

## **‘Eight hours’ sleep! And you must eat breakfast!’ The truth behind 10 of the biggest health beliefs**

It’s easy to think that science is constantly changing its mind on all things dietary and health-based – if you have never suffered headline whiplash from trying to keep up with whether or not wine is good for you, you probably aren’t paying attention. In fact, our collective understanding is getting more nuanced, with ever-emerging longitudinal studies and meta-reviews getting us closer and closer to the truth about what is good for our bodies. Here are some widely held beliefs and what science says now – so you can start making informed health decisions this year.

### **‘Lifting weights will make you bulky’**

This obviously isn’t true: just look at an Olympic weightlifter like Team GB’s Zoe Smith, who, while in undeniably good shape, has smaller shoulders than literally millions of men she would effortlessly outclass in the clean and jerk. To understand the science, though, you have to realise that there are two main ways to get strong: increasing the size of individual muscle fibres or coaxing more of them into firing at the same time. Bodybuilders aim to do the first, by doing many repetitions in each set of exercises, lifting until their muscles fail, and using training tricks to further exhaust their fibres. Athletes aim to do the second, by lifting heavier weights for fewer reps, and avoiding muscular failure. Also working for Zoe (or against her, depending on your perspective) is that muscle distribution and hormone levels are different in men and women: [men have far more upper body muscle mass](#) and higher levels of testosterone. Most gym-goers have trouble putting on as much muscle as they want to – you won’t do it by accident.

### **‘Breakfast is the most important meal of the day’**

This is a tricky one. Although there is nothing about the first meal of the day that makes it especially magical, the timing of meals is increasingly recognised as an important factor in weight loss, alongside metabolic and cardiovascular health. [One study on overweight female volunteers](#) found that those who ate a large breakfast saw greater weight loss and waist circumference reduction than another group who had a low-calorie breakfast and larger dinner, even when overall calories were controlled for.

“This might be because skipping breakfast leads to increased hunger levels later in the day, resulting in people overeating,” says Brady Holmer, a researcher at Examine.com, a database of nutrition and supplement research. “People who eat a big breakfast instead of a big dinner also tend to lose more weight, feel less hungry and can regulate their blood sugar levels better.” Although the evidence is mixed, some studies have found that eating more calories earlier in the day could have benefits for metabolic health.

The bottom line? Breakfast is important if it’s something that you enjoy, or helps you to follow a well-balanced diet, and skipping it may have varying effects on appetite, weight and energy for different people. If you can make it through the morning on an apple and coffee, by all means go for it – but if you are overeating late in the day, throw some extra feta in that omelette.

### **‘You should walk 10,000 steps a day’**

A surprising one: this number wasn’t based on any science when it first cropped up in the 1960s, but it might be good advice. [A study released in 2022](#) found that walking may reduce the risk of premature death from cardiovascular disease and cancer, with returns diminishing after the 10,000-step sweet spot. Another study found similar results for dementia, with as little as 3,800 steps a day proving effective. But it’s also worth stepping up the pace, as the dementia study saw a power-walker’s pace showing benefits above and beyond the number of steps walked. Diminishing returns kick in around the 10,000 mark – but up to there, do more if you can, slightly faster if possible.

### **‘You need eight hours of sleep’**

It’s easy to think of sleep as an individual thing: some people need eight hours, while others can get by on seven. Margaret Thatcher apparently managed on four, and new parents somehow cope on even less. But in one of the largest ever sleep studies, launched in 2017, participants who reported sleeping the doctor-endorsed seven to eight hours [performed better cognitively than those who slept more or less than that](#), regardless of age. Those who slept four hours or less performed as if they were almost nine years older. Lack of sleep [can also affect testosterone production in young men](#) and a review of studies published in 2010 suggests it [can raise the risk of all-cause mortality](#).

None of this will help when you are tossing and turning, so give yourself the best chance of a decent night's shuteye by keeping good habits. "Establish a routine," says Steve Magness, author of *Do Hard Things*. "If we repeat things often enough, the brain and body figure it out and sync the hormonal and neurochemical release in anticipation of that event – and the same goes for sleeping. Try to get outside early in the day to see some sunlight, which helps to regulate your circadian rhythm – and cut down on your device use at night." Another good reason to crack open an actual paperback.

