezing fresh fruits really that difficult?), flabby toast with the dreaded individual portions of factory jam and fat spreads, and some anonymous bacon oozing water, a cotton wool tomato and an egg drowning in cheap cooking oil.

What happened to the culinary creativity and locally sourced fresh ingredients? Why is industrially produced food suddenly acceptable? Couldn't the chefs have turned their talents to devising an amazing granola, or transformed some local fruits or veg into an intriguing, healthy juice? Why do we now have to put up with the factory-made toast that's cold because the waitress insists on producing it at the start of the breakfast? Shop bought marmalade? Even I can make marmalade.

Part of the reason is that this is the graveyard shift, when the most junior staff are deployed. Their kitchen bosses are either seriously sound asleep or ordering evening provisions. Somehow the morning repast escapes the eyes of the critics who judge a hotel restaurant not by its breakfast but by its dinner. So hotels – including some boasting Michelin stars – think they can palm us off with boring breakfasts using junk ingredients.

But they are wrong. As James Golding, chef at The Pig Hotel in Hampshire, puts it: "Breakfast is your last memory of the hotel, so it's vital to put on a good show." Which is something The Pig does amply: breakfast here involves pretty porcelain basins of homemade granola, local apple juice (great to see apple as well as orange juice, given that apples are something we Brits grow rather well), compotes and jams from fruits grown in the garden, New Forest honey, homemade banana cake and granola bars, and real bread that you can eat as bread or toast (hooray!) Cooked offerings are a joyous celebration of this lovely smallholding – Saddleback bacon cured by James, home-smoked kippers, and eggs from The Pig's own hens.

There are other welcome exceptions to the flabby breakfast habit. Le Manoir has to take my prize, with its gargantuan Anglo-French spread of cheeses, yoghurts, breads and meats, as well as dried, stewed and fresh fruits from the Manoir's garden. The colourful display, with its fans of shocking pink dragon fruit and freshly baked croissants, is as much a feast for the eyes as for the stomach.

Perhaps hotels should take a cue from the burgeoning number of breakfast or brunch hangouts in our cities, a happy sign that breakfast has finally become sexy. You only have to look at the 10am queues winding out of the Breakfast Club in Shoreditch to see what I mean. Inside, bright young things are ordering pancakes, huevos rancheros and flat whites. At Kopapa in Covent Garden, run by Kiwi chef Peter Gordon, you can wake up your taste buds with ricotta pancakes with avocado and roasted grapes, or spiced banana French toast with orange blosson labneh. Coffee is good and fair trade, sometimes roasted on the site.

Let's hope hotels wake up to the joys of breakfast too. Hey guys, this meal can be healthy and inventive so pull out the stops! This isn't the place for cost cutting or laziness. I'm looking forward to breakfasting like a king. Are you?

Food and farming writer **Clare Hargreaves** is the author of four books and writes for the national press, including BBC Good Food magazine and The Independent.

Feast with a Chef

Drawing on her contacts with many of the country's top chefs, Clare's most recent venture is running Feast with a Chef, offering fine dining in village halls. She calls it 'Fine dining without the starch.' To find out more about Clare, her writing, and Feast with a Chef visit www.clarehargreaves.co.uk or www.feastwithachef.co.uk

The truth about olive oil

Nina Teicholz

For two decades, olive oil has enjoyed a reputation as the best possible fat, a Mediterranean food with special heart-disease fighting powers and the key to longevity. Adopted worldwide and used to make everything from sautés to salad dressings, olive oil has become a kitchen staple, with consumption today now three times what it was in 1990. Yet is it truly an elixir for health?

Olive oil was first presented as a disease-fighting fat to consumers in 1993 by experts at the Harvard School of Public Health as part of the Mediterranean Diet. Of course the diet with a small "d"—the one of bread and branzino eaten by Mediterranean peoples themselves—had existed for many years, but the diet with a capital "D," as a nutritional concept and program that has been endorsed worldwide, didn't really exist before nutrition experts themselves invented it.

Olive oil was at its heart. As Harvard epidemiologist Walter C. Willett remarked, his Mediterranean diet pyramid was an improvement over the one published by the U.S. Department of Agriculture because it had "olive oil poured all over it."

Yet when Willett introduced his pyramid, the evidence linking olive oil to longer life was mainly circumstantial: Cretan islanders and southern Italians in the 1960s had been documented consuming nearly 30-40% of their calories as olive oil [i] and appeared to be heart-disease free, but this link was just an association and could not prove causation. The harder evidence came from a handful of clinical trials showing that olive oil had a relatively good effect on cholesterol levels compared to butter and vegetable oils.

Olive oil gets a PR agency

This scant science is not what propelled olive oil to its rock star status, however. That standing was achieved instead through olive oil money - specifically, the International Olive Oil Council (IOOC), an agency founded by the UN and charged with promoting the largely Mediterranean-based olive oil industry.

For nearly a decade, IOOC funding fueled a series of scientific conferences in glamorous, sun-drenched spots throughout Italy,

Greece, Tunisia and elsewhere. Researchers, food writers, cooks and health officials came for subsidized, luxurious gatherings that were part science, part foodfest and part cultural celebration - altogether a stroke of genius in targeting the nutrition world's most influential people.[ii] Samples of olive oil were tucked into flower arrangements and handed out in shopping bags. Expert panels on olive oil were interspersed with cooking demonstrations. Participants knew that oil money was flowing behind the gatherings, but the experience was so alluring that it lulled participants into playing the part of willing "olive oil ambassadors," as one attendee put it.[iii]

Back home, the press wrote pro-olive oil stories, cooks wrote cookbooks, and scientists conducted olive-oil research. In Willett's Harvard department alone, he and his colleagues published nearly 50 papers on the Mediterranean Diet from 1993 to present.

But where was the evidence?

Yet a decade after the diet had been introduced, the science still could not convincingly show that olive oil had any special heart-disease fighting powers. In 2003, the Food and Drug Administration reviewed all the data and concluded that only a very limited health claim could be made for the oil.

And the science has since gotten no stronger. As two Spanish researchers reviewing the data in 2011 on olive oil and heart-attack risk concluded, "surprisingly…there is not much evidence."

Even more surprisingly, it turns out that olive oil is not even ancient - at least as a foodstuff. The "four thousand year" tradition claimed for olive oil by its promoters refers to the oil's use in anointing the body and as a soap: a cosmetic, basically. And although promoters claim that Homer referred reverentially to olive oil as "liquid gold," the actual passage in the *Odyssey* reveals that "gold" refers to the flask in which the oil was stored, not the olive oil itself. The daily culinary use of olive oil in Italy,[iv] Spain, and Greece appears to date back only to the 19th century.

At least it's a fat!

Consumers might feel duped, but they should be consoled by the fact that they were right to embrace this oil in the early 1990s when it was introduced as the healthiest of fats. The public had been living with the low-fat diet for three decades by then, skipping sauces and spraying with PAM, in order to comply with official dietary advice.

The 1980s, especially, were a time when the low-fat diet was pushed to its non-fat extreme. Diet doctors like Nathan Pritikin and Dean Ornish counseled the public to eat little-to-no fat, and many people tried to comply.

Therefore, olive oil, as a 'safe' fat, saved the day by allowing Americans to eat, guilt-free, the tastier, higher-fat diet that had long been denied them.

For nutrition researchers, meanwhile, olive oil was the latest, best hope for finding a cure to the heart disease epidemic. The public had been cutting back on saturated fat for three decades already without stemming the disease epidemic, and this was an obvious disappointment.

Later researchers learned that targeting fat as the primary dietary culprit was very likely misguided, according to a large number of rigorous clinical trials conducted over the last decade. Those trials showed that sugar and other carbohydrates were the far more likely culprits in provoking heart disease, but olive oil, in the 1990s, served as a ticket out of the reigning, failed low-fat policies.

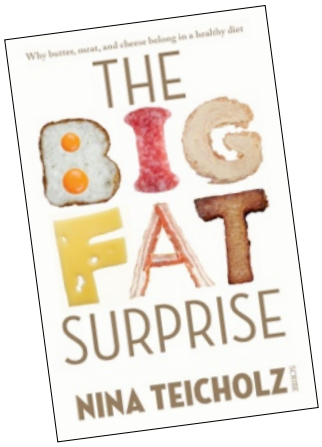
And to be clear, olive oil *is* a fine option. Extra-virgin olive oil is rich in nutrients. And because the oil does not oxidize easily at high temperatures, it is more stable and better for cooking than are vegetable oils made from peanuts, soybeans or corn.

Even more stable, however, are the solid, saturated fats such as lard and butter. Lard was also the fat of ancient Greece. At a dinner for Achilles, Patrokles laid "the backs of a sheep and a fat goat and the chine of a great wild hog rich in lard." Achilles' muscles therefore would have glistened with a *sheen* of olive oil, but he would not have eaten it. If only Homer had possessed as much marketing genius as the olive oil industry, we would have known this long ago.

References:

[i] Original data from: Keys, A., C. Aravanis and H. Sdrin, "The Diets of Middle-Aged Men in Two Rural Areas of Greece," *Voeding* 27, no. 11 (1966): 575-586. Reported in: http://www.ncbi.nlm.nih.gov/pubmed/9420448
[ii] *The Big Fat Surprise*, 189-197, from interviews with Laura Shapiro, Marion Nestle, Nancy Jenkins, Walter Willett, and Greg Drescher, among others.
[iii] Laura Shapiro, quoted in *The Big Fat Surprise*, (page196)
[iv] http://universitypublishingonline.org/cambridge/histories/chapter.jsf?bid=CBO9781139058643&cid=CBO9781139058643A014 (page 1196)

Nina Teicholz is the author of the new book, ***The Big Fat Surprise: Why Butter, Meat and Cheese Belong in a Healthy Diet***
Follow Nina on twitter @bigfatsurprise



5 Reasons Why Conventional Wisdom Insists Weight Management Is Simply About Calories

And 5 Reasonable Rebuttals On Why They're Wrong

Sam Feltham

Next month I'll be lecturing at FitPro Live, the world's largest fitness professional association, in an attempt to educate the fitness industry as to Why Dietary Fat Is Making A Comeback. In preparation for this I have been researching why people object to diets high in fat using real foods. The most common objections are that arteries will clog and cause heart disease, eloquently debunked in the April 2014 edition of *Diet & Health Today* by Jimmy Moore, and of course that fat has double the calories per gram, so the less fat, the fewer calories there are and weight loss will ensue, as the current conventional wisdom goes.

As well as trying to debunk the diet heart hypothesis I'll be trying to debunk the notion that one must simply restrict calories in the conventional sense to lose body fat. This will be a rather interesting task to say the least given that my audience will mainly be calorie counting body builder types.

