



For many years we have been told the key to good health depends on being fit and not prone to disease. But now **LEAH HARDY** reports on why

The message is clear. Look at any fitness magazine, diet book or even pick up a leaflet in your doctor's surgery and they'll all say the same thing – being healthy means being slim. And we've taken the message on board. Surveys find that around 37 per cent of women are on a diet 'most of the time', while the average woman will spend a staggering 31 years of her life on and off diets. Yet the average diet lasts less than six weeks due to what women describe as a simple 'lack of willpower' or because their eating regime leaves them 'moody' or 'depressed'.

And it's hardly surprising we feel such a need to diet. Government guidelines tell us we must keep our body mass index – or BMI – below 25 at all costs, which for a woman of 5ft 5in means weighing less than 11 stone. Above that, we are 'obese' or 'overweight' and risk suffering chronic health problems, including heart attacks, cancer and diabetes. If we do get into the overweight category, we must become healthy. This means we should lose weight

by dieting and, of course, by taking plenty of vigorous exercise.

But hang on, what if all of this is actually wrong? What if just about every single thing that we think we know about our weight, health and fitness is in fact incorrect?

Suppose diets not only don't make you thinner but actually raise your risk of dying? That being just a bit 'overweight' makes you live longer and losing weight doesn't? That simply standing up more and going for walks could improve your health more than going to the gym? This is the radical message conveyed by a growing number of scientists, dieticians and activists, and they have the science to back up their apparently extraordinary claims.

Last year, Dr Lucy Aphramor, a dietician and researcher at Coventry University, together with Linda Bacon, nutrition professor in the Biology Department at City College of San Francisco and author of *Health at Every Size: The Surprising Truth About Your Weight* (Benbella Books, £23.66), produced a radical paper. Entitled *Weight*

Science: Evaluating the Evidence for a Paradigm Shift, it was published in the academic journal *Nutrition*. They pointed out that not only is there no evidence that losing weight makes people live longer, but plump people – those who have BMIs of between 25 and 35 – may outlive their slimmer peers. A large-scale study by the Centers For Disease Control and the National Cancer Institute in the US found that being overweight (having a BMI of 25 to 29.9) was not linked to increased death rates from either cancer or heart disease. And a study carried out by the Mayo Clinic in the US of 250,000 people with heart disease found that those patients identified as overweight according to BMI standards actually survived longer than normal weight patients.

Dr Aphramor says, "Most studies find that people who are overweight or moderately obese live at least as long as normal weight people – and often longer." Fatter people were also more likely to survive heart attacks and other serious illnesses. Elderly people who were



FAT

DEBATE

heavily on our weight, and those plumper than is recommended are more a growing number of experts are claiming this is wrong

overweight were less likely to die than those of a 'healthy weight'.

Our perception that being model skinny is a sign of good health is particularly wrong. All studies find that being underweight, with a BMI of less than 19, is in fact a far greater risk factor for an early death than plumpness or moderate obesity, which means a BMI of up to 35.

Which naturally leads to the question, why do we classify a BMI of 25 as 'overweight'? "That's a good question," says Aphramor, "There is no good science to back up the classification of a BMI of 25 to 30 as being overweight," she adds. "Obesity research seems to enjoy special immunity from accepted ethics and standards in clinical practice and publishing ethics. But scientists reflect the prejudices of society, and we are a sizeist society."

But if being 'overweight' may not kill you, there is a specific type of fat that just might. This is called visceral or abdominal fat, which

collects inside the body. And you don't have to look fat to have it.

Professor Jimmy Bell of Imperial College London is a specialist in obesity and metabolism. In 2007, he measured the internal body composition of over 400 women and found that 40 per cent had high internal fat levels. One woman was 5ft 9in and a slender nine stone,

"Being underweight is in fact a far greater risk factor for an early death than plumpness or moderate obesity"

with a BMI of 19.9, yet she had three litres of fat crammed around her heart, liver, kidneys and pancreas. The average is just one litre. Many scientists believe this fat is more likely than any other to cause what we are told are the ailments of being overweight – heart disease, high blood pressure, Type 2 diabetes and many cancers including those of the

breast and colon. "Fat in the liver and pancreas has a direct effect on how the body handles sugar, and can lead to diabetes. It's a hidden time bomb," says Professor Bell. Worryingly, it seems people who maintain their weight through diet rather than exercise are more likely to have major deposits of internal fat, even if they are otherwise slim.

"The whole concept of being fat needs to be redefined. Fat is an active organ of the body and has a function far beyond storing energy," he explains. "Fat produces many chemical signals, including hormones and proteins that affect your mood, fertility and immune system. We need fat. But

abdominal fat produces different signals to peripheral fat, including chemicals that cause inflammation, and that's unhealthy. This is why two people can have exactly the same amount of fat but the effect on their health will be very different depending on where they store it."

