



The 5:2 Fast Diet: An Ayurvedic Review

by Nadia Marshall

I confess... I have a bit of a crush on Dr Michael Mosley. He's super clever, well-considered, doesn't mind experimenting on himself, is unafraid to tell it how it is and has a rather lovely accent. I love watching his documentaries and was particularly fascinated by his 'Eat, Fast and Live Longer' doco which led to the world-wide sensation of the 5:2 Fast Diet.

After learning about the many benefits of calorie restriction and intermittent fasting from a handful of the world's leading fasting scientists, Dr Mosley was keen to integrate it into his life. All of the approaches he'd come across were a bit extreme for him so, after a period of personal experimentation, he came up with the 5:2 approach.

As far as diets go, this one is very doable and therefore, relatively sustainable. The science behind it is rather convincing too. So, it's worth a closer look. Plus, it gives me a good excuse to watch more Dr Mosley videos on Youtube...

What is the 5:2 Diet?

The 5:2 Diet or 'fast diet', as it was originally called involves fasting for 2 days of the week (they don't have to be consecutive) and eating normally for the other 5 days. In fact, you don't even have to completely fast for your two days, you just have to restrict your calories to 500 calories for women and 600 for men. For example, Dr Mosely has 250 of his calories for breakfast at 7.30am and 350 calories for dinner at 7.30pm, effectively fasting for a 12 hour stretch. Mimi Spencer, who co-authored 'The Fast Diet' book has a few snacks in between and just keeps to the calorie restriction. However, the book says evidence suggests that the longer the actual fasting period (rather than just calorie restriction), the more successful the diet will be. Drinks, including tea and coffee but not alcohol, are allowed throughout the fasting period.

No guidelines are given for the five normal days of eating. However, general guidelines are given for the fasting days. High protein meals are recommended to help satiate and sustain because high protein meals have a lower glycaemic index (GI) so provide a more gradual release of glucose into the blood stream. As a result of the calorie restrictions, low fat foods are also generally recommended on fast days, including low fat dairy products.

Once the desired amount of weight has been lost, you can switch to a 6:1 maintenance approach, fasting just one day a week and then bumping it up to two days again if you feel you need to.

The Theory

Intermittent fasting is based on the scientific theory of hormesis; the idea that when a human is exposed to a stress or variant it can toughen them up or, simply put, 'that which does not kill us makes us stronger'. Dr Mosley writes, '... for most animals in the wild, periods of feast and famine are the norm. Our remote ancestors did not often eat four or five meals a day. Our bodies and our genes were forged in an environment of scarcity, punctuated by the occasional massive blow-out'.

There are two classic examples of hormesis: exercise and eating vegetables. Exercise stresses the body and involves the tearing and ripping of your muscles. But, as we all know, if you don't overdo it, the body responds with repair that actually makes your muscles stronger. And, eating plant-based food is very healthy for us even though plants contain anti-nutrients and other harmful chemicals that are poisonous to us. Because they're in such low doses, they don't kill us but rather, they activate stress responses and switch on genes that actually protect and repair the body.

It is interesting to note that our eating habits haven't just changed in the last ten thousand years, they've actually changed in the last thirty years. In the 1970's people would go around 4.5 hours between meals. Now it's down to 3.5 for adults and 3 for children (and that doesn't include all drinks and nibbles). We're also eating 180 calories a day more in snacks and 120 calories a day more in regular meals.

So, not only are we eating too much, we're eating too often... and there are many recorded benefits to regularly flipping the body into 'famine' mode.

The Benefits of Intermittent Fasting

Some fascinating research has been carried out on Intermittent fasting that Dr Mosley reports on in detail in the documentary and again in 'The Fast Diet' book. In a nut shell, intermittent fasting has been shown to increase longevity, reduce dementia, improve mood and a sense of wellbeing, reduce depression and anxiety, reduce the probability of getting cancer, reduce LDL cholesterol and blood pressure and reduce insulin resistance. For more details on this research see the break-out box below.

