Opening Extract from...

PRETTY UNHEALTHY

Written by **Dr. Nikki Stamp**

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How have we messed up our relationship with food and exercise so badly? Despite an explosion in the number of gyms, health foods and activewear, we are more obese, less active, more stressed than ever before.

We obsess over looking healthy, but our health is getting worse. Why did we start equating beauty with health? And is it possible to be fit and fat?

Equipped with Instagram accounts and blogs, online 'wellness experts' lead an army of followers towards what is labelled 'health' but might actually be far from it. We photograph ourselves and our food, but aren't sure whether we like the images until someone else 'likes' them first. It seems all this health and wellness is making us unhappy, poor and pretty unhealthy instead.

Heart surgeon and health commentator Dr Nikki Stamp unpicks the web of online pseudoscience and urges us to take back our health from the people who don't value it as much as we do. She explores the secret of long-term motivation for healthy diet and exercise, and shares the scientific value of self-kindness for true physical and mental health.

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Pretty UNHEALTHY ♡ DR NIKKI STAMP

Why our obsession with looking healthy is making us sick

Pretty UNHEALTHY

DR NIKKI STAMP

Heart surgeon, TV presenter and author of *Can You Die of a Broken Heart?*

Dr Nikki Stamp FRACS is a cardiothoracic surgeon, one of only 11 female heart surgeons in Australia. Her clinical work is at the forefront of cardiothoracic surgery, including transplants and congenital heart disease. She has a particular interest in women's heart disease and how the medical system can better serve female patients. Nikki has hosted heart health episodes for Australia's flagship science TV programme, *Catalyst,* as well as *Operation Live*, in which she commentated a live caesarean birth. Her first book, *Can You Die of a Broken Heart?,* has been translated into seven languages.

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INTRODUCTION: WAKE-UP CALL

The cuff tightened on my left arm. I could tell by how tight it was getting that the result was not going to be good. When it finally released, I looked at the numbers on the screen.

Shit. My blood pressure was way too high.

My doctor looked over his glasses and raised his eyebrows. He pressed the button again, hopefully to show us both that there was nothing wrong and that this ridiculously high blood pressure was just a mistake; a one-off.

After months and months of feeling so tired that I struggled to make it through most days, I had finally gone to see my doctor. For a long time, I had put it down to working too hard and burning the candle at both ends. I had finally reached a point where I couldn't stand the fatigue that I could feel in my bones; I decided to stop being a doctor who was dismissing all her symptoms and go and be a patient.

For the second time, the cuff around my arm released and made an audible sigh. And for the second time, the number was too high.

'I can't really accuse you of having white coat hypertension, can I?' he said, referring to the artificially high blood pressure people get when confronted with a doctor. I think we both assumed

I would be immune to that, as a doctor myself. All I could do was give him a nervous laugh as he pressed the button again, hoping for third time lucky.

There was no such luck, and the numbers on the screen stared back at me accusingly. We decided that after months of high blood pressure – something that runs in my family – it was time for some treatment. I also had to have a battery of blood tests to check for other reasons why I might be so tired. I left his office clutching a prescription for a blood pressure medication; I also bought a home blood pressure monitor to check myself. I was, on the inside at least, a little ashamed and a little scared.

Just a few days after starting my tablets, I felt amazing. My blood pressure was much lower and I had so much energy. Rather than waking up every morning feeling like I hadn't slept at all for months, when my alarm went off I was bright and ready to face the day. I couldn't remember the last time I had felt so good. So healthy.

Outwardly, I blamed my newfound diagnosis squarely on my genetics. When my friends and colleagues marvelled that I was too young and looked far too healthy to have high blood pressure, let alone be on treatment for it, I blamed my dad. He has been treated for high blood pressure since his 20s. I laughed and said something along the lines of: 'You can't choose your parents.'

Inwardly, I knew that this wasn't entirely fair. I knew that even with the genetic make-up for things like high blood pressure or heart disease, living a healthy lifestyle slashes your risk of actually developing the illness. I knew that I had really not been taking care of myself, letting my exercise lapse and eating foods that were easy and fast, but almost certainly not that healthy. I knew I was over-committed and over-stressed. But I had managed to hide these

feelings and pretend that everything was fine. After all, I *looked* fine. It was an easy lie to get away with when the outside appearances hid the inside problems.

About a week after my doctor's visit, I was in a changing room, trying on a dress in one of my favourite stores. I was cursing the fact that the room had no mirror and I needed to venture outside into the public eye to see if I looked any good. I hate doing that; I get self-conscious about what other people will see. I wanted to judge myself, my body and my appearance in private. As I wrestled with the zip at the back of the dress, my phone beeped with a message.

It read: 'Nikki, your fasting blood sugar is a bit high. I have added an HbA1c to check you don't have diabetes. I'm sure it's probably okay though.' An HbA1c is a blood test that gives a picture of how high someone's blood sugars have been over the past six weeks – I know it well because I often order it for my own patients.

I felt the blood drain from my face. My head was filled with doctor thoughts, muddled with fear. *Do I have diabetes? Maybe I don't have diabetes, just pre-diabetes... But, Nikki, that's also bad*, I told myself.

