

YOU  
ARE  
WHAT  
YOU  
(don't) eat

By Anna Rich

It's pretty much a given that diet has a major influence on our health. What, then, should we eat? We asked specialist dietitian Annchen Weidemann for her take.

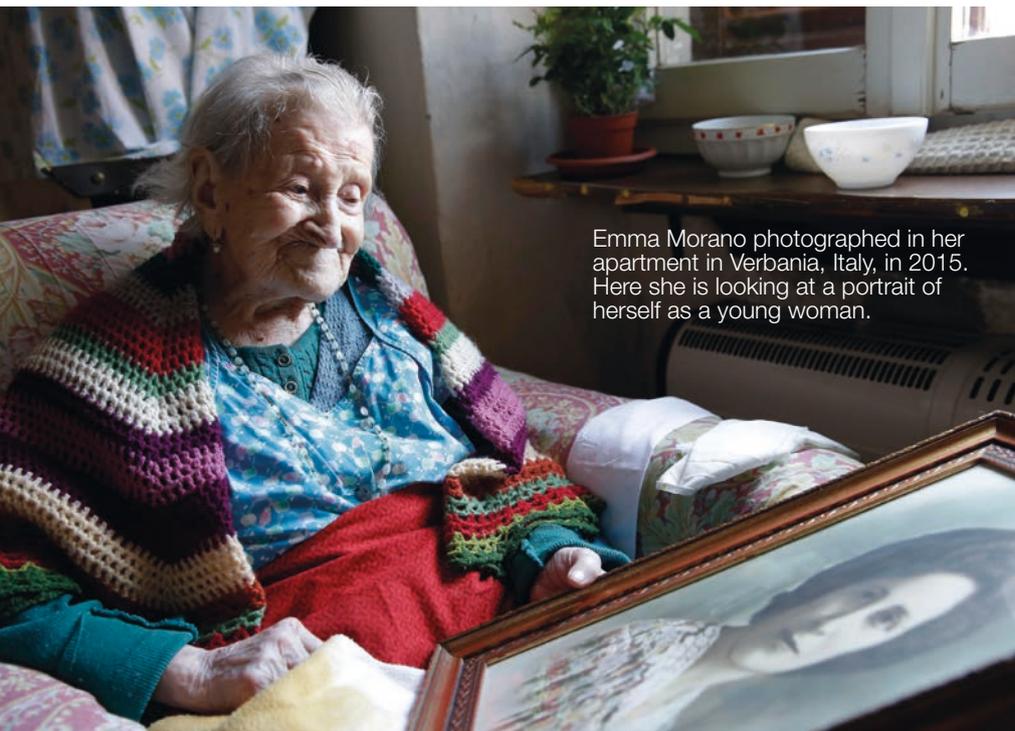
**U**ntil Emma Morano died in April this year, at 117, she held the Guinness World Record for oldest living person, oldest living

woman, and last person known to have been born in the 19<sup>th</sup> century. (The oldest woman recorded, Jeanne Louise Calment, lived to 122.)

In any discussion of these outliers, the question arises, 'What did she eat?' (And yes, they're usually women.)

Guinness World Records notes that Emma ate the same food every day for about 90 years: three eggs (two raw, one cooked), fresh pasta, and raw meat. She had started on the eggs at the age of 20, on the advice of her doctor, as he'd

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Emma Morano photographed in her apartment in Verbania, Italy, in 2015. Here she is looking at a portrait of herself as a young woman.

diagnosed anaemia. In her later years, her diet became even less varied. When news agency AFP asked Emma what she attributed her longevity to, her response was, 'I eat two eggs a day, and that's it.' And, she added, cookies. 'But I do not eat much because I have no teeth.' (As an interesting aside, she also puts her longevity down to walking away from an abusive marriage.)

In the same report, her last doctor commented, 'Emma has always eaten very few vegetables, very little fruit. When I met her, she ate three eggs per day, two raw in the morning and then an omelette at noon, and chicken at dinner. Now she lives mostly on biscuits, and does not want to eat meat because she doesn't like it any more and someone told her it causes cancer.' He added that Emma had 'a child-like love of cookies', and even 'hid them under her pillow so no one else would eat them!'

### Emma and the cookies

Emma's diet flies in the face of conventional wisdom. So how would Annchen explain her longevity? 'Take infertility. Someone might come to me and ask, "Why can't I fall pregnant? My neighbour is just as overweight,

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and she has six kids." Not everybody who is overweight is infertile. But among the overweight population, infertility is far more prevalent than among the normal-weight population.

'You can extrapolate this to smoking. Not everyone who smokes gets lung cancer. But within the smoking population, there's a much higher incidence of lung cancer than within the non-smoking population.

'Similarly, not every fat person has a string of diseases. You can be fat and healthy – and slim and unhealthy too. But, by and large, a normal-weight person will live longer and more healthily. There will always be the exceptions. If you plot the responses to insulin on a graph, in a group of 100,

half of us fall right in the centre. Then you have the outliers – the very skinny and very fat people at either extreme, who over- or under-respond to insulin. But there's no doubt that our Western way of eating has a serious insulin-stimulating effect, and it's killing us. It's making us overfat and diseased. That is the truth.'

Despite a glut of 'good' advice about eating habits that promote health, we're seeing obesity levels escalate across the globe, to the extent that obesity is deemed an epidemic. Our idea of what normal weight is, has shifted: take a look at old music videos, especially from the sixties and seventies. Those high-waisted flares may be less than flattering, but the people inside them are almost all pretty skinny. Our perceptions of the

aesthetics of weight might be culture-bound and changeable, but from a health perspective there's no changeability: there is an undeniable cascade of ill effects. The World Health Organisation says obesity is a major risk for serious diet-related noncommunicable

diseases, like diabetes mellitus, cardiovascular disease, hypertension and stroke, and certain forms of cancer. Also, if you're obese, your quality of life is negatively affected, and you're more likely to die young, they add.