A Summary of the Research

ALZHEIMERS & DEPRESSION: Professor Mark Mattson of the National Institute on Aging in Baltimore is studying intermittent fasting and dementia. He has found that genetically modified mice with a tendency for dementia who are put on intermittent fasts live for up to 20 additional months without any visible signs of dementia. In humans that would be the equivalent of developing signs of Alzheimers at 80 rather than 50. The fasting mice also have an increased production of BDNF (brain-derived neurotrophic factor) which has been shown to stimulate stem cells to turn into new nerve cells in the

hippocampus, an essential part of the brain for learning and memory.

BDNF also has an effect on mood, reducing anxiety and lifting mood, with effects similar to the repeated use of standard anti-depressants.

CANCER & DIABETES

Professor Valter Longo, Director of the University of Southern California's Longevity Institute is studying approaches that reduce the risk of developing age-related diseases such as cancer and diabetes. His research on fasting has shown that if you go without food for even quite short periods of time it switches on 'repair genes' which can confer long-term benefits. 'There is a lot of initial evidence to suggest that temporary periodic fasting can induce long-lasting changes that can be beneficial against ageing and diseases. For example, Insulin-Like Growth Factor 1 (IGF-1) has growth-promoting effects on almost every cell in your body. It keeps your cells constantly active. You need adequate levels when you are young and growing but high levels later in life appear to lead to accelerated ageing and cancer.

Professor Longo's research has shown that eating high levels of protein keeps IGF-1 levels high. Fasting (particularly from protein) helps reduce IGF-1 levels and also appears to switch on a number of repair genes. Calorie restriction also switches on a process called autophagy or 'self-eating' where the body breaks down old and tired cells.

WEIGHTLOSS, BLOOD PRESSURE & CHOLESTEROL

Dr Krista Varady of the University of Illinois in Chicago is studying Alternate Day Fasting – i.e. relatively little food every other day. In her studies to date this approach has led to impressive falls in low-density lipoproteins, blood pressure and weight.

Dr Michelle Harvie, a dietician based at the Genesis Breast Cancer Prevention Centre in Manchester has done a number of studies on two-day per week fasts on female volunteers. In the studies, the women on two-day fasts lost almost twice as much weight as the full-time dieters and insulin resistance had also improved significantly.

The Proposed Benefits of the 5:2 Diet

Because Dr Mosley came up with the diet himself, no research on the specific 5:2 approach had been carried out prior to its popularisation. However, due to the viral nature of the diet, combined with the emphasis on recording a range of statistics (including weight, BMI, Body Fat and fasting glucose), a large amount of anecdotal evidence has been recorded on the effectiveness of the diet, at least in terms of weightloss. Some of these testimonials can be found at the end of the book.

And, Dr Mosley happily shares his own personal statistics. After just three months on the diet, he lost 19 pounds (8.6kg), reduced his BMI by 2.4, reduced his body fat by 7%, lost 3 inches (7.6cm) from his waist and 1 inch from his neck. He also reduced his fasting glucose from 7.3 to 5, effectively reversing his pre-diabetic condition!

The other reported benefits of the approach include a change in appetite, attitude and a boost in energy. It is suggested that your appetite will decrease so you don't actually want to pig out on your five 'normal' days. And, apparently your eating habits will naturally change with no effort as your appetite for certain foods changes. Dr Mosley reports eating less meat, less bread, less refined sugar and developing a genuine disinterest in cheesecake. In terms of attitude, it is said the main shift will be realising you don't actually need to eat as much or as often as you always have – that you've perhaps been overdoing it for years.

The Pros of this Approach

The best thing about this diet is that it appears to work and is relatively easy to do, particularly for shortish periods of time. If you fall off the wagon, it is also easy to come back to. So if you need to lose weight or reduce insulin resistance in a shortish period of time it seems like a good choice.

Another good thing about the approach is with the focus on low calories and low GI, the diet will naturally encourage people to eat more veggies and fruit, at least on their fast days.