The sales assistant yelled into the changing room: 'Going okay in there?' *No*, I thought, *I might have bloody diabetes*. Surely not though. I looked down at the dress and ventured out to the communal mirror, my brain still going a million miles an hour to decipher what the hell was wrong with me. I stared at my reflection and the thoughts that came next were not good: *I can't get diabetes. I can't be unhealthy; look, I'm not even fat. This dress is a small. People who wear small size dresses can't have diabetes*.

My more realistic (and harsher) brain kicked in: *You know very well that is complete bullshit. Firstly, you are not fat, but that doesn't mean that you can't have diabetes or high blood pressure. Secondly, be honest: you have been taking really bad care of yourself, you're eating badly, you're not exercising and those few extra kilos you've gained, that's why we're here. Small size or not, you're unhealthy*. I felt like I was being told off, which I probably should have been.

The sales assistant must have assumed I was deep in thought over my dress, not weighing up in my head the risk of having a heart attack or mentally going through the exercise I had avoided in the last week. I bought the dress, maybe in an effort to prove that I am small and therefore worthwhile and definitely not sick, and scurried out of the shop.

What had gone so wrong? Not just with my health, but with my thinking? Why was I trying to rationalise my wellbeing with my looks and my size? Why was I so quick to dismiss hard evidence of a problem off the back of the picture I posted on Instagram last week in which I looked pretty good? Why was the label on a dress a more important marker of my health than the fact that I was on medication for blood pressure?

I had been sucked in, that's why. Sucked in by a lifetime of exposure to incorrect information and disordered thinking. I had been told that the way I looked was the most important thing and the most important marker of how healthy I was. I had scrolled through social media and flipped through magazines that sold me messages on how to 'drop that last 5 kilos quick' which backed on to articles about how 'every body was beautiful'. No wonder I was confused: the messages I had received my whole life were bewildering and they were dangerous.

Despite the fact that as a heart surgeon I spend every single day battling illness that has its roots in the way we live our lives, I had let my own health slip. Not only that, I was just as vulnerable to the flawed messages about health equalling beauty. I'd been taking advice from beautiful 20-something women whose Instagram posts showed a life purporting to be healthy, but which were, in fact, heavily filtered and often filled with inaccurate information.

The end product of all of this? It would seem that I was, in fact, pretty unhealthy.

Weighing up the options

Sitting across from me is a young woman. She has an aneurysm of her aorta, the main blood vessel out of the heart, and she needs an operation to fix it. The surgery will probably take me about five hours or more and it's up there with one of the biggest surgeries anyone could ever need. She is otherwise generally well, apart from having high blood pressure. A little like me, she tells me that it 'runs in her family' and she has no idea how she got it.

I feel quite relaxed as I explain to her the problem, why we need to fix it and exactly how I would do that. These are the conversations I have day in and day out; I draw diagrams and the words to tell people what is happening to them roll off my tongue.

This woman, however, has another problem that I do not really want to talk to her about. My comfort is replaced with a low-level anxiety as I start to talk about her weight and her lifestyle. I always ask my patients if they exercise and what their diet is like; this patient tells me that she spends a lot of time on computers and doesn't do any exercise. She is very overweight and, while it is a

term that is highly medicalised and not at all pleasant, she meets the criteria for obesity. This has nothing to do with her self-worth or any judgements about her as a person, but is relevant to the impending surgery. It worries me because overweight or obese patients undergoing this surgery have a significantly higher risk of problems, including potentially disastrous wound infections. When you are already facing major surgery, you need all the odds stacked in your favour, not against you.

I take a deep breath and tell her we'll need to be extra vigilant about complications. I can feel her anxiety as I talk: I bet I'm not the first doctor or the last to explicitly or otherwise talk about her weight and lifestyle. I tell her I need her to get fitter for surgery and refer her to an outpatient exercise program where she can learn how to move her body. We're stacking the odds here, I explain. I make referrals to a dietitian and an appointment to see her again before surgery in six weeks' time.

As she leaves, I feel guilty. I think it's because I am so afraid of shaming someone about their body. Our society has equated being fat with a litany of negative things about that person. We stereotype them as unworthy, lazy and unattractive. We inflict immense shame on people because of their outward appearance, and often we do this under the guise of talking about health.

I have a very good reason to talk to people about the way they live their lives. Whether it's about exercising, stopping smoking or improving their diet for the health of their hearts, it is a part of my job and integral to the care I need to give people. And yet, I am quite often scared to have these discussions because the last thing I want people to feel is ashamed of who they are. I also know of patients who have had these discussions with their doctors, and

then make complaints to the hospital that someone mentioned their weight or told them they absolutely have to stop smoking.

We have long since stopped thinking of health in terms of what our bodies can do. Rather, we have become conditioned to see health as the superficial behaviours or appearance of someone's body. We judge the health of our own and others' lives by the size of their clothes and the food in their shopping trolley. We live in a world where a picture-perfect healthy lifestyle has become more important to achieve than actual health itself.

We never talk honestly or openly about how healthy we actually are, what our bodies can and can't do. We're not honest with the way we eat, hiding away binges and ultra-restrictive diets in equal measure. We take advice from someone with a social media account or a blog as gospel in our quest to at least appear healthy and follow this advice without ever questioning if it is actually good for us. We never show how bad we feel about our bodies as we scroll through photos of beautiful people, hoping to discover inspiration but finding shame and confusion instead.