With this in mind I decided to set myself a cognitive challenge of trying to change my current beliefs that body weight and fat are primarily regulated by biochemical reactions to different foodstuffs that we consume rather than the number of total calories that one consumes. In my cognitive challenge I have read articles, blogs and magazines that simply promote the calorie theory of weight management as well as involving myself in heated discussions with dogmatic dieticians and fanatic fitness professionals to find out why the current conventional wisdom insists that weight management is simply about calories.

From my research the 5 main objections that are raised by calorie purists are:

1) Don't you believe in the first law of thermodynamics. Dummy!
2) Metabolic ward studies show weight loss is the same no matter the composition of the diet.
3) Insulin does not make people gain body fat.
4) Our calorie consumption has gone up by 400 calories a day over the past 40 years which is why we're getting larger.
5) Those who promote that weight management is hormonal are just trying to sell books and become famous.

I shall go through each of these objections one by one with some common connections in-between.

1) Don't you believe in the first law of thermodynamics. Dummy!

This is the age old objection that calorie purists come up with and it never ceases to come up in any interaction about weight management. When this comes up in a discussion I always say “Yes, of course!” and ask “Do you believe in all the laws of thermodynamics?” This is an important question because there are 4 laws of thermodynamics in total, and in any scientific investigation it's important to take all of these into account.

The zeroth law, which was found after its creation to be more fundamental than the first, hence the weird numbering, states “If two systems are in thermal equilibrium with a third system, they must be in thermal equilibrium with each other” which means that if you and a friend who have a body temperature of exactly 37C jump into a swimming pool that is 37C then you're all the same temperature and in thermal equilibrium. Obvious I know but physics is very literal and matter of fact.

The first law, as we all know through virtue of repetition, states “In an isolated system energy can be neither created nor destroyed, but can change form.” Calorie purists tend to leave the last bit out for some reason, I shall come back to that in point number 3. The second law states “Heat flows naturally from an object at a higher temperature to an object at a lower temperature, and heat doesn’t flow in the opposite direction of its own accord.” Which is wonderfully explained by Zoë Harcombe in her fantastic YouTube explanation of thermodynamics and weight loss, where she says “energy will be used in making available energy”.[1] Basically meaning that if you jump in a cold swimming pool you'll use energy to keep yourself warm. The third and final law states “The entropy of a perfect crystal of any pure substance approaches zero as the temperature approaches absolute zero” which means that we can't bring an object down to absolute zero. This has no real relevance to the debate of weight management so feel free to ignore that one.

When we take into account all the laws of thermodynamics the calorie theory for weight management just doesn't hold up as we're not closed or isolated systems. We are open biological systems that are constantly changing. Of course the laws of thermodynamics always hold true but we currently have don't have a real understanding of how open biological systems actually interact with these laws, we only know that they hold true. This was best demonstrated in 1990 by Claude Bouchard, Ph.D. From the Pennington Biomedical Research Center, who put 12 pairs of young male identical twins under 24 hour surveillance and overfed them by 1,000 calories a day 6 days a week for 100 days. [2] The total excess amount each man consumed was 84,000 calories, which puts my 55,000 calorie excess to shame but mine was in 21 days so I feel better for that. Anyhow, to quote the abstract of the study “During overfeeding, individual changes in body composition and topography of fat deposition varied considerably.” The average weight gain of participants was 8.1 kg, but the range was from 4.3 to 13.3 kg. There was significant similarity of weight gain between twins, which suggests that genetics are certainly involved in how we store and use energy, but there were still differences between the twins.

The bottom line here though is that if the calorie theory of weight management was true in its purest form then all 24 men would have put on exactly 10.90909090909091kg instead of the range well below and actually above the calorie predicted weight gain. This suggests that the individual biochemistry of the different men drives how much energy they store or use from foodstuffs rather than the total calories consumed. For me the only way total calories consumed or portion sizes matter in terms of weight management are their total contribution to the different biochemical reaction load from different foodstuffs.

2) Metabolic ward studies show weight loss is the same no matter the composition of the diet.

Metabolic ward studies mean that study participants are put under lock and key to control what and how much they are consuming, similar to the study previously mentioned. There are a fair few metabolic ward studies that have been done over the past 50 years that show variation in weight loss from different diets didn't have clinical significance. However, there are also a fair few problems with these studies. First the sample sizes were too small and they were far too short. One of the most cited studies by calorie purists is from Lewis SB et. al. called *Effect of diet composition on metabolic adaptations to hypocaloric nutrition: comparison of high carbohydrate and high fat isocaloric diets*[3] had a massive 10 participants studied over...wait for it...14 days. The results were that mean weight loss on the high fat diet was 5.2kg and the mean weight loss on the high carb diet was 4.4kg. This 0.8kg difference is often explained as loss of water or glycogen, stored carbohydrates in muscles and the liver, which is a fair assumption. There is another problem with this study though, and others like this, and for this I'm going to quote the Nutrition Science Initiative, www.NuSI.org, who have a clear and concise review of the past 80 years of nutrition science literature on their website.

“Consider an intervention that compares a daily 1000 calorie diet to a daily 1000 calorie carbohydrate-restricted diet of 10 % carbohydrate. If the usual diet of the subjects was 3000 calories, of which 50% was carbohydrate, the diet that restricts all calories equally will be restricting carbohydrates from 1500 calories to 500 calories. The diet that restricts primarily carbohydrates will be restricting carbohydrates from 1500 calories to 100 calories. Such a study, therefore, can be perceived as comparing a diet that restricts carbohydrates by 1000 calories to a diet that restricts carbohydrates by 1400 calories. The question would then be whether or not this difference is significant enough to induce an observable difference in fat loss over the period of the study. Under these circumstances, any differences might be too modest to detect.”[4]

The bottom line here is that we have insufficient evidence from current metabolic ward studies that are either too short, too small or both, to be able to see any differences from different diet compositions of the same amount of calories. The only way we can be sure whether different diet compositions create different amounts of fat loss is through larger sample sizes, longer periods of time and by having participants to eat at energy balance and see if there are any differences in body composition. Thankfully this type of study is under way with the Nutrition Science Initiative.

3) Insulin does not make people gain body fat.

Insulin is a fundamental hormone that helps ship nutrients into cells, and one of those cells that it is the master regulator of is a fat cell. As described in a number of medical text books:

“*The overall action of insulin on the adipocyte (fat cell) is to stimulate fat storage and inhibit mobilization (fat burning)*”

Endocrinology: An Integrated Approach

"*Insulin restrains fat mobilization (fat burning) by two mechanisims: supression of lipolysis (breakdown of fats) and stimulation of the re-esterification (storage) of fatty acids within the adipocytes. (fat cells)*" Metabolic Regulation: A Human Perspective

"*Insulin not only promotes fat storage but it also restrains fat mobilization.*" Diabetes Mellitus: A Fundamental And Clinical Text

"*Hormone sensitive lipase converts stored fat into free fatty acids (fat burning)…This enzyme is depressed by insulin.*" Human Biochemistry and Disease

"*Insulin…inhibits the degradation of triglycerides (fat burning)*" Principles and Practice of Endocrinology and Metabolism

Despite the many well known actions of insulin in many medical text books some calorie purists insist that insulin does not make you gain body fat. In their arguments there seems to be some slight cognitive dissonance. For instance obesity researcher Stephan Guyenet explains in one of his blog posts, The Carbohydrate Hypothesis of Obesity: a Critical Examination, that "*On average, diabetics do gain fat when they initiate insulin therapy using short-acting insulins. This is partially because insulin keeps them from peeing out glucose to the tune of a couple hundred calories a day. It's also because there isn't enough insulin around to restrain the release of fat from fat cells, which is one of insulin's jobs, as described above...In addition, short-acting insulins are hard to control, and often create episodes where glucose drops too low, which is a potent trigger for food intake and fat gain.*"[5]

So this could explain weight gain from insulin spikes from either carbohydrates or injections, right? Wrong, apparently, according to Guyenet "*it's not consistent with research on the biological functions of insulin*". I don't like picking on people individually but Stephan is a good example of what psychologists call *Baby Duck Syndrome* or simply an imprinted idea. He has read the words "*energy can be neither created nor destroyed*" from the second law of thermodynamics and this idea has set like ice on a pond in the Arctic, nothing will shift his mind from this. Not even the last part of that sentence I was talking about earlier "*but can change form*". As he alluded to in his explanation of what happens when diabetics initiate insulin therapy which "*keeps them from peeing out glucose to the tune of a couple hundred calories a day"* which is shipped into fat cells because of the glucose overload and becomes part of the persons body fat.

The bottom line here is that we've known since the 1960's that insulin is massively involved with the storage of fat in the body but we can't completely figure out the nuts and bolts of what else is going on in the body quite yet which has confused the matter. However, as George Cahill Jr., a retired Harvard professor of medicine and expert on insulin said to Gary Taubes "*Carbohydrates is driving insulin is driving fat*". [6]

4) Our calorie consumption has gone up by 400 calories a day over the past 40 years which is why we're getting larger.

It's undeniable that the general population is consuming more calories than we did 40 years ago. However let me propose this question to you, does a blue whale grow to be the biggest animal ever because it eats so much or does it eat so much because it's the biggest animal ever? The answer is the latter, if you weren't sure, and the reason is because biological organisms eat to their level of growth. A growing teenager, especially males, eat veraciously because they are growing at an accelerated rate. When they are younger, particularly from 3-8, they don't eat quite as much because their growth, driven by hormones, is less pronounced than in their pubescent years. With that in mind the reason that we are eating more calories than ever is because we are growing bigger, horizontally, and it's getting worse every generation.

Let's take the example of gestational diabetes, which is a form of diabetes where women without previously diagnosed diabetes exhibit high blood glucose levels during pregnancy (especially during their third trimester). Babies born from Mothers with gestational diabetes, and pre-existing type 2 diabetes, are larger and carry more body fat due to, you guessed it, insulin stimulating fetal growth.[7] This confusion of how biological growth is caused is one of the major reasons why there is so much misunderstanding and conflicting messages in obesity research.

Some researchers just can't seem to get their head around that hormones drive growth, and hormonal growth leads to the organism to consume more in order to fuel it's growth, no matter where it's happening in the body. An obvious example of this is that of Wesley Warren who had a 140 lb testicle after accidentally striking his testicles while sleeping in late 2008. [8] A cause suggested was that this trauma impacted on his lymph nodes and caused what's known as lymphedema, although no one was able to determine the true cause. The reason I use this example is not to freak you out but because not only did Wesley have an abnormally large testicle, but he was also obese. To anyone on the street Wesley's excessive body fat growth of 100 lb was purely because of his excess calorie consumption. However, looking at his 140 lb testicle you know that the excessive growth isn't because of excessive calorie consumption, although he would have been storing more calories than he expended as he was growing in weight, but because biological factors were driving the growth of his testicle. Sadly Wesley died in March 2014 of complications with diabetes.