Although there is a focus on calories and GI, it is only for two days of the week so hopefully the five days of no focus is enough to ensure people don't get uptight around lists and numbers. This is a rare thing in a diet. The other rare thing is that there is so little focus on food... because the focus is on NOT eating! This is also surprisingly refreshing in a world so obsessed with creating more and more conflicting ideas about food.

In true Dr Mosley style, the book is quite thorough. It answers all of the questions that might come up when considering doing the diet and trouble shoots all of the issues you might face, particularly with the fasting. It makes the science very accessible and actually has a lovely tone throughout. Mimi is particularly warm, encouraging and forgiving in the FAQ section.

Another 'pro' of the diet worth mentioning is it helps people to realise that nothing terrible happens when you fast. That hunger is not necessarily a cause for panic and doesn't increase indefinitely... that it actually passes with time. This is a pretty big realisation for most of us!

I actually recommended this diet to my Mum. Why? Because I know she can happily skip meals. I know she's comfortable and familiar with low cal, low fat diets and has already been following a high protein/low carb approach so isn't into grains. This diet offers her more freedom and potentially more success than the other diets she's tried lately. And, she has a pitta/kapha constitution so I know she'll be okay on it. But... if she was purely pitta or kapha, I would have hesitated...

The Cons of this Approach

The main con of this diet is we don't really know why intermittent fasting works yet. The book openly confesses that we don't know whether it is the calorie restriction two days a week that creates the benefits or the actual abstinence from food. Both seem to have their benefits. And, we don't actually know why eating less or not eating at all has such good effects. It just does. Well, it turns out we know a lot more than this. There is some research that Dr Michael Mosely didn't report on in the

book or the doco that is asking and answering some of these questions. This research is indicating it isn't the reduction in calories OR the the abstaining altogether from food that is necessary, it is the occasional abstaining from one essential amino acid found in protein that increases longevity and reduces the diseases of old age.

I only came across this research because it's actually been carried out by an old boyfriend of mine who I studied genetics with at Adelaide Uni. I happened upon it when researching the 5:2 diet last year and couldn't believe it! It isn't widely publicized but it should be... because it is fascinating work with huge implications, particularly for all the high protein diet fans out there.

So, Dr Matt Piper, formally from the University College of London's Institute of Healthy Ageing (and now with Monash University) and his team consider diseases like cancer, diabetes and heart disease to be disease of old age, as a symptom of old age if you like. Rather than focussing on the individual diseases, they are carrying out research on how to reduce aging itself through dietary changes and other interventions. In 2013 they discovered it is fasting from the amino acid in protein called methionine that may actually be the most important factor for increasing longevity and, therefore, reducing the diseases of old age (2). Methionine restriction diets have replicated the 20% increased longevity results observed through calorie restriction and protein restriction diets (3). Interestingly, low methionine diets have also been used in alternative treatments for cancer for many years(4). Being an essential amino acid, methionine is found in most foods in varying quantities. It is super high in brazil nuts, sesame seeds, soy beans and... all MEAT (including fish and poultry). It is super low in nearly all veggies and fruits, almonds, coconuts, cashews and low-moderate in legumes and grains (some are higher than others). So it's possible that low-methionine food days rather than fasting days might suffice? Eitherway, high-meat-consumption diets may have significant implications for longevity. (If you want to geek it up, watch Dr Piper's presentation here. He has a rather lovely accent now too! And, here is a link to a methionine food chart).

So, the fact that the 5:2 diet encourages high protein meals (usually as meat) on the fast days is somewhat ironic. I understand why they've done this... because in practice, it makes the fast days easier to get through and because they're also aiming for low calories, they think they can't use fat to make the food lower GI. But, they're also loading up on the one thing that they most likely should be abstaining from to get the real benefits of intermittent fasting in the longer-term. Even the research they reported on from Professor Valter Longo recommended reducing protein intake.

Aside from this failure of logic, the main con of this diet is that it lacks the subtleties of all the things Ayurveda considers important when it comes to food and eating. There is no focus on every individual being slightly different and therefore having an inclination to certain imbalances... and a different capacity to go without food for periods of time. They mention differences between men and women but that's about it. There is no focus on digestion and metabolism and the foods that support these things. And, there is no focus on the effect food has on our minds. To be fair, no diets that I know of, apart from Ayurveda, take these things into account either.