Now, I am angry with this state of affairs.

I am furious at the false story we've been sold for years, equating health with how we look, and that we're sold false promises and snake oil by people and industries who bank on us feeling bad about ourselves. When I see a patient, the fact that I am afraid to talk to them about their health for fear of making them feel ashamed is frustrating. Despite my education, my training and my exposure to health and disease, I am still susceptible to the misleading messages of health and wellbeing, and that infuriates me.

As a society, we have lost sight of what it is to be truly healthy: to have bodies that are resilient to disease, and able to do everything

we want them to do, and to feel emotionally fulfilled. Instead, we have become obsessed with an ideal: with losing weight fast, fitness fads and superficial judgements about how healthy or unhealthy people appear.

I want to change all of that. I want to take a wrecking ball to these false assumptions and create a new normal, where we look after our bodies for optimal health not just to appear healthy. To do this will mean dismantling decades of beliefs about our bodies and what constitutes health.

It is a long overdue change – for us to finally love our bodies rather than to hate them. To finally think critically about the vast information we are fed and to change our focus from looking good to actually, truly being healthy. I'm excited to embark on this revolution, which will lead to real and all-encompassing health.

Chapter 1

SICK ENOUGH YET?

'Pick one: gym floor or hospital floor.'

ANONYMOUS

I got home from work late following an emergency surgery. I had been operating on a middle-aged man who had suffered a bigger heart attack than we had thought and it took my team and me hours working well into the night to save his life. As I finally got to bed I promised myself that I would still go for a run in the morning. My body needed it. 'No excuses, just get it done,' I told myself.

Of course, when the alarm sounded at 5:30am, I stared at it through bleary eyes, craned my neck to hear the strong gusts of wind outside and pulled the covers up a little tighter to keep out the cold. When I surfaced, still pretty tired, I told myself off.

On my ward that morning, as every morning, patients displayed the end results of years of lifestyle disease. In one room was a 48-year-old woman who'd had a heart attack and been operated on earlier in the week. Next door was a man in a wheelchair, his leg missing above the knee on one side and the dusky stump on the

other side finishing just below the knee. I knew it wouldn't be long before that ended above the knee too. A relative of his walked past me and I could smell the cigarette smoke wafting after them.

The television screen in a patient's room showed yet another health story with an aggressive headline: 'Australians are getting fatter and sicker.' I wondered if a lifetime of late nights leading to missed morning runs was going to put me in the same predicament.

Throughout human history, until fairly recently, infectious diseases have struck us down time and time again. Epidemics of infections such as dysentery, influenza or smallpox have wiped out vast swathes of the population. For instance, the Spanish flu killed an estimated 75 million people in the early twentieth century. Millions have died globally from outbreaks of cholera, dysentery and smallpox. With the advent of better public health including hygiene campaigns, vaccinations and antibiotics, we have largely innoculated ourselves against these kinds of illnesses, especially in developed countries.

Now we face a different threat. Around the world, 70 per cent of deaths result from non-communicable diseases: diseases of our lifestyle, not spread by bacteria or the other enemies of earlier generations, but caused by the way we treat our bodies. The main culprits are heart disease and diabetes caused by smoking, inactivity, poor nutrition, alcohol use and obesity. For the first time in decades, life expectancy in the United States is declining. The threat to the length and quality of our lives has a lot to do with these lifestyle diseases. In affluent countries we have the money and resources to both fuel and battle this modern plague, but it also affects people in developing countries. Nobody is safe from the growing danger.

Even for those of us who are living longer, this is coupled with an enormous burden of disease. More people than ever before have high blood pressure and diabetes, meaning a lifetime of medication, doctors' visits or operations. Heart disease and strokes, of which a staggering 80 per cent are preventable, now cost more lives and more health-care dollars than other medical conditions or injuries such as road trauma. Tobacco consumption still claims more lives around the world, but inactivity, obesity and diet are not far behind. If we get the extra years out of our time here on this planet, they may well be tarnished with disease.

And it's not just heart disease and diabetes. Did you know bowel cancer, breast cancer, throat cancer, stroke, emphysema and even dementia all have proven associations with poor diet, exercise, alcohol use and smoking? Estimates from multiple research studies and the World Health Organization (WHO) state that around a third of cancers could be prevented by a healthy lifestyle. Heart disease risk could be halved, and yet so many of us struggle with this, despite knowing what we should do. For me, the hardest part of this growing epidemic of illness is not the money it costs us: it's the lives and the quality of the days we live that really hurt. These aren't just numbers on a page to me. These are my reality; this is the enemy I wrestle with on a daily basis. Countless times, I have heard patients and doctors alike say, 'If only'. If only I had done more of this or less of that, then I wouldn't be so sick. I wouldn't be having heart surgery as a young man. I wouldn't be staring down a cancer diagnosis. I could do the things that I want.

We're getting sicker earlier in life and we have no idea what to do about it. Or perhaps we do know some of what is good for us, but actually doing those healthy things is really challenging. In our

desperation, we turn to pictures of beautiful girls selling 'flat tummy teas' (a 'tea' that is in fact just a laxative or diuretic) as our inspiration for health. We diet ourselves into misery and failure. We run long distances as a form of punishment for eating too much, rather than to nurture ourselves. We have allowed our society to place advertising dollars and false science ahead of real health. And we carry the shame of never being quite good enough.