The bottom line here is that biochemistry drives growth where ever it is in the body, whether that be a testicle or body fat and that you eat to your level of growth.

5) Those who promote that weight management is hormonal are just trying to sell books and become famous.

This is a standard defence for many, and one that I've never really understood. For me it's a bit of a non-argument as everybody needs to make money and there are a million and one better ways than writing a book that you know you will be brutally criticised about something that has been said many times before. Not to mention the fact that those that criticise authors for saying weight management is a hormonal issue sell books themselves and sell just as many. I won't mention any names or specific numbers but you can connect the dots.[9] One name I would like to mention though is Gary Taubes. Who has done okay money-wise from writing about the subject through his books *Good Calories Bad Calories* and *Why We Get Fat*, which did well but didn't get above 81 in total book sales in the UK and 397 in total book sales in the USA. Gary has had his fair share of scrutiny but is actually going about trying to disprove his hypothesis rigorously, as a good scientist should, through his non-profit organisation the Nutrition Science Initiative previously mentioned in point 2.

The bottom line here is that I don't know too many people who set up a non-profit organisation to try and disprove their hypothesis that weight management is about biochemistry and not just simply physics. That doesn't particularly sound like a money grabbing person to me.

Overall, looking at the evidence about whether weight management is a biological issue or a physics issue the inconsistencies of weight gain and loss in different people on different diets suggests that individual biochemistry is the overriding factor of how different people react to different diets and number of calories rather than the total number of calories consumed. If weight management was solely reliant on calories-in and calories-out the accuracy of calorie counting has to be so high that to not gain 10 lb every decade of your life you would have to be sure not to eat more than 10 calories a day, or 2 skittles, of your supposed calorie maintenance. A scientific impossibility for daily life and one that I don't think nature would allow for the survival of any species.

Finally, from the current nutrition science research to date I have a duty of care to advise an ad libitum low carb high fat diet of real foods for primary care in those looking to lose weight and become healthy because that's what all the randomised control trials tells us is best for the majority.[10] I'm not saying that it's the only way but it certainly seems to be the most obvious place to start and people can find their real food solution from there with a little bit of guidance from those that have done it before them.

References:

1. Thermodynamics & Weight Loss by Zoë Harcombe. https://www.youtube.com/watch?v=szRucLvNC4s

2. Bouchard et al. The Response to Long-Term Overfeeding in Identical Twins. http://www.nejm.org/doi/full/10.1056/NEJM199005243222101

3. Lewis et al. Effect of diet composition on metabolic adaptations to hypocaloric nutrition: comparison of high carbohydrate and high fat isocaloric diets. http://ajcn.nutrition.org/content/30/2/160.full.pdf

4. Review of the literature by NuSI. http://nusi.org/the-science/review-of-the-literature/

5. The Carbohydrate Hypothesis of Obesity: a Critical Examination by Stephan Guyenet. http://wholehealthsource.blogspot.co.uk/2011/08/carbohydrate-hypothesis-of-obesity.html

6. The Scientist and the Stairmaster by Gary Taubes. http://nymag.com/news/sports/38001/index4.html

7. Leipold et al. Large-for-gestational-age newborns in women with insulin-treated gestational diabetes under strict metabolic control. http://link.springer.com/article/10.1007/s00508-005-0404-1

8. Wesley Warren Wikipedia page. http://en.wikipedia.org/wiki/Wesley_Warren,_Jr.

9. Neislen Book Scan. http://www.nielsenbookscan.co.uk/

10. 23 Studies on Low-Carb and Low-Fat Diets – Time to Retire The Fad by Kris Gunnars. http://authoritynutrition.com/23-studies-on-low-carb-and-low-fat-diets/

Sam Feltham is founder of 'Smash the fat' http://smashthefat.com/.
Follow Sam on twitter @samfeltham

Playing with my food

Chris Packe

I have found that there are wonderful lessons to be learned anywhere you look, if you have the inclination and create the time to experiment.

Two friends of mine have a lot to teach me about the universe, both through the medium of food, so I thought I'd stop and properly listen. Zoë Harcombe is a nutritionist and author who is spectacularly turning the subject of eating on its head, and Tara Wood is a biologist stuntwoman who set up an amazing holiday company 10 years ago called Wildfitness, where you learn priceless lessons in the benefits of eating, moving and living in the way that evolution designed us to.

Not long ago I re-read Zoë's book on how the human body (and mind) really interact with food (*Why Do You Overeat?*) and a blog post by Tara proposing an intriguing one-month eating-and-exercise challenge (http://wildfitnessblog.com/the-one-month-wild-challenge-be-pure-and-strong-for-2013/). Having also watched a Horizon documentary on fasting some time before (Eat, Fast and Live Longer, BBC2), I thought I'd have a play with my food and see what happened.

The experiments

Here's what my version of their suggestions involved:

1. Horizon's fasting experiment: 2 consecutive 24 hour fasts per week for 5 weeks (basically just dinner on Monday and Tuesday, and normal eating the rest of the week). This, I believe, was tried out by quite a lot of people after the programme aired. I subsequently found that their suggestion was not to make it consecutive days, but hey, this is MY experiment.

2. Tara's eating experiment: No gluten, dairy, sugar or alcohol (I threw in caffeine for 2 weeks too). Exercise intensely at least twice a week (this brought me nicely out of winter hibernation. I generally did 5 mile barefoot runs with chin ups back at home, plus Tara's 'animal workout'). Tara did go on to encourage sleeping as much as my body told me to, but I couldn't add this in too or I would have imploded.

3. Zoë's eating experiment: Meat, fish, eggs and veggies (plus a bit of brown rice) only for 5 days. From then, no mixing of carb food (grains and potatoes) with fat food (meat). And no processed food, only real, whole food.

Number 1 can't of course be combined with the others; I did that one separately. But I thought I could supercharge 2 and 3 by doing them both together, so that's what I did.

What I learned...

...about the world

- Wheat and dairy and processed sugar are EVERYWHERE. Seemingly in everything in Tesco apart from raw onions. Probably even in car batteries these days. No wonder we're so highly strung (especially when driving). I was regularly caught out until I became vigilant. What do you mean sausages and gravy both have bread in them??

- Wheat and sugar are like crack, and so 'impulse aisles' are like crack dens, designed by the devil himself (who works in the sales & marketing department). It's food porn! I shuffled through these aisles clutching my wholefoods like a priest through Amsterdam fumbling his rosary.

- Anything that ends up in any sort of packet and still claims to have nutrition, would appear to be brazenly lying. I only appreciated last month how shocking this truth is.

- Pubs are a total write off if you're avoiding fake stuff… Until you discover icy soda water with squished lime quarters in it, which taste like mojitos (probably still got wheat in it somehow).

- People in local health food shops are *really nice* and ought to be knighted. So are local butchers, except they hold meat cleavers which is a bit more menacing.

…about myself

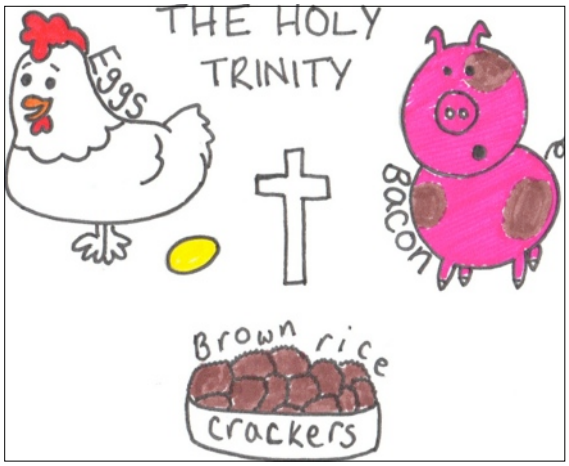
- I used to think hunger was an intolerable feeling and that I had to eat every 4 hours. A 24 hour fast is a real myth-buster in this regard. It's easy really; therefore eating snacks – or 'grazing' as the snacking propaganda prefers it to be called - is purely compulsive. That's a lot of mindless eating I've done in the past then.

- Not having to eat eliminates the need for hundreds of food-related decisions in any given day. I basically gain an extra 3 hours to use as I please.

- Fasting does not make me obsess about food, except for just before dinner. But controlling my diet does; it can take over my life and there's the danger of becoming a real bore.

- Ruling out ingrained recipe habits makes me try cooking new stuff. Plain old chicken and vegetable stew, so delicious it made me dance around the kitchen (a happy lunatic is still happy). Tofu scramble? Hey, that's really nice.

- I supposedly ate healthily before; I now see this in a new perspective. Since wheat and sugar are like crack, cutting them out made me weak and pathetic for the whole first week. And rampantly hungry. Who is that crazy person in my head, who makes me want to lunge for croissants or do



an armed hold-up of Ben's Cookies? Well, he's always been there, I just never introduced myself to him before. The glucose monster is still lurking, but at least he has lost his hiding place.

- Eggs are magic. So is bacon. I ate 60 eggs in March. Probably not to be repeated, but eggs were definitely my saviour.

- Willpower is finite. I tried at first to fight and prevail with unassailable willpower. But forcing myself is quite exhausting and not much fun. Especially when the experiment is scheduled during my daughter's birthday party (several parties actually, somehow)… lots of home baking of cake and brownies, and the torturous crunching of Pickled Onion Monster Munch. There's only so much willpower available to me, so something would have given way unless an outlet was provided. Luckily, roasted macadamia nuts tasted like millionaire shortbread… yeah, I know they're not raw etc… And I never knew that brown rice crackers could get me so wantonly excited. It goes to show what becomes possible when my settings go back to zero. (But is Booja Booja ice-cream really too good to be true?)

My healthy take-aways

1. It's OK to start something as a curious experiment with no particular aim (this was certainly never an exercise in weight loss), but if it doesn't quickly find a compelling connection to some bigger ideal, it will – and should – quickly fall away.

2. This quickly turned out to be a big exercise of my willpower muscle. It was pretty tough at times, saying no to urges so much. But I was driven by the vital awareness and self-discipline it was bringing, realising how it applies equally in other areas of life, such as overcoming fear (of failure and the unknown) and desire (for the trap of familiar normality, and the comfort of consuming).

3. Perhaps the biggest thing from all this was to see once again, that when my world gets turned upside down, I experience creative destruction. Old beliefs and habits get destroyed, and I discover valuable new possibilities. These experiments always leave me miles better off. More aware of myself, more conscious of the world around me.