Dieting itself causes this most dangerous fat to accumulate. ➤

says the professor. "Proportionally, only a small amount of fat is lost from internal stores when you diet. It mostly disappears from the top and bottom. But when you put any of the fat back on, it deposits in the abdomen area. Also, putting your body in starvation mode through dieting can eat into muscle, but once you put the weight back on again the body does not replace that muscle but stores surplus calories as fat. Thinner women are more at risk if they crash diet because they can end up with more internal fat than someone who is larger."

So if dieting doesn't make us healthy, what does? The answer is easy – exercise, or to be more specific, just moving about. We have always been taught that the value of exercise is to make us thinner – increasingly, we are seeing this is a big mistake. Exercise can change our metabolism, our future health, even our genes themselves, and this can and does happen even if

we don't lose an ounce. Giving up exercise because it's not 'working', or making us thinner, is the single biggest health mistake we can ever make. Exercise 'works' on every cell of our bodies regardless of our size.

Exercise is actually the best cure for dangerous abdominal fat. People who do simple aerobic exercise – just enough to get you slightly out of breath – for at least 30 minutes three times a week can reduce their visceral fat levels by between 25 and 60 per cent, according to a study in the *International Journal Of Obesity*. Professor Bell says, "In some cases,

this was enough to wipe all their fat from the inside, including fat found in the liver. Excitingly, new research shows that if you exercise, signals from muscles may actually turn white fat into what we call 'beige fat'. This is similar to the brown fat that is found in babies, which actually burns energy to keep them warm. Beige fat can also burn white fat off the body." The more we learn about keeping active, the more we realise its power.

Of course, making changes to our lifestyles can be hard. The idea of spending money on going to the gym and fancy trainers when we

"People who maintain their weight through diet rather than exercise are more likely to have major deposits of internal fat, even if they are slim"

doubt we'll have the time to even get on the treadmill, puts many off exercise altogether. And gyms can be intimidating places for people who don't meet the skinny ideal. This is why the new buzz-phrase in health is 'activity not exercise'.

Steve Hunter is a senior lecturer in sport and exercise science at London's South Bank University. He says, "When it comes to health, physical activity is more important than fitness. For example, a brisk walk will bring you some health benefits even if it doesn't necessarily improve fitness, which is measured by how muscles use oxygen during

exercise." If you hate the gym or running, Steve recommends 30 minutes of physical activity a day, which can include brisk walking to the shops, stair climbing, cycling to work, gardening, decorating or chasing children around the park. "Daily moderate activity is quite adequate to alter the body's biology. It can improve blood pressure and cholesterol, and enhance insulin response and keep weight steady. The key thing is that it should be habitual and lifelong," he says.

Just getting up from your seat more often can change your health destiny. "When you sit down, your muscles go silent," says Marc Hamilton, an inactivity researcher at the Pennington Biomedical Research Center in the US. And this leads to a cascade of harmful metabolic effects. Your calorie burning rate immediately plunges to about one per minute, a third of what it would be if you got up and walked. After just 24 hours of being sedentary, fit,

young, volunteers suffered a 40 per cent drop in their ability to produce insulin to reduce their blood sugar, increasing the risk of developing Type 2 diabetes. Plus the enzymes responsible for 'vacuuming up fat from the bloodstream', plunge, which in turn causes the levels of good cholesterol to fall.

Alpa Patel, an epidemiologist at the American Cancer Society, found that men who spent six hours or more per day of their leisure time sitting had an overall death rate about 20 per cent higher than the men who sat for three hours or less. The death rate for women who ➤



FAT v FIT

It's reassuring to know that our size, weight and age has nothing to do with how fit we are – as these women attest

“I'M A SIZE TEN BUT HOPELESSLY UNFIT”

Caroline Widdows, 34, lives in Bristol with her husband Charlie, 36, and their two children aged four and two. She runs a vintage furniture business



“I've never dieted or seriously exercised, but have always remained a slim size 10. I think that's the main reason why I've never taken to exercise – I just don't have the motivation. I think of myself as an active person, but to be honest I am feeling very unfit at the moment. I eat moderately healthily, mostly on the run, but with a home-cooked dinner with the children. I don't worry about not exercising, though I suppose I should. Thinking about being old or ill because of lack of exercise seems such a remote prospect. I think if I put on a lot of weight I might consider exercising, but until then I don't have time.”