I feel like even though the low cal, low fat, high protein suggestions are only for the fast days they are still a bit old school. It is pretty widely accepted these days that the low fat approach has, in many ways, been the major cause of our vast array of dietary and health issues in the first place (see my article for more information). At least it's only for two days of the week... or is it? Do the recommendations creep into the rest of the week?

Finally, I think it would also be pretty difficult to continue the diet long-term. I'd personally struggle with mustering the motivation to fast twice a week for longer than a few months but that's just me.

The Ayurvedic View

From an Ayurvedic perspective, giving a blanket prescription to any kind of fasting isn't considered the greatest idea. Abstaining altogether from food for 12 hours twice a week will suit some constitutions (like pitta/kaphas and

maybe pitta/vatas) but it won't suit others so well. Pure Vata or Pitta constitutions or those with a strong Vata imbalance would most likely struggle. Pittas will get irritable or downright angry when hungry and fasting may get heat-related-indigestion... reflux and the like. Vatas or those with a Vata imbalance may get anxious, light-headed, have difficulty concentrating and will get gassy indigestion. Kaphas will have difficulty sticking with it and their digestion may become more dull.

Cleansing and fasting, from an Ayurvedic perspective is done, in part, to help restore our digestive fires. We are looking to rebuild a fire that has either gotten too strong, too dull or is blowing around in the wind. This needs to be done with a little subtlety and panache. Whenever you fast in Ayurveda, you never go straight from light (or no) foods to heavy foods. You always have a period of transition in between. We all know when building a fire you need to put kindling and then medium logs on before adding the big tree roots. If you add the big ones straight away, the fire will be overloaded and it will go out. It is the same with our digestive fires. Perhaps this is why so many people report a decrease in appetite when on the 5:2 diet or alternate day fasting diets - because their Agni is actually becoming dull from the quick transitions from fasting to normal or binge eating.

That's not to say Ayurveda isn't a big fan of intermittent fasting... it is. Ayurveda recommends eating your heaviest meal in the middle of the day and having a light supper (usually veggie soup) nice and early, around 6/6.30pm. It then recommends rather elaborate morning routines so you tend not to eat breakfast until 7.30/8am which means you're fasting every night for 12-14 hours. Break-fast really becomes 'breaking the fast'.

In addition to this, carrying out a mono-diet or liquid diet day once a week is considered one of the best things you can do for your digestion as it gives your digestive fire a break and enables it to burn up any excess Ama or toxins lying around. But, it doesn't necessarily involve abstaining from food altogether – depending upon your constitution, you eat either kicharee or a light daal or

vegetable soup for your three meals during the day (or more regularly if you need to).

Then, at seasonal junctures, particularly Winter into Spring (i.e. right now in the Southern Hemisphere), longer fasts are generally recommended. The nature of these fasts or cleanses would again depend upon the individual but basically a mung daal, fruit and vegetable fast for 3-5 days is appropriate for most. This means papaya, stewed apples and pears, mung pancakes with veggie subji, veggie patties, veggie soups, daals, daal soups etc for a few days, once a year. Not too gruelling at all. Vatas would be prescribed shorter fasts and may also include a little rice, kaphas could have longer fasts with no grains and more bitter veggies. And, the food would always be prepared in a way that supports digestion throughout.

Ayurvedic diets are predominantly vegetarian and Ayurvedic fasts or cleanses are mostly vegan (apart from ghee) so they are naturally low in methionine. They are also low cal and low GI but they are not low fat. Ayurveda uses saturated fat, usually in the form of ghee, and acidity in the form of lemon juice to reduce the GI of its food rather than high protein. (see my low GI article here for more info).