### **'You should aim to eat five portions of fruit and veg a day'**

Bad news if you are not already doing this: five might actually be the minimum. "The five servings recommendation is sound advice, but also somewhat arbitrary," says Holmer. "Many studies have found that roughly this number is associated with improved health, but there is also evidence that up to 10 servings per day of these foods can be beneficial." In general, those who consume more fruits and vegetables have [lower risks for cognitive decline and dementia](#), and diabetes, and [may even experience decreased levels of stress](#).

If you are struggling to hit the minimum, it's worth bearing in mind that not all portions are created equal. "For long-term health, two servings of fruit and three servings of vegetables per day has been associated with the greatest benefit," says Holmer. "And the more variety, the better." Dark, leafy greens and cruciferous veg – think broccoli, brussels sprouts and cabbage – are some of the most nutritionally dense vegetables available, while berries tend to be more packed with antioxidants than bananas.

### **'You need to drink two litres of water a day'**

Good news for anyone already sick of sloshing their way to the toilet a dozen times daily: staying hydrated is important, but the recommendation to drink two litres of water a day, while reasonable advice, is not based on hard science. In 1945, the US National Research Council wrote: "A suitable allowance of water for adults is 2.5 litres daily in most instances ... Most of this quantity is in prepared foods." And in 1974, a book by leading US nutritionist Dr Frederick J Stare stated: "How much water each day? This is usually well regulated by various physiological mechanisms, but for the average adult, somewhere around six to eight glasses per 24 hours, and this can be in the form of coffee, tea, milk, soft drinks, beer, etc. Fruits and vegetables are also good sources of water." The

bit about getting your hydration from lattes, celery or Fanta often gets lost – which is a shame because it’s still valid.

### **‘Abdominal exercises will give you a six-pack’**

“It makes a sort of sense that if you want to build your abs, you would do typical ab exercises like crunches and sit-ups,” says Emma Storey-Gordon, a personal trainer and sports scientist. “But the truth is that whether you have visible abs or not has far more to do with your body fat levels and where you are predisposed to store fat than the number of sit-ups you do.” Many resources will tell you that you need to be around the 10-15% body fat range to start seeing the outline of your abs if you’re male, or 15-20% if you’re female. In reality, it’s a bit more complicated. “A lot of women need to go below a healthy body fat range for abs; those with longer torsos, who don’t store fat around their midsection, may not.”

As for whether you can target specific areas to spot-reduce fat, there is some evidence that hormones may play a role in where it’s stored. But one of the biggest recent meta-analyses of studies suggests that the best thing you can do is reduce your alcohol intake a bit.

### **‘Dieting will slow your metabolism’**

It’s a common trope that eating a very low-calorie diet, or even fasting, will trigger “starvation mode”, where the body slows metabolism as a way to keep you from losing any more weight. “While there’s no such thing as ‘starvation mode’, there may be small changes to someone’s metabolic rate when they lose weight or go on a diet,” says Holmer. “It’s called adaptive thermogenesis – a process during which the body reduces its production of heat in order to conserve energy.” This phenomenon might explain why some people have a hard time keeping weight off, or even regain weight after dieting. Even though the change might not be that large – about 100 calories a day – it can still make a difference in the long term.

To lessen the chances of your metabolism slowing down due to dieting or weight loss, you should avoid rapid weight loss: gradual is better. Also, alternate periods of dieting with periods of energy balance, and increase your activity levels by doing gentle exercise. And, as there are plenty of other

benefits to going for a stroll, it's probably easier than cutting out even more calories.

### **'Red meat is bad for you'**

Classically, red meat was often advised against because it contains a lot of saturated fat – but it's not as simple as that. Several studies have shown an association between a higher intake of red meat and an increased risk of prostate cancer and heart disease, but it is now widely believed that the associations between red meat and disease risk might be confounded, because many studies don't distinguish between processed (bacon, sausages, burgers and deli meats) and unprocessed red meat intake.

“Several recent studies have found that eating unprocessed red meat [may not actually increase the risk for heart disease or cancer](#),” says Holmer. “And major health organisations have recommended that people can continue to eat unprocessed red meat.”

But what about the current crop of so-called “carnivore” dieters – Jordan Peterson included – who eat almost nothing but steak? Well, it's a high-risk strategy. Technically, you can get plenty of vitamins and minerals from the right kind of meat, but the Inuit, Maasai and other tribes often cited by modern carnivores as evidence for the benefits of their lifestyle would have been eating blissfully free-range animals rather than factory-farmed cows. The best recommendation? Choose meat that is as unprocessed as possible – and if the animals were happy, that is probably better for your health, too.