It just so happened that this experiment ended on Easter Sunday.

Did I use my beefier willpower muscle to come down slowly?

Of course I didn't (must have been the egg thing).

Read more of Chris's work at 'Chris Packe's Freedom Blog'
www.chrispacke.com
Follow Chris on twitter@Chrispacke

It's complicated

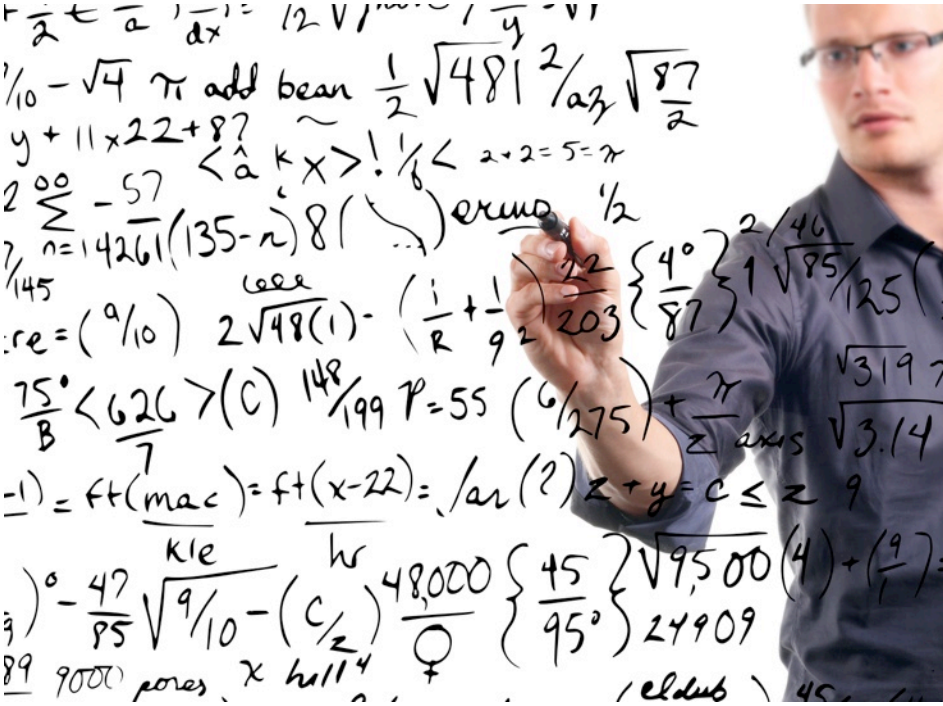
Kate Jones

No, really; it is. Yet if an alien surveyed our society through our mass media and political culture, they would be forgiven for thinking that humans see the world in very black and white terms only.

You don't want to be fat? Then eat less and exercise more. We still read and hear this exhortation all too often. As Zoë and many other researchers in this area have so clearly demonstrated, it just isn't that simple.

Zoë has a brilliant article on her blog which explodes the calorie myth comprehensively. But then people ask, "OK, well if it's not about eating less and exercising more then why do people not stick with low carb eating?"

Well, er, I'm afraid it really is more complicated. Having knowledge, even coupled with understanding, doesn't mean that losing weight, let alone sustaining weight loss, is simple. We live in a pretty obesogenic society - anyone ever tried to get some low carb food in a train station or airport? How many of us go to meetings at work or conferences where croissants and pains au chocolate have been laid on for breakfast? Eating a low carb diet requires planning once you're outside your own home and, I'm afraid, a level of discipline and restraint in a society that encourages neither. In the same way, we know that the cure for alcoholism is to stop drinking alcohol, but as anyone who has ever attempted a 'dry week' will testify, it's incredibly hard to give up alcohol for social reasons let alone if one is doing so with the added burden of the physical/psychological dependency of addiction.



And just how much do we know and understand? The role of "Big Food" is probably one aspect responsible for the obesity epidemic but there are many other contributory factors that we are only just beginning to understand, such as our ethnic adaptations to different diets. It's possible that low carb isn't necessarily right for everyone if you have evolved on a diet relatively rich in carbs. Of course, it could be that carbohydrates in traditional diets, where the food is unprocessed, may not create obesity, but process food to combine fat and sugar in particular proportions and you might increase levels of obesity in those people too. Or, it could be that a carb rich diet which is also low in calories will ensure that obesity remains unlikely. Most studies on human nutrition are epidemiological in nature and so can only establish association and not necessarily causation. Despite the huge amount of research in the field of nutrition, much of it only reinforces that we still don't know very much about food and its synergies, and even less about the way those synergies work when they interact with real human bodies, as opposed to, say, mice and rats. Studying the effect of a single foodstuff, or, worse still, a single component of a food, may not be all that useful. We could eat blueberries till the cows come home but if we also eat a mainly processed food diet then the poor old anti-oxidant super hero will have to concede defeat.

Probably...

Eating red meat is also often associated with cancer but it might be very different depending on whether it's grass fed beef or processed burgers. Having the kind of lifestyle where you can afford grass fed beef could be less stressful than one where the choice of processed food makes economic sense. So, is it the burgers or the stress that causes poorer health outcomes? A combination? Other factors combining with diet and stress levels?

Epidemiological studies all too frequently create more heat than light but perhaps things might be beginning to improve: The Economist recently reported on the launch of the Meta-Research Innovation Centre at Stanford University in the States which aims to name and shame sloppy scientific research. NuSI (the Nutrition Science Initiative) has been set up by Gary Taubes (he of *Good Calories, Bad Calories* fame) and Peter Attia. Their aim is to try to find a way to produce better research on human nutrition.

NuSI have a tall order here. We are at the beginning of the era of personalised medicine, itself a response to the recognition that human beings are - yes you've guessed it - complex systems and, as a result of this, we respond to the world differently, individually, including our response to disease and the medicines we take to cure them.

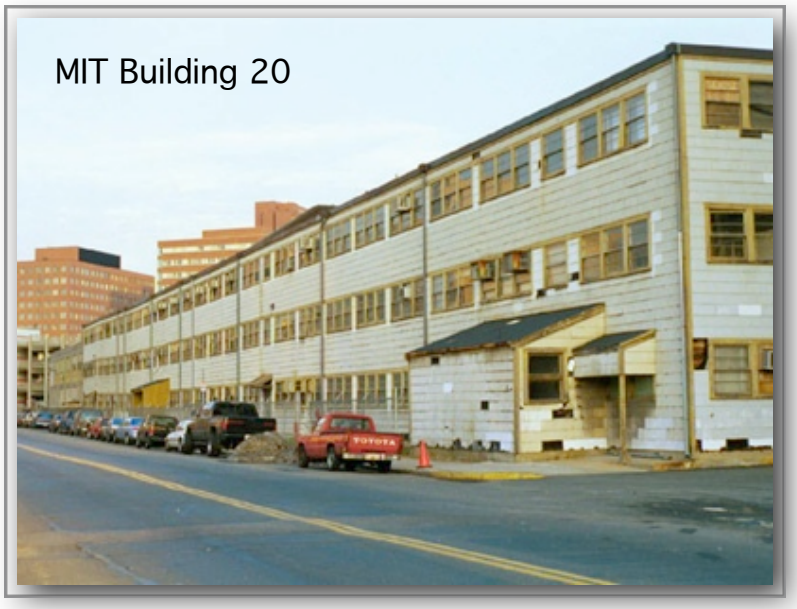
Scientist, Martin Rees, in a recent interview on American Public Media radio show, **On Being**, argues that, "You are very foolish if you take seriously what anyone tells you about diet or childcare." He goes on to point out that this is not because people working in these fields are "less competent" but that "anything to do with human beings and their environment" comes under the heading of "the very complex". Now, this is a man who deals in cosmic complexity - I mean literally not metaphorically. Rees holds the honorary title, Astronomer Royal and was President of The Royal Society for five years, a post held by the likes of Isaac Newton, yet he approaches science with refreshing humility, assuring his audience that, "If science teaches me anything, it teaches me that even simple things are fairly hard to understand and that makes me skeptical of anyone who claims to have the last word or complete understanding of any deep aspect of reality."

"the beginning of wisdom is knowing that you don't know."

Socrates

So, should those of us with far less brain power at our disposal than Lord Rees simply give up in the face of the complexity of human beings and the world we have done so much to shape? Can we find a middle way between overly simplistic views of the world, and despair in the face of the magnitude of our problems? I think we can. I recently came across the Civil Conversations Project in the United States. It's another gem from **On Being**, a programme which I can't recommend highly enough. The project is an attempt to find out how we can "speak the questions we don't know how to ask each other?" It addresses the seemingly intractable social and political arguments of our day. In 1994 two receptionists at an abortion clinic were shot dead by a pro-life campaigner. Many on both sides of the abortion debate were shocked by the violent turn of events. Some of those people met in secret over a number of years to see if they could create a dialogue rather than a debate. What was fascinating about the outcome was that no-one crossed to the other camp, but what was gained was a deeper understanding of and respect for the commitment and values of the other side. The conversation is ongoing.

Perhaps then what we need to encourage in ourselves and in the next generation is a greater capacity for acknowledging complexity; a greater capacity for being able to engage with those who disagree with us, in order to really listen and find solutions to our complex problems. Marcus du Sautoy, Simonyi Professor for the Public Understanding of Science at Oxford University wrote in **Oxford Today** that, "It's an increasing revelation across the academic world that many of the problems we are trying to crack are not amenable any more to a single subject focus." The need for specialisation is real but it cannot be at the expense of making connections between disciplines. du Sautoy argues for a different kind of education, one where we tear down "the walls between classrooms" in order to teach "in a more holistic way." This is literally what happened at the Massachusetts Institute of Technology (an institution that usually features in the top three in Global Rankings of Universities) in the 1940s.



Building 20 was a "temporary" wooden structure speedily thrown up during the Second World War for war-related research. The building survived until 1998 and became known as "The Magic Incubator", famous for its variety of occupants from different academic disciplines. The flimsy nature of the internal walls meant that ripping them down and reconfiguring space was easily done. This was a building of no architectural merit but what it provided was flexibility of use and perhaps, most important of all, the potential to break down metaphorical walls between the different academic fields. High risk projects and new disciplines, like linguistics, gravitated to Building 20, and the cross fertilisation of ideas here is thought to be responsible for the incredibly productive research output that emerged: from educational research programmes that transformed the teaching of physics to the **Tech Model Railroad Club,** thought to be responsible for the birth of computer "hacking".