The O word

Obesity is not a nice word. Just saying it tends to conjure up unflattering images in our minds. But it's a medical term that needs examining. Uncomfortable as it may be, it's time to get real about obesity, overweight and the dreaded F-word – fat. Medically speaking, obesity is defined as having a body mass index (BMI) over 30. BMI is a simple calculation of dividing your weight (in kilograms) by your height (in metres squared). It's got some important limitations as a measure of health but it has a place in this discussion. When you have a BMI over 25, you're classed as overweight. Over 40 and it's called severe obesity.

The more overweight you are, the more likely you are to have health problems. When people refer to obesity as an epidemic, it's a shocking reference to how quickly so many of us have got bigger. The rates of severe obesity in the US quadrupled between 1986 and 2000. More than half the population in developed countries is considered overweight, and in Europe, Australia and the US almost 30 per cent are obese, according to government statistics.

Childhood obesity is a growing problem with a third of American children and adolescents now overweight or obese. In

Australia, the number of overweight children has risen dramatically to the point where one in four kids is now overweight. Those children are more at risk of becoming overweight adults and developing all the associated health problems. Kids who are overweight are also particularly vulnerable to the crippling social stigma that comes with looking that way; this can lead to a lack of focus on encouraging them to be healthy.

It's no secret that our modern lives have contributed to this problem. We're acutely aware of how little physical activity we do and how easy it is to access energy-dense and nutrient-poor foods. We know the effect of poor-quality sleep and how much our phones and computers do for us. We quite literally do not need to get off the couch to carry out our lives.

We used to tell ourselves that obesity came as the result of a fatal character flaw: laziness. I still hear colleagues explaining someone's obesity as the end result of lack of willpower or not wanting to change enough, but science has recently shown us that isn't the case. Research into how our biology makes us bigger is a growing field; factors include the bacteria in our gut and the microbiome, as well as our genetics and other complex processes still not fully understood. Obesity is also strongly linked to our social circumstances: how much money we earn, how educated we are and where we live.

Here's the thing: obesity for some, not all, is more like a disease with complications than a major character flaw. It's not that people who are overweight lack discipline or self-control; it comes down to a complex interaction of our genetics, our environment, our day-to-day lives and factors we're still learning about. Obesity is not a choice or a screw-up, but rather a disease that carries its own

complications, leading to other illnesses. Our bias against obese people is changing, but that still doesn't mean that being obese is good for our health.

What we know for certain is that when we store extra fat, it's not just fat on the outside of our bodies that is problematic. Fat is also stored on our insides. When it accumulates around our vital organs, such as our heart or our kidneys, it causes direct damage. The fat that cradles our kidneys causes high blood pressure and impairs liver function; around our heart it makes us more likely to have a heart attack or heart failure and it makes our body resistant to insulin (leading to diabetes).

Fat also accumulates in the throat, leading to obstructive sleep apnoea – sufferers wake repeatedly through the night with obstructed breathing. This can place enormous strain on the heart and lungs as well as lead to exhaustion during the day. The extra weight places stress on our joints, leaving us at risk of arthritis and other aches and pains. The science linking obesity with heart disease and joint disease is strong and, although it's not the only factor leading to these conditions, the link is irrefutable.

Ironically, we sometimes describe where our fat is stored by different fruit shapes. An 'apple' describes people who carry the bulk of their weight around their mid-section. A 'pear' describes someone whose hips are the site of fat storage. Research has shown that 'apples' are more prone to illness than 'pears'; there seems to be something especially unhealthy about fat stored in and around the organs in our abdomen. This type of fat storage is riskier, particularly for heart disease. Unfortunately, we don't get to choose where we store extra fat; our bodies store it this way due to genetic programming, our diet and levels of hormones such as cortisol and androgens.

Obesity places us at risk of a number of serious, life-changing diseases and forms a part of the metabolic syndrome where we see weight gain (particularly in our midsection), diabetes, high blood pressure, raised cholesterol and what we call impaired fasting glucose, which is like pre-diabetes. We cannot ignore this growing problem: since the 1980s, there has been an extraordinary rise in our weight and the illnesses associated with it. The number of diabetics grew by around 400 per cent from 1980 to 2014, and heart disease is now Australia's leading single cause of death with 18,590 lives lost to it in 2017. In addition, about one-third of the population has high blood pressure and as a result more people are being killed by strokes. This is also happening ever earlier in life.

The reasons include the changing nature of work and demographics of the workforce. More of us are sitting behind a desk all day, rather than walking around a farm or construction site. The dramatic rise in female employment, combined with increasing industrialisation of the food sector, has led to an increase in the consumption of processed and ready-made foods, most of which are far higher in sugar, salt and fat. A recent survey showed 85 per cent of Australians had eaten fast food in the previous six months – the most popular were McDonald's, KFC and Subway. The first McDonald's opened in the Sydney suburb of Yagoona in 1971; in the past twenty years, the total number of fast-food outlets in this country has increased from 12,000 to 1.8 million.

At the same time, longer working hours and lengthy commutes have led to a decline in the time spent on sport and exercise. The most recent Australian Health Survey revealed that only 55 per cent of adults aged 18-64 get the recommended amount of exercise – 150 minutes a week of moderate physical activity. The Australian

stereotype of the lean, bronzed digger is decades out of date; we are now the third most obese country in the world.