“I GOT FIT IN MY 40S AND IT CHANGED MY LIFE”

Caroline McKinnon, 56, lives in London, is married to Charles and has three grown-up children. She runs a school uniform supply business



“In my 20s I was an unfit size 16 and didn't really do any exercise until I was over 40. I'd lost some weight with a slimming club and by training for a charity bike ride for Oxfam, but then I got an injury. I got bored and turned to trainer Stuart Amory (inkilterfitness.co.uk) to help me recover. He started training me outside and not only did I love it but it transformed my body. Exercise has given me firmer thighs, tightened my upper arms and made my stomach flat. I've lost 20lb and I'm now a size 10. As well as Stuart's session once a week I do yoga twice a week. I could never go back to my old lifestyle now.”

“BEING BIG DOESN'T MATTER, BEING FIT AND COMFORTABLE WITH YOUR BODY DOES”

Athlete Judy Oakes OBE, 54, is a former World Champion in Powerlifting and still holds the British record for shot put. She is now a personal trainer and administrator at physiotherapy specialists clinic21.co.uk. She lives in London



“At my athletic peak I was in the gym three times a week lifting very, very heavy weights. At 5ft 4in I weighed 80kg (12 stone 8lb) and with a BMI of 30.2 I was technically 'obese', yet I was extremely fit and powerful with a flat stomach and firm muscles. After I retired in 2000 my weight went up to

90kg (just over 14 stone), so I watched what I ate for a while and went back to the gym twice a week. In addition, I might cycle once a week or go for a brisk 15-minute walk. I believe you should do what you enjoy, and if that's going for walks then that's absolutely fine. I have always maintained it's how

you feel that counts, not your size or numbers on the scale. In my view you look good if you are fit, even if you are bigger. If you feel fit and are comfortable with your body then that's the most important thing. If you are fit you can be heavier and still look and feel good.”

sat for more than six hours a day was about 40 per cent higher.

So if we now have scientific proof that fat is not always bad and thin is not always healthy, why is it so hard to get out of the mindset that we must be catwalk model thin, and to be thin we must diet? Dr Lucy Aphramor says, "It's hard to change the status quo. It's hard for dieticians to say that everything they've been saying about diets for 20 years is wrong. We live in a very sizeist society and people want to fit in, be accepted at work and socially, and not face prejudice and abuse."

Of course, being so extremely obese that movement is difficult, that joints are under strain and sleep is constantly interrupted due to breathing difficulties, can be

unpleasant. But Linda Bacon says that even if weight loss could improve these people's health, it is still pointless to recommend diets as they nearly always fail. In fact, large-scale studies show that after five years, over 90 per cent and up to 98 per cent of dieters regain everything they have lost, and in fact a third to two-thirds of them actually gain weight.

"The scientific evidence is clear – for the vast majority of people, there is no known safe way to obtain significant weight changes and maintain them in the long term," says Linda. "Dieting puts bodies in emergency starvation mode, and just as it is difficult to hold your breath for a long time, it is difficult to willingly under eat – your body

will make you eat, just as it'll make you breathe, in order to survive."

Marilyn Wann is a fat activist from San Francisco and the author of *Fat! So?* She is healthy, active and dynamic with perfect blood pressure and cholesterol levels. She also promotes the Health At Every Size (HAES) philosophy and says, "Everyone wants to be healthy and happy and to be respected whatever their size. We suggest people move in ways they find fun and, when they are hungry, eat food that makes them feel well."

"Your healthy weight is not a number on a scale, but the weight you are when you have a healthy lifestyle. People will always be different shapes and sizes, and I think that's wonderful." ✨

ARE YOU A TOFI? (THIN ON THE OUTSIDE, FAT ON THE INSIDE)

We can't all have an MRI to reveal our internal fat, but Professor Jimmy Bell says this quiz will "pick up most TOFIs". The more boxes you tick, the higher your risk. The easiest way to reduce your risks from harmful internal fat is to gradually increase your activity and exercise levels, give up smoking, cut down on drinking and eat healthily. If you are worried about your health or need help changing your lifestyle, see your GP.

I walk or exercise for less than 30 minutes a day

I am a slim build but don't do much exercise

I am apple-shaped with a large waist size for my body shape. (The ideal waist to hip ratio is below 0.79 – work out yours on the waist to hip calculator at bbc.co.uk/health/tools)

I have been a yo-yo dieter

My waist is above 80cm (31½in) (89cm/35in for men)

I smoke

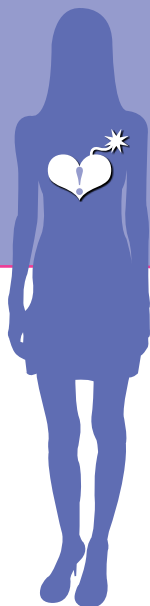
I drink more than a unit of alcohol a day

I have a stressful life

I have a sedentary job

I am menopausal

I eat a lot of processed food that's high in saturated fats



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