When Donald Rumsfeld made his much-mocked 2002 statement that there are "known unknowns" and there are "unknown unknowns", he was very possibly channeling Socrates who, in the fourth century B.C., argued that, "the beginning of wisdom is knowing that you don't know." If Lord Rees can admit that he doesn't know then I sure as hell can too. So, let's keep tearing down the walls between ourselves and those who disagree with us, whether it's the food we should eat, climate change or the threat posed by international terrorism. If we do, then we might find that, in an age of individualism, we are more than the sum of our individual parts.

Kate Jones works at a sixth form college in Cardiff, where she teaches critical thinking to young adults. Follow Kate on twitter @ktqtips90

Chef's corner

With Ryan Turner

Ryan continues his series of low carb recipes for us. For this edition, he's created some delicious summer dishes.
www.thefoodbible.com

Ingredients

1 large onion, finely chopped
4 sticks celery finely diced
1 clove of garlic, finely sliced
Small leek, finely chopped
250g good quality frozen peas
A few sprigs of mint, chopped
500ml vegetable stock
50g butter
50ml Crème fraiche plus extra for garnishing
8 rashers Pancetta
Salt and ground black pepper for seasoning

Serves 4

Method

1. Put the onion, leek, celery and garlic along with the butter in a large heavy bottomed pan. Lightly cook the vegetables, without allowing them to colour, for approximately 5 minutes.
2. Add the frozen peas and continue to cook for another 5 minutes, stirring constantly.
3. Add the hot vegetable stock and mint and cook on a medium heat for approximately 10 minutes, until the vegetables are tender.
4. Remove from the heat, stir in the crème fraiche and liquidise the soup.
5. Pass through a strainer and adjust seasoning to taste
6. Grill or pan fry the pancetta strips until very crispy and roughly chop into thin strips. Sprinkle the crispy pancetta strips into the centre of the soup then garnish with swirls of crème fraiche and finely shredded fresh mint.

Chef 's tips

For a lighter version of this soup leave out the pancetta and use ½ tsp of olive oil instead of butter to cook the vegetables. Use low fat crème fraiche to garnish the soup.

For a vegetarian version simply leave out the pancetta for an equally delicious soup.

Smoked salmon and avocado mousse with king prawns dressed in chilli and lime

Ingredients

2 Ripe avocados
2 Limes
Pinch Cayenne pepper
150ml Double/heavy cream
100g Smoked salmon
1 Lemon
50g Cream cheese
2 Spring onions/scallions, finely chopped
16 King prawns/shrimp
Salt and pepper for seasoning
1/2 Red chilli (deseeded and finely chopped)

Serves 4

Method

1. Begin by making the avocado mousse, cut the avocados in half and remove the stone, peel off the skin and place into a measuring jug.
2. Using a hand blender, whiz the avocados until they are smooth and creamy.
3. Add the juice of one lime, a pinch of cayenne pepper, seasoning and 50ml/2 fl oz of cream to the avocados and whiz again until all of the ingredients are incorporated and creamy.
4. Spoon the avocado mixture into the bottom of 4 serving glasses.
5. To make the salmon mousse place the salmon and the juice and zest of half a lemon into a blender and blitz until smooth.
6. Put the remaining cream and cream cheese into a mixing bowl and beat with an electric whisk until the mixture is light and fluffy.
7. Finely chop the spring onions/scallions and add to the cream mixture along with a pinch of cayenne pepper and seasoning.
8. Gently fold in the smoked salmon mixture to make a soft creamy mousse, spoon into the serving glasses.
9. To serve top with four king prawns/shrimp which have been marinated in the juice of half a lime and half a finely chopped red chilli.

Serve with crusty brown bread, a lemon wedge and a dressed salad for a classic prawn cocktail alternative. Harcombe followers can ditch the bread.

Chef's tips

Make this the day before your dinner party and leave in the fridge so you have more time to relax on the day of your party.

If you don't want to top the mousse with prawns you can use a few slices of cucumber instead

Smoked chicken, avocado and strawberry salad

Ingredients

400g Cooked smoked chicken breast (sliced)
250g Mixed salad leaves
2 Ripe avocados
Juice 1/2 lime
150g Strawberries

For the dressing:

2 tbsp Orange juice
2 tbsp Lime juice
1 tbsp Wholegrain mustard
Zest 1/2 Orange
3 tbsp Honey
4 tbsp Extra virgin olive oil
Sea salt and pepper to season

Serves 4

Method

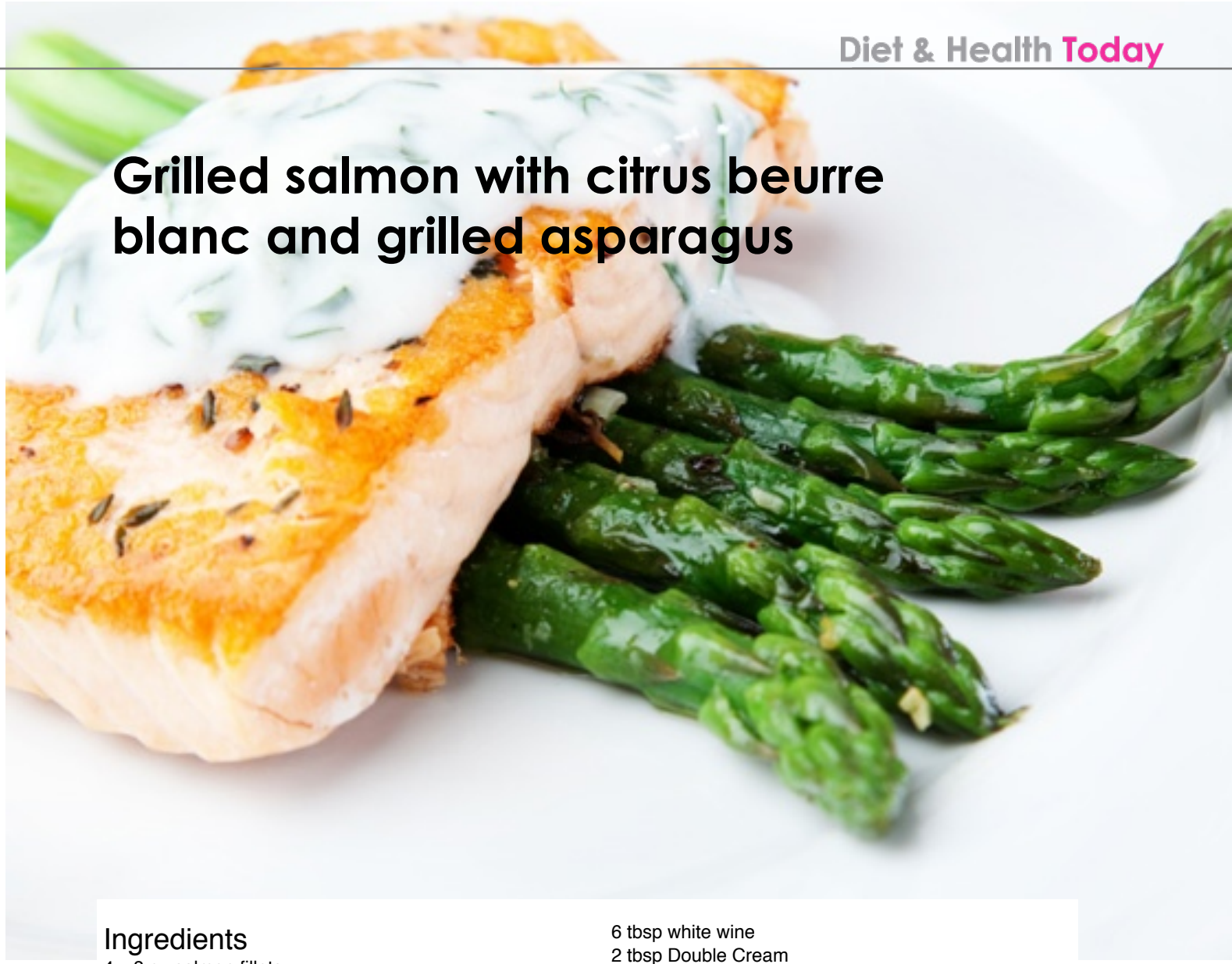
1. Divide the salad leaves between 4 serving plates.
2. Slice the chicken breast and divide between the four plates, scattering onto the salad in a rustic fashion.
3. Cut the avocados in half and remove the stone, remove the skin and slice into thin strips, squeeze over a little lime juice to prevent the avocado from discolouring and add to the salad.
4. Slice the strawberries and add to the salad in a random fashion.
5. To make the dressing whisk all the ingredients together.
6. Drizzle over the salad and serve immediately.

Chef's tips

If you don't have smoked chicken breasts, you could also use freshly grilled chicken instead.

Try adding some toasted croutons to the salad to give it a bit more crunch (Not Harcombe followers).

Grilled salmon with citrus beurre blanc and grilled asparagus



Ingredients

4 x 8 oz salmon fillets
2 tbsp unsalted butter (melted)
Salt and white pepper

For the beurre blanc:

150g Unsalted butter
2 large shallots, finely sliced
2 tbsp white wine vinegar
6 tbsp white wine
2 tbsp Double Cream
1/2 tsp Lemon zest
1 tsp Lemon juice
Juice of 1 lime
Freshly ground black pepper
1/2 Chopped tarragon
2 bunches (16-20 stalks) Fresh asparagus

Serves 4

Method

1. To make the beurre blanc, place the shallots, vinegar and wine in a pan and reduce until there is almost no liquid left.
2. Add the cream and heat gently. Whisk in the butter a little at a time, never allowing the sauce to boil. Season with lemon juice and zest and lime juice and season well.
3. To prepare the asparagus cut off the woody ends and peel away the lower harder skin of each asparagus spear.
4. To cook the asparagus plunge into salted boiling water for 6 to 8 minutes until tender, drain, season and brush with melted butter.
5. Brush each salmon fillet with melted butter and season with salt and white pepper. Place under a preheated grill for 5-6 minutes until just cooked.
6. Serve immediately with the, beurre blanc and asparagus.

Chef's tips

Serve with steamed sugar snap peas or mange tout instead of asparagus.

The story behind kefir

Shann Jones

A traditional Eastern-European probiotic drink called kefir has been making a lot of superfood lists lately, both for its health-promoting properties and powerful "psychobiotic" bacteria, which positively affects the mood centres of the brain, alleviating anxiety and depression.

But what is kefir, and what does it do?

Kefir (pronounced ke-feer) from either the Arabic "keyf" (joy and pleasure) or the Turkic "kopur" (milk) is a fermented drink that originated with shepherds of the North Caucasus region. Kefir is a natural probiotic drink, similar to – but stronger than – active yogurt.