The stigma of weight

Recently I've noticed a trend, especially among people who are very rightly fighting weight stigma, to make sweeping statements such as 'obesity doesn't cause disease' or 'bias kills people with obesity, not their fat'. I have to challenge that because it ignores a lot of the science at hand. It is absolutely true that as a society and even as health-care professionals, we're horrible to fat people and this has a marked impact on their health. However, there are causative links between obesity, especially the presence of fat in certain areas of our body, and other complications such as diabetes. In diabetes, for example, the fat tissue contributes to insulin resistance as well as possibly the amount of insulin the pancreas produces. Both parts of the science (bias, or psychology, and illness) can be true and we must take them both into account.

Our physical health isn't the only thing at risk. People who are overweight and obese are often subject to discrimination and ridicule. Weight stigma is a risk factor for mental and physical disease in its own right. Research into how fat people get treated in the doctor's surgery has shown that, for instance, they may get less time with a doctor or lower quality medical care. In a number of countries, health-care systems lack the resources of time and adequate numbers of dietitians or exercise programs to give people the tools they need to make positive health changes.

We are mean to fat people. They're very often the basis for comic relief in films and society at large. While it's easy to call obesity a

character flaw, the causes are not simple. On one hand, we all make our own food choices and perhaps we eat more than our bodies need. However, those choices do not happen in a vacuum. Obesity happens in a biological context where some people are more prone to weight gain. And food choices happen in environments where we are too often presented with unhealthy foods that are easier to find and cheaper.

Even in a hospital, a place where we're surrounded by illness and people trying to get better, we make it bloody hard to make good food choices. In every hospital I have worked in, the lack of healthy food options is insane. How are health-care workers meant to eat well in this environment? How the hell are the patients, or their visiting support people? One hospital got rid of sugary drinks such as Coke for a short time, but it didn't last because staff and patients alike near-on revolted. More often than not, we're given an abundance of unhealthy choices and the healthy choices are inaccessible or completely absent.

We're wired to want to eat 'tasty' food; our biology encourages us to overindulge in fatty, sugary and salty foods. Soft drinks or sodas give us huge amounts of calories and sugar but no satiety or feeling of fullness. In the US, half of all adults have at least one soda a day, with about 16 teaspoons of sugar in every regular 600 ml bottle. Researchers are exploring the addictive qualities of these types of food, meaning, biologically speaking, the ways in which they act on the brain that could make it harder to give them up. It's a contentious point, and comparing food to substances such as drugs is way too simplistic, but certainly it's an interesting area for research.

Fit and fat?

Is it possible to be fit and fat? There is a group of people who meet the criteria for obesity, yet don't seem to have any nasty side effects such as heart disease or diabetes. The concept has been publicised widely in the media and investigated extensively by researchers. I have heard patients, friends and celebrities say that although they are big they are healthy, or fit, or both.

Most research has called into question 'metabolically healthy obesity', which is how 'fit and fat' is described in scientific journals. The bulk of the research shows us some crucial points. Firstly, obesity is just one aspect of health and an overall assessment. That's to say, you can't judge a book by its cover. Just by looking at someone's weight in isolation doesn't tell you how healthy or unhealthy they are; that is true for people who are bigger and those who are smaller. (For children, this may be even more relevant. Some claim we place far too much emphasis on a child's weight and body size and not enough on their overall physical, cognitive and psychosocial growth and development.)

Health is associated with our weight, but also other factors such as how active we are, what we eat, whether we smoke and our genetics. Our fitness is one factor that could offset the effects of our lifestyle or size, and can help us to be 'fit and fat'. At present, researchers have largely reported that we don't know enough about this condition. Research published in powerhouse medical journals shows that if you follow these 'fit but fat' people over a decade, despite the fact they were once healthy and obese, they don't always stay that way. Many go on to develop complications of their obesity, maybe indicating a loss of fitness and healthy behaviours, or the natural course of their body weight.

That's not to say so-called 'fit and fat' people aren't out there. There is probably a small number who seem to be naturally predisposed to avoid some of the complications of obesity. It is likely their healthy lifestyle offers some protection. Although obesity is one piece of the puzzle in determining health, it is not the only one.

Fat on the inside

While we might think that being a normal or healthy weight protects us from illness, it isn't always the case. Studies of people with diabetes show that 15–20 per cent are of normal body weight. These people are more likely to be male, not be active enough, smoke, or store their fat in those central, danger areas. Sometimes they are referred to as 'thin outside, fat inside' to hammer home their health battle. It's estimated that 20 per cent of the population, despite being of normal weight, are at risk of illnesses we normally associate with obesity. This is one area where BMI falls flat.

BMI measurements certainly have their limitations. BMI doesn't tell us where the weight is stored or what it's made up of. A heavy body builder with huge amounts of muscle would have a falsely high BMI. A tall person, who isn't what we might call overweight based on their appearance, may store their fat in their abdomen, around their organs. One study demonstrated that one in three adults has their health misclassified by BMI. That's not to say the calculation was wrong. Some skinny people had metabolic evidence of health issues, such as high cholesterol or high blood glucose, while some bigger people had metabolic evidence of being healthy. And, although a lot of research has shown a connection between

BMI and disease, there have been studies over the years that have gone against the trend. Some have shown that more body weight actually makes us more likely to survive some diseases; for example, certain cancers. Obesity experts are quick to point out-that this has not been proven to the point where we should ignore the health effects of extra weight. The 'Obesity Paradox' does not mean that extra weight is actually beneficial, but rather that BMI tells only part of a person's health story.