Few of us are happy to be overweight. 'If you see a fat person in the supermarket, every thought you have about that person is dead wrong,' says Annchen. 'You think, "You glutton, you sloth." It's probably not the case at all. They cry in my office and say, "People think I gorge myself, but I really don't." And I can attest to that. They are in such hormonal disarray that they don't do what they want to do; they're driven to eat more and to move less. Insulin (here it is again)

makes you deathly tired – they move very little because they can't. Their insulin response is so chaotic that anything they eat leads to perfect fat storage. They don't eat such a lot to maintain the weight they have. They don't want to be fat; they want to be normal. But they don't know how.'

And that brings us to the weight-loss advice that does the rounds. Annchen believes it is generally poor, and compounds the problem. 'As Dr Jason Fung, a Canadian nephrologist, weight loss and obesity expert and author of *The Obesity Code: Unlocking the Secrets of Weight Loss*, asks: "How can 40 to 50% of the population be so morally bankrupt that they let this [weight gain] happen to them?" And he's absolutely right: they're not morally bankrupt. People want to lose weight but they can't because we're not giving them good enough advice.'

## What's the bad advice?

'24/7 dieting is a complete failure,' says Annchen. 'I tear my hair out when I see the "advice" on social media. The current fad is the 28-day diet. Dieting has failed us for five decades and it's always going to fail us. People lose three kilos and they're so pleased, but they fall off the wagon and pick up five. It's always like that. It's such a demotivator in the long-term. Those regimes don't work; when are we going to learn that?'

'We now know that it's difficult to access your fat stores. The lowered calorie intake of a diet doesn't allow you to really dig into your fat stores – it just depletes superficial glucose. If you reduce calories – if you're only semi-feeding yourself – your hunger and satiety hormones are plunged into chaos. If you do manage to lose weight that way, after six weeks your ghrelin (your hunger hormone) levels are far higher than when you started.'

'The ghrelin keeps rising and rising and rising because you're not meeting your body's demands. There's a partial insulin stimulation.'

As for the advice to move more as well as eat less: absolute nonsense, says Annchen. She points to Fung's

presentation on the TV series *The Biggest Loser*. The contestants, he says, sign a gag order so they can't spread the word, but they invariably pack the weight back on again. Over the 30-week duration of the show, the average contestant went from 149kg to 91.6kg, with body fat down from 49% to 28%. 'It sounds like, if you keep doing what you're doing, you'll keep losing weight,' says Fung. 'But you don't. And the reason, which we've known for 100 years, is that your metabolism starts to slow down.' The study on the contestants, published in the *Journal of Clinical Endocrinology & Metabolism*, showed a decrease in metabolism in them all. 'If you're burning 1 300 calories, and you're eating 1 500 (still a lot less than you used to eat), you're going to gain the weight back.'

'What is sad,' says Fung, is that we give people this really horrific advice to eat less and move more. And then when they fail, we blame them for it.'

## What we really need to understand

That takes us back to insulin, the hormone that signals to your body to store fat, and that stops fat burning. When you eat, insulin goes up. To try to understand how it works, let's take a quick lesson from Fung. He says the body has two ways of storing energy: as glycogen – easy to use – and as fat – not as easy. Carbohydrates are turned into glycogen (chains of glucose), which are stored in the liver. When you have too much, your liver produces lipids, and stores fat.

Fung goes on to draw a great analogy: 'Glycogen is like a fridge. You can put food in easily, and take it out easily. The fat is more like your freezer. You can store more of it, but it's in your garage, which is harder to get to, and to put things in and get them out. So you generally prefer to use your fridge.'

'The fridge, though, has limited capacity. If you have too much stuff, you have no choice but to put it in your freezer. In the body, it is insulin that makes that decision. It stops the

fat from coming out. If you have a lot of insulin (say you eat a huge meal), it tells the body to store the food in the freezer – as fat. And if it's high, it doesn't move from the freezer to the fridge. But when you don't eat, your insulin levels fall. And that's a signal to start pulling some of that energy from the glycogen, and the stored fat.'

Here's your take-out. 'What fasting (or low-carb diets) do,' Fung says, 'is empty out that fridge. And remember, what you want to do is get rid of all that insulin too. If you don't have insulin telling your boy to shunt all that energy into fat, you can start to empty the freezer (fat stores). You're forced to go to your inaccessible fat stores and start to mobilise those.'

## The fasting solution

Annchen often recommends intermittent fasting to her patients. 'There are no harmful effects other than if you fast when you're not supposed to – like when you're underage, sick, pregnant, elderly, frail, have a chronic underlying condition, or have lost weight because of disease.'

How often is 'intermittent' then? 'You could practise this for two days a week – either skipping breakfast or dinner so you have a stretch of 16 to 20 hours without any insulin response.'

'Some people go on a seven- to 14-day fast once a year, and that also seems to work well,' says Annchen. 'That's far better than to put yourself into a half-hungry state every day on a 24/7 diet, which we know sets you up to fail. These diets make you much hungrier than if you ate properly, then fasted.'

And even if fasting is not for you, it's clear from Dr Fung's explanation of the insulin response that it's not a good idea to nibble constantly. 'My recommendation to my patients is not to eat more than three meals a day,' says Annchen. 'Eating six to eight meals a day, through snacking, stimulates insulin. And then you store fat. Only if you don't eat for a period, do you reduce insulin – and fat storage.'

'So it's really not what you eat, it's what you don't eat.' ❀