Both kefir and yogurt are cultured milk products …but they contain different types of beneficial bacteria. Yogurt contains short-lived beneficial bacteria that provide food for the friendly bacteria that reside there. It's a "one-shot deal" – only aiding digestion while the yogurt is actually in your system, so you need to keep reintroducing it to see any benefit.

But kefir contains live, active, growing, living cultures of very strong strains of normal flora; these will actually permanently repopulate your digestive tract with good bacteria, powerful enough to overtake harmful organisms – a feat that yogurt can't match.

Kefir's active yeast and bacteria provide more nutritive value than yogurt by helping digest the foods that you eat and by keeping the colon environment clean and healthy. Because the curd size of kefir is smaller than yogurt, it is also easier to digest, which makes it a particularly excellent, nutritious food for babies, the elderly and people experiencing chronic fatigue and digestive disorders.

In addition to repopulating the digestive tract, kefir also adds enzyme stores to in the body.

If you are lactose intolerant, kefir may be one of the only dairy foods that you can drink, as it is lactose-free. The cultures on Kefir are active and growing when they enter your body. They thrive in dairy and use up the lactose and partially digest the proteins, making it a product that most people can ingest and will benefit from. Even people with milk sensitivities can usually drink kefir. The same is not true with yogurt. Kefir can be made from any milk: goat, cow, ox, sheep, etc. Goat's milk in particular is easily tolerated by many people because of its molecular similarity to human milk; raw goats milk is more widely tolerated still because of its naturally probiotic nature. So kefir made with raw goats milk is the most powerful – and the most widely tolerated – of all fermented milk probiotics.

To get the same amount of probiotics in a pill, you would need to consume up to 35 pills a day. The dormant, dehydrated probiotics that you find in a pill tend to be one or two strains per capsule, whereas kefir contains up to 45 strains of beneficial yeasts and bacteria.

The bacteria in kefir are live and thriving in their own environment, with their own prebiotic food, in a medium that sticks to the inside of the intestinal wall for maximum effect This is a tremendous boost to your system and will repopulate your digestive tract more quickly, more efficiently, and more thoroughly than probiotics.

Kefir contains several major strains of friendly bacteria not commonly found in yogurt, Lactobacillus Caucasus, Leuconostoc, Acetobacter species, and Streptococcus species. It also contains beneficial yeasts, such as Saccharomyces kefir and Torula kefir, which dominate, control and eliminate destructive pathogenic yeasts in the body. They do this by penetrating the mucosal lining where unhealthy yeast and bacteria reside, forming a virtual "clean team" that housecleans and strengthens the intestines. So your body becomes more efficient in resisting such pathogens as E. coli and intestinal parasites.

The benefits of kefir are extremely well known around the world, although it is just now becoming popular in the UK. Presently, kefir is the most popular fermented milk in Russia. Various reports have stated that it accounts for between 65% and 80% of total fermented milk sales in Russia, with production of over 1.2 million tons per year in 1988. Currently kefir is being manufactured on a commercial scale in Czechoslovakia, Finland, Hungary, Norway, Poland, Sweden, Switzerland, Russia and various of the former soviet union states, Denmark, the United States, France, West Germany, Canada and parts of southeast Asia. But kefir is only now becoming widely appreciated in the UK.

The benefits of Kefir

The benefits of kefir are many, but can be summarized this way: a health gut is anti-inflammatory, and kefir will restore the bacteria that keeps your gut healthy. Kefir repairs the damage done by antibiotics to your "microbiome," or 2 kg mass of live bacteria that thrive in your gut, and help your body to process food, fight infections and deal with allergies.

The kefiran (a water-soluble polysaccharide) in kefir has been shown to suppress an increase in blood pressure and reduce serum cholesterol levels. Kefir is a strong source of digestible protein and the proteins are heart healthy. What's more, this anti-oxidant contains compounds that inhibit mutation. Because of naturally occurring sugars within kefir, it is a good tool for regulating blood sugar for those who struggle with diabetes. Kefir boosts the immune system to effectively fight external germs and potential diseases. It treats constipation, diarrhoea, colon cancer, ulcers, respiratory conditions, eczema, psoriasis, acne and diseases bourne from gut dysbiosis (a destructive imbalance of microbial flora which is

linked to e.g. inflammatory bowel syndrome and chronic fatigue syndrome). Being high in lactase (because the bacteria and yeast within the kefir interact in such a way to form this enzyme) it absorbs the lactose that results after the cultured process. Therefore those who are lactose-intolerant can still consume kefir without getting the usual symptoms that come from ingesting dairy products such as yogurt, milk or cheese.

Kefir is teeming with vitamins and minerals that are easily absorbed by the body such as vitamins B and K, folic acid and phosphorous. Particularly abundant are calcium and magnesium. Reported benefits are a substantial decrease in bloating, wind, discomfort in the abdominal area and thrush.

Problems occur when the ratio of yeast to friendly flora escalate out of control. Kefir helps keep the yeast in order down to twenty percent, propelling the good flora to an eighty percent colonisation for the digestive tract to do its job optimally and correct digestion is the key to unlocking the cells to receive the nourishment from food eaten, i.e. it facilitates the fuel getting to our engine.

The functioning of liver, gallbladder, circulation, heart activity, metabolism, oxygen supply to the cells, blood circulation to the brain improves and stabilizes. Also so-called senility does not occur or is even reversed and the elasticity of the blood vessels and joints is restored.

The research

Russian bacteriologist, Ilja Iljitsch Metschnikow, won the Nobel Prize in 1908 for citing the life-extending properties of kefir. He researched the connection between the relatively high age of Bulgarians and Rumanians and their regular consumption of sour milk (Kefir or lactobacillus bulgaricus).

Six times Nobel award-nominated doctor, Johanna Budwig, says that kefir spun in a blender with cold-pressed flaxseed oil creates a newly structured power-housed nutrient which can actually help the immune system to prevent and degrade cancer. This is not surprising since there is a strong linkage between candidosis infection (which kefir helps kill) and cancer formation. Consumers of a Western diet are reported to have about three kilograms of mucoid plaque stuck to the walls of their intestine, which harbours bad bacteria.

Dr. Natasha Campbell-McBride, MMedSci (neurology), MMedSci (nutrition), founder of the GAPS diet and the Cambridge Nutrition Clinic, writes extensively of the benefits of kefir in her book Gut And Psychology Syndrome. Natural Treatment Of Autism, ADHD, Dyslexia, Dyspraxia, Depression And Schizophrenia.

Kefir is made by fermenting “kefir grains” in milk. The grains acidify the milk until it becomes fizzy and sharp tasting. At this level of acidity, harmful pathogens like E coli and Salmonella are unable to survive in the milk, rendering it as safe as pasteurizing – but a whole lot better for you!

The origins of kefir

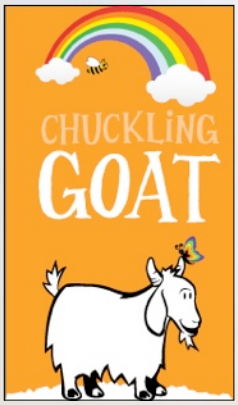
The origin of Kefir grains themselves is unknown, a bit romantic and mysterious! You can’t make kefir grains – new kefir grains can only be obtained from propagating and dividing existing kefir grains.

Amongst the people of the northern slopes of the Caucasian Mountains there is a legend that Mohammed gave kefir grains to the Orthodox people and taught them how to make kefir. The ‘Grains of the Prophet’ were guarded jealously since it was believed that they would lose their strength if the grains were given away and the secret of how to use them became common knowledge. Traditionally, kefir was made with cow, sheep or goat’s milk, fermented in sacks made from animal hides. Usually the kefir sacks were hung in the sun during the day and brought back into the house at night, when they were hung near the door. Everyone who entered or left the house was expected to prod the sack with their foot to mix the contents. As kefir was removed more fresh milk was added, making the fermentation process continuous.

Kefir grains were regarded as part of the family’s and tribe’s wealth and they were passed on from generation to generation. So, for centuries the people of the northern Caucasus enjoyed this food themselves, but didn’t share it with any outsiders!

Other people occasionally heard strange tales of this unusual beverage which was said to have ‘magical’ properties. Marco Polo mentioned kefir in the chronicles of his travels in the East. But kefir was largely forgotten outside the Caucasus for centuries, until news finally spread of its use for the treatment of tuberculosis in sanatoria and for intestinal and stomach diseases. Russian doctors became convinced that kefir was beneficial for health and the first scientific studies for kefir were published at the end of the nineteenth century. But kefir was extremely difficult to obtain, and commercial production was not possible without first obtaining a source of grains. A beautiful young Russian woman named Irina Sakharova was sent into the heart of the Black Caucasus to get hold of some grains. After a harrowing adventure, which included being kidnapped by the prince who controlled the grains, and barely escaping a forced marriage to him, Irina came back with 10 pounds of the grains. In 1973 the Minister of the Food Industry of the Soviet Union sent a letter to Irina Sakharova thanking her for bringing kefir to the Russian people.

Kefir is a lot easier to get hold of these days than in Irina’s time! Chuckling Goat, located in southwest Wales, makes kefir in the traditional style with raw goatsmilk and real kefir grains, which can be delivered to your door.



Shann Jones and Richard Jones are the founders and directors of Chuckling Goat. Their products can be found at Fortnum & Mason, Nutricentre and online at www.chucklinggoat.co.uk. Their book, *Confessions from Chuckling Goat: How Kefir and Natural Remedies Saved My Husband’s Life*, will be published by Hay House in Feb 2015.

Follow Shann on twitter @Chucklinggoat

John's Piece

John Nicholson

Summer is all very well. The warm weather is most welcome after nine months of autumn and winter and although having to tolerate seeing men in those 3/4 length shorts is a downside, there is a bigger problem with summer. What is it? I'll tell you.

It's salad. Bloody big bowls of salad.

Summer is the time the salad fascist comes out to play, wagging a finger and trying to appear holy and well-fed. Rubbish. Fry me a steak, baby. I'm anti-salad.

In this era of food misinformation and outright corporate-funded lying, the one thing we can all agree on, it would seem, is that salad is good for you. The magazines and TV ads are full of fresh-faced, clean-skinned women (it's always women) with well-conditioned hair and a manic smile beaming out at us in a floral print dress, holding a big bowl of salad like it's the Holy Grail; like eating salad is almost a moral thing to be celebrated.