BMI is a screening tool; if you score close to either end of the scale, rather than being told categorically that this makes you unhealthy, it should primarily trigger more investigation. A large study published in the *Journal of the American College of Cardiology* showed a relationship between BMI and heart disease in a group of people followed for many years. Dismissing everything we know about the associations between obesity and certain illnesses just because BMI is a flawed tool seems like throwing the baby out with the bathwater.

Obesity is a constant public health pressure and, we're told, a growing burden on society. However, some argue that the way we talk about it makes it harder to manage; I tend to agree. I am yet to meet a patient who is obese and unaware of it. I can see the shame on their face whenever it comes up. Constant messages that being fat is bad for you reduce public sympathy and lead to stigma that might stop people seeking help. Researchers from Swinburne University even argue that calling obesity an epidemic is harmful, because it might place further emphasis on the idea that health equates to being skinny, further fuelling the obsession with body appearance rather than body health. Our obsession with being skinny could be leading to growing rates of body dissatisfaction.

I acknowledge that it is uncomfortable to talk about our weight. It is a source of shame for people of all shapes and sizes. Weight bias absolutely impacts on the health of people who are bigger, and health-care workers contribute to this as much as the general population. I have heard colleagues call overweight people 'fatties' or make jokes. It's inappropriate and unprofessional and causes untold damage to health and wellbeing. However, just because we've long been cruel and dismissive of people who are overweight and we've caused harm in that process does not mean we need to stop talking about it. There are doctors and patients alike who advocate eliminating the word 'obesity' from our vocabulary because it causes embarrassment, bias and ill health.

In 2018, the Australian government released findings of a parliamentary enquiry into the so-called 'obesity epidemic'. One of the recommendations was to fight stigma, and one way to do that was to stop using the word obesity in health promotion and prevention programs. They conceded that there isn't an alternative for 'obesity' in medical settings or policy naming yet. While the term 'fat' is used by some groups to reclaim what they're called by others (following other social justice movements) that word might not suit everyone so, for now, we look for a more encompassing, less stigmatising term.

There is a tendency to blame the individual for the fact that they are bigger, especially if they're unhealthy. While we send messages that it's not okay to be fat, we also support a society that advertises junk food to kids. Think of the hypocrisy of the hospital whose staff berate patients for not eating well, but only offer hot chips and Coke for lunch! UK research has revealed that among the many causes of obesity, very little has to do with willpower or personal

responsibility. If we want to tackle obesity, we need to empower people to make good choices, not let them flounder in a hospital food court of bad choices.

Sitting: the new smoking?

Linked to the fact that we're getting bigger, of course, is the fact that we're also doing a lot less physical activity. Headlines like 'Sitting is the new smoking' indicate the huge threat inactivity poses to our health. We have long known the value of moving our bodies: the Greeks and Romans celebrated a strong and healthy body, and early physicians promoted exercise as a magic pill. Something has gone awry, however, with a recent study finding that globally 5.3 million people a year are estimated to die from inactivity. Lack of movement has been tied to many diseases, including heart disease and dementia; being active makes a big dent in our risk of diabetes, heart disease, joint problems and premature death.

Despite the fact that most countries have joined the World Health Organization's (WHO) commitment to get people more active, it's not really working. Public health campaigns may be missing the mark, or the barriers to exercise might be simply still too strong. We appear to even be going backwards. In Australia, 56 per cent of adults are not active enough, and that becomes 66 per cent for women from a low-socioeconomic background. Elderly people are also not active enough, with serious repercussions for their health and ability to recover from disease. These statistics are echoed in many countries around the world. For entertainment, we watch an average of 13 hours of television per week and now

spend almost seven hours a day accessing the internet via computers, tablets and phones. Even children as young as two years old are notching up 90 minutes of television a day. We commute in our cars, driving 17,600 minutes a year. An Australian study showed that commuting more than an hour a day by car increased the risk of ill health.

Women's inactivity deserves particular attention. A survey of American women showed that just 19 per cent meet the guidelines for aerobic and strength training, meaning the majority are missing out on the extensive benefits of exercise. An Australian study reported that physical activity falls during girlhood and by age 24 over half of women have stopped playing sport. Reasons include lack of time or a safe space, or lack of access. Overcoming stereotypes that women shouldn't play sport, or feeling self-conscious while being active are also disincentives to regular exercise. We're giving women mixed advice – exercise, but make sure you look good doing it – and this is costing lives.

Despite a huge commitment from public health organisations like WHO and the backing of governments around the world, we're not winning. Even when research has shown the success of a particular study aimed at increasing activity, it tends to fail the real-world test by not working when it's scaled up. Given that the problem of inactivity spans our whole lives and affects virtually every aspect of our daily routine, it will take more than just creating more parks or getting kids to play during school lunch. Every sector of the public and private spheres, including our workplaces, needs to commit to change, if we're ever going to improve. Even though we are fully aware of the gravity of the problem, we don't appear to be getting any closer to solving it.