Ayurvedic Alternatives

Well known Ayurvedic Practitioner and Author, Dr John Douillard, has written some great articles on the subject of intermittent fasting. He's a big fan! He suggests doing three things to lose weight and improve insulin resistance: (1) first, stop snacking between meals and have just three meals a day (2) when this feels ok, start having bigger lunches and lighter dinners (have supper instead - soups are best) (3) when this feels ok, make your suppers even smaller and eat them earlier, before 6pm (4) when this feels okay, start skipping supper from time to time (4-6 times a week if you need to lose a lot of weight) and have bigger, later lunches instead (5). Dr Douillard is 60 now and doesn't look a day over 45 so might be worth listening to! Here's another option...

For about 4 months last year, after I first read about the 5:2 diet, I tried out my own little intermittent fasting experiment,

in a more structured way. I called it the Ayurvedic 4:2:1 Diet. It involved the following:

-Ayurveda Days: for 4 days of the week - eat in an digestion-friendly way (warm, cooked, home-made meals, predominantly vegetarian, digestive spices, drinking warm water and herbal teas... basically following all of the Ayurvedic guidelines for good eating etc) (see my book, Living Ayurveda for more information)

-Fasting Day: for 1 day of the week - either have a soup fast (daal soup, veggie soup or a special kicharee fasting soup) or, if that feels too light for the vatas and pittas out there, have a mono-diet day of just kicharee

-Whatever Weekends: for 2 consecutive days of the week, usually your weekend - eat whatever you want (got out to dinner, eat meat, drink beer, eat chocolate... whatever)

But the timing is also important. You should have at least two Ayurvedic days after your fast day before moving to a 'Whatever Weekend' so it isn't too much of a shock to your digestive fire. And, you should have at least one Ayurvedic day after your 'Whatever Weekend' before doing your fast – again, to not shock your digestion. So the Ayurveda days are digestive transition days between fasting on light foods and eating heavier foods.

My week would look like this...

Mon, Tues – *Ayurveda Days*
Wed – *Fasting/Mono-Diet Day*
Thurs, Fri – *Ayurveda Days*
Sat, Sun – *Whatever Weekends* (this would usually start Fri night and finish Sun lunchtime)

On this approach, I lost 5 kgs in 3 weeks and then maintained my weight after that (I didn't need to lose more), I experienced the benefits of no longer being afraid of not eating and I felt my blood sugar issues were resolved. I felt light, energetic and my digestive fire felt really balanced while my ama-load decreased. At the same time, I felt no guilt whatsoever on the 'Whatever days'. It was great! It felt like an easy way of keeping the old 80:20 rule we always talk about.

I sent the diet to a few clients and one of them took it on board whole-heartedly. She lost 13kg in 3 months! Not bad. She looked about 10 years younger by the end of it too.

But then my work week changed and it became difficult to choose a day for Kester and I to do our fast together. After writing this article, I feel inspired to do it again and I welcome you to join me!

Conclusion

Intermittent fasting is awesome. But, it doesn't necessarily have to come in the form of abstaining from food altogether to gain most of the benefits. Giving your digestive fire a break and cutting down a little on protein, particularly the amino acid methionine, may be enough.

If you're not really in love with Ayurveda and find it difficult to prepare the food but need to lose weight, give the 5:2 diet a go. I'd just recommend using plenty of digestive spices in your food and favouring warm, cooked foods and warm drinks. And make sure you eat more vegetarian food and more healthy fats and oils on your five normal days.

Or, give Dr Douillard's approach a go – you don't need to be 'Ayurvedic' to stop snacking and occasionally skip dinner. If you do love Ayurveda and enjoy the food but find it difficult to integrate with your life, particularly on the weekends, then maybe give my Ayurvedic 4:2:1 Diet a go.

Or, if doing regular fasting is just all too difficult, then try an annual fast instead, around this time of the year. To make it even more effective (and pleasurable), get your local Ayurvedic practitioner to oversee it and have some treatments at the same time to aid the process.

References:

- 1) 'The Fast Diet' by Dr Michael Mosley & Mimi Spencer
- 2) <http://www.telegraph.co.uk/news/health/news/6710896/Vegetarian-low-protein-diet-could-be-key-to-long-life.html>
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- 5) <http://lifespac.com/dr-johns-weight-loss-plan/>