Worse than that, salad has also become a middle-class stick to beat the filthy poor or the lumpen prols who won't get with the 'hey its so healthy and tasty' programme. Ooh look at you fatty, why don't you eat some more bloody salad? You can hear them thinking it if not actually saying it. Only in Britain could salad be used as part of the class war. Don't believe me? OK. Is watercress working class or middle class? You know the answer. Are pea shoots working class or middle class? How about rocket? You know as well as I do that somehow, and I don't know how, these foods are middle class. They are aspirational. Plain old iceberg lettuce is working class but chicory is definitely a social class up. By implication, the more salad you eat, the posher you are. The more well-to-do, funky and cool. Well, I'm not buying it. This is another reason to mistrust salad.

I was a vegan for 26 years, I've had my fill of salad and much bloody good it did me (read my book *The Meat Fix* for the full, gory details). I don't care if it is summer, nor if you are wearing a floral print shift dress and appear almost ridiculously happy to be serving salad to your expectant family of blank-eyed drones; salad is boring and only to be tolerated in small measure when placed with a lot of meat, fat and/or cheese. There is no moral victory in eating a radish (wait for those farts to kick in and see how you like me). You won't become richer or more successful if you choose the baby spinach leaf salad at your local Waitrose and don't be fooled into thinking otherwise. And ironically you won't be healthier either, not unless you've started eating salad instead of drinking sump oil and high fructose corn syrup smoothies.

This is because although salad is pushed to us by everyone from your doctor to your supermarket as a universal panacea for good health, in actual fact, it doesn't contain almost any nutrition at all. Not unless you count all the pesticide residue on lettuce to be nutrition (salad leaves are usually the most sprayed vegetable in the store). As Zoë has long pointed out, you get more vitamin C from liver than you do from a whole skip full of salad. You could push leaves into your face for a week and still not get as much nutrition. Salad is little more than water and a few trace minerals and vitamins.

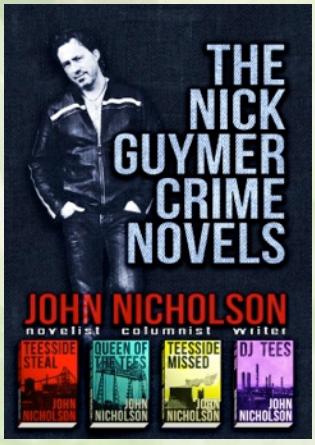
Sure you can get thin eating just salad and this is exactly why it should be avoided. The reason you lose weight eating only salad is exactly because there's nowt in it. Why wouldn't you lose weight? You're effectively starving yourself. There almost nothing in it to feed your body, so yes, eat salad and waste away. But being thin isn't the same thing as healthy and what we all need to be doing is feeding ourselves appropriately in order to perform to our maximum.. That isn't going to happen by eating a lot of celery or cress. Trust me. Though as any porn star can tell you, celery does cause the male body to over-produce some of the more intimate bodily fluids. I'm just sayin'. All knowledge is power, right?

All that happens when you eat loads of salad is you get hungry really quickly unless you've drenched it in a lot of oil, which, as you'll be aware, is not recommended because Fat Is Bad. It's not, of course - but when did the truth and food ever get into bed together in the 21st century? There's no doubt pouring half a bottle of organic extra virgin olive oil onto salad improves it. So if you must indulge in it, be my guest and drown the bloody stuff.

(A quick anecdote: I was in Waitrose. Sorry. A small boy asked his dreadlocked hippy father, 'why is it called extra virgin olive oil?' His dad, without missing a beat replied 'Because its not been f*cked with.' Proof that not all Waitrose customers are gilet-wearing, Audi-driving, middle-class snobs.)

If I want something raw, I shall enjoy some carpaccio of beef. A few salad leaves here and there are fine, but let's not kid ourselves any longer into thinking it is a replacement for proper food. It is not superior to animal fat or protein. It won't keep you alive longer, it does not absolve you of all your sins, it does not make you a better person, not even if you wear a floral print dress - which is just as well because I look terrible in a floral print dress.

This summer, make a stand against the salad fascists.



John Nicholson.
www.johnnicholsonwriter.com
Follow John on twitter
@johnnythenic

Beauty from within? Alice Hart-Davis

As a bit of a departure from our core features, we invited **health and beauty journalist Alice Hart-Davis** to share some insights from the beauty side of life. Alice has written for just about every UK newspaper and magazine that you can think of and we gave her a free hand to choose a topic. For those of you, like Zoë, who haven't yet mastered skin creams, you may not even know that there are beauty supplements. Alice shares her thoughts on beauty pills, and where they fit with a natural lifestyle…

Beauty from the inside out

Most of us think we're doing pretty well if we manage to keep our skin clean and moisturized. But now, a mass of 'beauty supplements' are emerging, determined to convince us that they are the next step in skincare, designed to reach the parts that creams can't, namely, to tackle skin-improvement from the inside out.

It's a seductive idea. We are all familiar with the idea that what we consume is reflected in the way we look. The skin is the largest organ in the body so it ought to benefit from improved nutrition just as our bodies do, and any of you who have given Zoë's regime a whirl will know how cutting out 'anti-nutrients' like sugar, alcohol and caffeine can make your skin look miles better, really quickly.

A decade ago, there were only a handful of 'skin pills' and few of them were taken seriously. But in the past few years, dozens of new brands of beauty pills and beauty drinks have emerged onto the market and they seem to be striking a chord with consumers who want to go that bit further with their all-round skin care.

Do we need them?

Good question. Isn't eating a good diet enough? A nutritionist would probably say that eating right – getting enough omega 3 essential fatty acids (which help keep the membrane of skin cells in good order so that they hold moisture better), antioxidants (for scavenging up the free radicals that accelerate ageing processes in the body) and vitamins (good for skin repair) is the first place to start.

And so it is.

So, how can beauty pills help?

I think the main way that supplements can help is by filling the gaps in our nutrition. Even if we're super-keen and well motivated, it's hard to eat to optimum levels the whole time. And then there are the things we don't like eating so much. I don't mind eating oily fish, even for breakfast, but I know it's not universally popular. Lots of people don't love vegetables, particularly not dark green leafy vegetables and many micronutrients are hard to consume in sufficient quantities to be of benefit.

Where's the proof?

What we really want to know is whether beauty supplements really can transform our skin (and that our money will be well-spent).

The good news for those of us who prefer a bit of proper evidence of efficacy to enthusiastic anecdote is that increasingly, supplement-makers are putting their wares through decent, placebo-controlled clinical trials – to show that they really do give discernible results for the skin. Colladeen Visage has been shown to give skin the equivalent of SPF10 protection from sun damage, which is pretty impressive, and also to reduce spider veins considerably; Perfectil Platinum has been shown to protect skin from the damaging events of winter weather; Dove Spa has done trials which show a significant reduction in wrinkles –and Caudalie have data showing their pills give wrinkle-reduction, too. The brand with the most convincing studies of all is Imedeen, which you might think of as the matriarch of the genre – it has been around for 22 years and has a dozen clinical studies and many consumer studies to show that it not only improves skin quality, but helps your skin hold moisture better and makes the dermis – the lower layer of the skin where you find the collagen and elastin that gives skin its bounce – more dense.

What about collagen supplements?

One category of supplements that still perplexes me a bit is that of collagen supplements. Prompting the skin to produce more collagen, which helps to give the skin its structure, is one of the key aims of many face creams and non-invasive treatments. How much easier, the makers of collagen supplements suggest, to pop a few pills or down a drink containing collagen which has been broken up into tiny fragments that the body can use to improve the skin. Which sounds fair enough, until you consider that any collagen you eat will get broken down by the digestive process to its component amino acids, which surely could then be used by the body for any repair processes it fancied, and not just for the skin… and couldn't you get a get the same bonus supply of amino acids by scoffing an extra protein-rich piece of chicken?

Whenever I put this to the makers of these supplements, they say that the mechanism by which the body uses the products to make new collagen 'isn't fully understood', or something to that effect, so I'm not convinced.

Yet evidence is starting to pop up for these, too, showing that taking the products can give improved moisture retention and better collagen density. PureGold Collagen have done some trials on this and so has Purelogicol.

I still think the first supplements to try – for their all-round benefits, as well as for their skincare potential – are omega-3 supplements. After which, take your pick according to your budget. Beauty pills are an easy enough thing to add into your life – and they are certainly one of the more natural approaches to ageing gracefully.

Alice Hart-Davis is a beauty journalist and creator of Good Things skincare www.alicehartdavis.com
www.goodthingsbeauty.com
Follow Alice on twitter @AliceHartDavis

You don't know squat!

Why the way you sit affects your health more than you know.

Olly Selway

Humans didn't evolve to sit. It's something we're not well suited to and that we're not very good at it. In fact sitting is a pretty new idea, only in common usage for a few hundred years. Before that, sitting was something reserved for kings and aristocrats – the only people who had access to the luxury of a chair.

Just as evolution expected us to 'eat real food' (I think I remember Zoë Harcombe mentioning this a couple of times), evolution expected us to squat, not to sit. The squat is an entirely different creature however, as any of you who have tried to maintain a deep squat for any amount of time will have discovered.

Sitting and gravity

Thanks to all the sitting we do, squatting is now also very difficult for us, but in a wholly different way. In order to squat properly one must maintain a really well-organised body, bending flexible muscles and joints at just the right moment to maintain a perfect relationship with gravity. For most of us older than five, without practice and training, a good squat is well out of reach and cannot replace the practicality of sitting in a chair.

The problem with sitting is that it breaks down our relationship with gravity. When sitting, we introduce a challenge that can't be solved by our inherent instinct for balance. It's like an unsolvable Rubik's Cube. We discover that, no matter how we sit, we can't quite find the right position that allows us to feel properly aligned and comfortable, the way a good squat does for a child or a native of Asia or Africa who has squatted their whole life.

Sit up straight!

Instead sitting introduces a huge challenge: how to stabilise our wobbling carcass into a stable position, balanced on just two bony protuberances on the bottom of our pelvis. Our poor brain throws all sorts of crazy solutions into the mix to solve the problem. If we let it, it will have us crossing our legs, leaning on our elbows, slumping in our chair, crossing our arms – anything to try and maintain a coherent sense of balance.

Unfortunately none of these compensations will do the job we hope it will, so we shuffle from pillar to post trying endless position to alleviate the fatigue felt by exhausted postural support muscles.

The injunction to 'sit up straight' is no help at all. In an unworkable, dysfunctional position, muscles will fatigue and that familiar slump will set in once more.

Squatting. Practice makes perfect

Most of this struggle is subconscious, of course. And, at first, so are its downstream effects. However as time marches on and more research is done, it's becoming clearer and clearer that we ignore the challenge of sitting at our peril.

You may need to sit down to hear this

At the moment, there is strong evidence that sitting poorly (which almost all of us do) contributes to the decline of our health on a physical, emotional and aesthetic level.