The food wars

What we eat plays a huge role in how healthy we are, of course, but unfortunately the thriving science of nutrition is a growing target for pseudoscientific 'influencers' and commercial entities. Social media is filled with cries of 'Food is medicine' and 'Every time you eat, you're fighting disease or feeding it', in an attempt to illustrate the importance of good food. Even though nutrition is an easy target for bogus advice, it is also crucial to health. Changes in science or conflicting advice make it harder for us to follow a healthy way of eating.

Sayings such 'you are what you eat' or 'an apple a day keeps the doctor away' are part of conventional wisdom. Incidentally, that old saying about eating apples probably does hold some weight. A study of more than 8000 people published in the *Journal of the American Medical Association* showed that regularly eating apples leads to lower rates of medication prescriptions – not because apples are powerful disease fighters, but because regular fruit eaters probably eat pretty well most of the time. Even while debate has raged about what we should or shouldn't eat, the importance of good food is well known; we generally understand the link between diet and certain diseases such as obesity and high blood pressure.

But rather than stick with that easy-to-understand old advice, we have made things ever more complicated. Instead of 'eat more vegetables', we are now told which vegetable, where to buy it, whether it should be organic, and how we should cook and serve it to maximise its benefits. We have taken 'an apple a day' and turned it into 'an apple is high in flavonoids which fight cancer' – a gross overstatement. It is challenging enough to keep up with the basics of good diet, let alone these layers of complexity.

Despite that, we keep trying. We are more and more obsessed with what we eat, what we read and what we do. We're tracking macros and reading food labels and are discerning consumers in the quest for cleaner, leaner bodies. Restaurants and food chains now claim to be 'healthy' and menu items are prefaced with words such as 'super', 'green' or 'clean'. We are presented with a list of popular ingredients all designed to make our insides better than ever before, coming off the back of public interest in healthy guts or metabolism boosting.

Food is central to our wellbeing, but which foods are best for us has been hotly contested, particularly in the last few years. Decades ago, nutritional guidelines called for low-fat, high-carbohydrate approaches, emphasising grains and refuting the health benefits of foods such as eggs and nuts. However, as nutrition science evolves, scientific researchers and the person in the street have become more interested in optimal eating. Once thought to be 'not so bad', sugar has been declared by some as public enemy number one and fats appear to be having their moment in the sun. Former nutritional pariahs such as nuts and avocados are back on people's healthy menus. No single substance is responsible for all our ill health, nor is one particular food its panacea. Demonising sugar, for example, is unhelpful, firstly because it damages our relationship with food and leads to guilt, but most importantly because it fails to acknowledge the complexity of food, nutrition and disease.

The constant changing opinion of what's good and what's bad seems to have led to distrust in nutritional research. Compounding this is the fact that 'big food' sponsors a number of research projects or lobbies for food information to be presented to the public in a commercial context. The public understands this potential conflict

of interest and this breeds suspicion. For example, Australian foods carry a 'Health Star Rating', which came under fire when consumers and experts noticed high nutritional ratings – 3.5 out of 5 stars – being given to sugary foods. This is obviously misleading to the public and the undue influence of the food industry was blamed.

This distrust of experts has opened the door for dozens of people with very little in the way of health or nutritional knowledge to share their beliefs online and gain huge followings. The rise of 'superfoods', such as kale, coconut oil and quinoa, has coincided with pseudoscience around them, often disseminated on social media and popular blogs and websites. These foods, despite having no major advantage over cheaper, more readily-available healthy foods, have seen a surge in popularity.

Will the real experts please stand up?

As public appetite grows for finding the 'secret' foods that lead to health, so too has the number of books, documentaries and blogs claiming to have uncovered the truth about foods and nutrition. Some of the biggest nutrition-related books in recent years have been written by journalists or full-time writers, which begs the question, where are the qualified experts? Why aren't they using their expertise to explain what's good for us?

The recommendations of popular nutrition superstars have come under fire for being unscientific or unattainable to most people. Coconut oil, for example, was touted as a panacea just a few years ago, yet research has called its benefits into question; in some cases, it can be shown to be detrimental to health. Yet it's still promoted by social media darlings as the secret to health or dietary

success. In some cases, popular bloggers have risked lives by stating that they can cure cancer, leading to growing numbers of people completely shunning conventional, proven treatment.

Nutrition science is complicated research to conduct. Although we want to look at a particular type of fat, humans don't eat single nutrients; we eat food, so the effect of a particular nutrient can be hard to separate. And when we research people's diets, we often rely heavily on their recall or self-reported eating, which I'm sure we can all understand is not ideal. This kind of research also takes time and doesn't give us the instant answers we all want. How often have you thrown your hands in the air and said, 'Wait, I thought that was bad for us?' as the list of foods we're supposed to be in love with changes?

Regardless, food is vital to our wellbeing as individuals, a society and even to our planet. Our complicated relationships with food have led to a state where food has become our undoing but has the power to be our salvation. Despite what the diet industry would have you believe, it probably has very little to do with surefire meal plans, superfoods or one eating plan being superior to the other. What we eat does not need to be complicated and it should happen in an environment where it is easy to be healthy and harder to be the opposite.