On the physical side, poor quality sitting contributes hugely to back pain, osteoarthritis, poor circulation, high blood pressure, poor oxygenation, increased risk of injury, lower sporting performance and all manner of complaints that can be caused by the unnecessary compression of abdominal and thoracic organs.

In fact, the last of these appears to be a huge, largely unexplored, cause of ill health as organs - adrenals, kidneys, colon and stomach – are forced into strange shapes and fail to work as they should. Studies finding a strong connection between poor posture and low health and only now beginning to surface, but the connection appears to be a strong one.

On the mental side, a compromised sitting position (and resulting poor standing posture) can result or contribute to tiredness, lack of concentration and depression – mainly through the disruption of the proper action of our natural breathing patterns. In fact, sitting puts us into a mild 'fight or flight' response, preventing us from fully relaxing at any time or being fully alert and present in the moment.

Aesthetically, sitting makes us look ugly. Thanks to its chronic influence, the beauty of the human form and the grace associated with a perfectly erect carriage is lost forever. The results of too much chair time are a forward head position, a saggy abdomen and rounded shoulders – that classic "startled rabbit caught in headlights" look.

The issue is that when we rise from our chair we cannot shake off completely any shape that we were forced to contort our body into in order to avoid falling off the seat. Our muscle memory works like clay left out in the sun: we are baked into a new, stiff and awkward shape which alters the way we do everything. The way we stand, run, breathe, sing - everything.

This deterioration of muscular skeletal health is something that has been recognised by studies conducted on children before and after their first year and grown-up school: a time when they are expected to sit at table, curl forward and press a pen onto a page for the first time. After a single year of organised schooling, their posture is heavily compromised and the expressive openness of childhood is already on the way out of the window.

Excessive pressure on the spine from poor sitting typically results in a loss of standing height of about 3 inches in middle-aged adults, increasing by another inch each decade. In some older individuals it can be considerably more, as evidenced by those individuals who struggle to lift their heads high enough from their 'walkers' to see where they are going.

Specifically, it causes alterations in muscle length in key muscles responsible for keeping us upright and well-aligned. Muscles to our rear ('the posterior chain') become pathetically weak, and muscles to our front ('the anterior chain') become chronically tight. (Ironically most gym programmes accidentally tighten the anterior chain, while forgetting to train the posterior chain at all!)

Our natural postural reflexes, seen in the perfect alignment of most young children, are lost in this complex neurological assault on our sense of balance and alignment. What now feels now like our 'natural' way to stand, walk, run etc, is now only a shadow of what it once was. Because we confuse 'habitual' with 'natural' or 'optimal', we are left with little clue why we don't take the same pleasure in physical movement that we used to.

Rethinking sitting

So what answers are there? Lumbar Supports? Postural vests? Kneeling chairs? Swiss balls as seats? Regular massage? Yoga? Pilates? Standing desks? 'Walk and work' desks incorporating treadmills? Squatting on the floor?

Sorry to disappoint, but I am still researching this problem as I write this - though I feel I'm close to reaching some powerful solutions. In the meantime, I would urge you to consider how much time you spent sitting – in the car, at the table, at the desk, on the sofa – and see whether you need it all. As a physical trainer, I'm duty bound to advise you to spend more time on your feet and more time gently active.

However I recognise that we now live in a society that expects those of us who work primarily with computers, paper or customer service to spend a minimum of 8 hours a day sitting. There doesn't seem to be much getting around this, before the arrival of the final apocalypse.

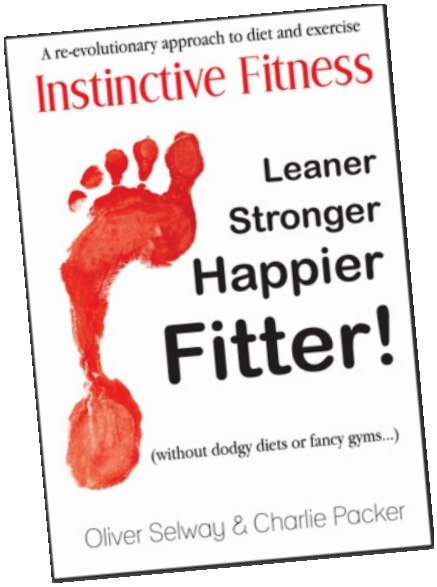
Answers need to be realistic, sensible and based on solid science – unlike a number of 'solutions' I've listed above.

In a future article I will start to examine some of the more technical answers to a problem rapidly approaching epidemic proportions. (Back pain on its own raises the issue to be worthy of the term 'epidemic', if you think I might be leaning in any way towards exaggeration.)

Interestingly, this problem isn't new to our generation. The problem of how to protect adults and children from the damaging effects of sitting was tackled by our Victorian ancestors. Unfortunately most of this intelligent research has been ignored, forgot or discarded – so it's there that I've started my search for a timely solution to this pressing problem.

I'll let you know any good answers in my next article. Right now I'm getting out of this chair and going for a walk!

Olly Selway is a personal trainer , founder of Woodland Workout and author of Instinctive Fitness.
www.paleotraining.co.uk
Follow Olly on twitter @PaleoTraining



Tips for a wild summer

Tara Wood

This goes out to all of you in the Northern Hemisphere…and those of you in eternally hot places.

1. Get in Wild water

By this I mean all of the outdoor swimming holes you can find near you or on your travels. There are more out there than you think… My flight to Kenya last week was delayed a day and I was put in a hotel in Heathrow next to the air field and a busy road. I went for an exploratory run and found a park with a river running through it and had a most unexpected but refreshing dip!

Although the summer is a comfortably warm time to start this habit, swimming in cold water during the winter is also really good for you. Cold water dips enhance your libido: studies have shown an increased production of testosterone and oestrogen in men and women who regularly take cold showers. They also help increase circulation, stimulate your parasympathetic 'rest and repair' system and boost your immune system. Acute cold increases your white blood cell count, which means you are less vulnerable to the flus and colds going around, (that are often attributed to being out in the cold! However if you are run down, then best to keep wrapped up until you feel strong).

And, the rush! Cold water dips stimulate the release of endorphins.

Evolutionarily, we would have been exposed to extremes of temperature and adapted to this. A good way to feel comfortable is to expand your comfort zones… Get cold, get tougher and feel more relaxed in the outdoors.

If you are in the UK, the most well known places to dip in London are the ponds on Hampstead Heath and the Serpentine. Some useful websites for Wild swimming are below. In my experience if you don't put your head under, (or have any open wounds!) you can swim in loads of places that don't occur to most people…. Always wear respectable underwear just in case…

Outdoor Swimming Society website
Wild Swimming website – exploring Britain's outdoor swimming places

2. Hydration

Most obviously, you do need to drink more water in the heat and people can forget and get de-hydrated. I've just been in London and witnessed a mildly hot day and was bombarded with reminders over loud speakers to remember to drink water!!

But the wild insight is that humans can handle stretches of acute dehydration. Particularly if you are used to it. We don't need to clutch a water bottle and sip from it all day. If we need water, you will feel thirsty. If you have had enough water, you won't feel thirsty – usually… It is true that if you haven't been in the heat for a while it might take a few days for your body to give you accurate signals and for you to listen to them. Also diuretics like tea or chocolate might get rid of water faster than your body's thirst response can kick in. However, once you get familiar with the heat of the place that you are in, you can rely on the simple rule: if you are thirsty, drink.

I quite enjoy going for stretches without water and then glugging down loads of water at once. It's often more convenient and makes me feel much more comfortable if I do happen to go for a stretch without water. Acute stress is often revitalising and strengthening for your body – chronic stress is what degrades your health.

3. Adventures in the outdoors

With long days and without the dangers of the cold, this is the time to explore the outdoors. Hook up with another Wild One (put a post on our Facebook page to see if anyone lives near you) or unsuspecting soon-to-be Wild person. The benefits of spending time in nature are many and profound – see our blog on **How Nature Affects Your Health** for more info.

- Set off early on your bike to a pub in the country for lunch. Sleep under a tree for an hour or two to digest and then bike back.

- Run to somewhere and hitch back. I did this with a friend – found a room in a little village called Alfriston and spent the day running across the South Downs (UK) without maps not knowing where we would end up, we even had to cross a couple of rivers. Then we hitched back along the A27. The human exploratory drive has been studied as something that has significance as an evolutionarily important characteristic, that remains as a drive in us today, that if fulfilled gives us satisfaction.

- Sleep out. Netta (who runs the Wildfitness Isle of Wight location) and her family who live on the island keep this practice alive. They have a favourite spot which is softened by a bed of heather and looks out over the sea. Sleeping with the open sky above you gives you a unique sense of freedom and communion with nature. The trick is to take many more sleeping bags and blankets than you think you might need. For an in depth guide on sleeping outdoors if you want to do it regularly, **this link is useful**.

So it's summer! Seize the season! Take the opportunity to bike, run or walk to work. Open windows to the outside whenever you can, eat sun-ripened seasonal fruit and veg, sign up to outdoor sports and wear very few clothes. We're sending you all support from Watamu where we know the sun very well. If you need to cool down, come and see us – it is our cooler monsoon season for July and August (it's still a cosy 27 degrees, but the mornings and evenings are the perfect climate for training!).

Tara Wood grew up in Kenya and, after studying Biological sciences at Oxford, she founded Wildfitness in 2000. www.wildfitness.com

Contributors

Thank You!

Zoë Harcombe
Author and obesity researcher.
Creator of The Harcombe Diet.
www.zoeharcombe.com

Ryan Turner
Low-carb chef and food consultant.

Clare Hargreaves
Freelance food writer and creator of 'Feast with a Chef'
www.clarehargreaves.co.uk/

Shann Jones
Founder Chuckling Goat. Author.
http://www.chucklinggoat.co.uk/

Nina Teicholz
Author: The Big Fat Surprise.
@bigfatsurprise

John Nicholson
Writer, columnist, novelist, real foodie, ex-vegan
www.johnnicholsonwriter.com

Sam Feltham
Personal trainer and founder of Smash the Fat
www.smashthefat.com

Alice Hart-Davis
Beauty journalist. Creator Good Things Skincare
http://alicehartdavis.com/

Chris Packe
Experimenter. Writer. Doodler. Woodsman. Whittler. Dog off a leash.
Chris Packe's Freedom Blog:
www.chrispacke.com

Olly Selway
Founder, Woodland Workouts.
Author, Instinctive Fitness.
www.instinctive-fitness.com

Kate Jones
Kate works at a sixth form college in Cardiff, where she teaches critical thinking to young adults.

Tara Wood
Founder of Wildfitness, Tara continues to develop courses and philosophies that challenge us in a natural way.
www.wildfitness.com