Malnourished and overweight

In modern society vast numbers of us suffer from illnesses relating to the overconsumption of food, or excess food of low nutritional value. Yet, at the same time, huge numbers of people globally remain hungry or undernourished. Malnutrition used to mean

famine. Nowadays a malnourished child could present as underweight *or* overweight, and there are plenty of adults who are overweight or obese *and* malnourished. A lack of healthy food has led to people missing out on nutrients, such as iron and zinc, which are vital for our red blood cells and immune system and for reducing the risk of heart disease and diabetes. It's not just our physical wellbeing at risk: malnutrition contributes to differences in educational attainment, female empowerment and poverty.

In the past few decades our diet has changed to include increased amounts of sugar-sweetened beverages and processed foods containing trans fats and high-fructose corn syrup. Many people also eat bigger portions and rely on ready-made or restaurant meals of variable quality. The Australian Bureau of Statistics data shows that Australians consume an average of 14 teaspoons of sugar a day, with 14–18-year-old boys having a whopping 38 teaspoons per day. WHO guidelines recommend no more than six teaspoons a day. Australians consume 81 per cent of their sugar from nutrient-poor soft drinks and processed snacks.

Most trans fats are formed through an industrial process popular with manufacturers because it extends the shelf life of foods. These fats have been identified as so dangerous to health that seven European countries have banned them, with many more asking manufacturers to limit their use. Trans fats not only promote weight gain, they also appear to cause damage to our heart and blood vessels and promote diseases such as diabetes. If trans fats were medicine, they would never be approved for human consumption.

Foods laden with trans fats or sugars are also thought to trigger reactions in the body that promote illness and dysfunction. They alter where we store fat, contribute to a fatty liver and increase our

amounts of LDL, or bad cholesterol. They also cause inflammation of many of the body's organs, including the gut and blood vessels, which can act as a precursor to disease.

The popularity of these foods has much to do with marketing, especially to children. Research has shown that virtually all of the foods marketed to children exceed the recommended intakes of calories or sugar they should eat to maintain health. These foods are also cheap and quick to prepare, increasing their appeal to time-poor, low-income families. And with high fat and sugar levels, the food is often very tasty, adding to its general appeal. But altering this is a challenge – eating food is a social act and changing our nutrition can mean changing social structures and practices.

Disordered eating

At the same time as we're eating too much – too much food overall or too much unhealthy food – eating disorders are on the rise. These include conditions such as anorexia nervosa, bulimia nervosa, binge-eating disorder and others. We're also seeing growth in what is termed 'disordered eating', when a person's food intake is not quite right for their body or they have incredibly restrictive eating patterns that threaten their physical and mental wellbeing. This group of eating disorders doesn't quite meet the criteria for one of the main disorders, but could be surprisingly common.

It's been estimated that around 15 per cent of Australian women will experience an eating disorder at some point during their life; a further 20 per cent will suffer with an undiagnosed eating disorder. These figures have been rising, and there has also been an increase in diagnoses in young men. Sufferers face serious risks to

Disordered eating vs eating disorders

Disordered eating is a set of troublesome eating behaviours, such as purging, bingeing, food restriction and other methods to lose or control weight, that don't occur often enough, or are not severe enough, to qualify as a true eating disorder. Sounds familiar? Looks like every diet ever invented. Compare this to an eating disorder, with which someone has a very well-defined set of symptoms and physical and psychological problems. Make no mistake though, both can be incredibly harmful.

their physical health and increased rates of suicide. They can sometimes struggle to access appropriate treatment because their symptoms are either unrecognised or too complicated for our health systems to deal with. Despite this, hospital admissions for eating disorders in the UK continue to grow, nearly doubling between 2010 and 2017. A 2012 report estimated that treating eating disorders cost the Australian health system $100 million. Anorexia is our deadliest mental disorder, with an estimated mortality rate of 20 per cent.

The causes of eating disorders include genetic factors, psychological and personality traits, and life events such as childhood abuse. However, how we view our own bodies is also affected by the media, society and our peers. People who have recovered from eating disorders are rightly critical of the way we glamourise dieting and thinness by valuing being thin at any cost – something that normalises disordered and highly restrictive

eating. If it yields the desired results, the health costs are simply ignored. As the incredibly damaging saying goes: 'You can never be too rich or too thin.'

Smokes and booze

Despite many years of health warnings, we still smoke and drink to excess. Tobacco use remains one of the leading causes of death around the world and is a risk factor for lung cancer, bladder cancer, emphysema, heart attacks, strokes, and peripheral vascular disease – people literally lose their legs for a smoke. Excessive alcohol use leads to cancers and liver dysfunction as well as increasing our chances of being involved in an accident. Despite restrictions on both of these commonly used drugs, and knowledge of the risks, young people still take up smoking, while binge drinking is a public health nightmare.

Women in particular tend to smoke for stress relief and, worryingly, they are more likely to take up smoking as a form of weight control. Women are 31 per cent less likely to quit successfully than men. So, despite the fact that smoking is socially unacceptable and unhealthy, this is trumped in some cases by concern over appearance.

Pretty unhealthy

If illness rates keep increasing, we are all in a lot of trouble. Our health systems will struggle to keep up, but there are other far-reaching consequences. In 2017 life expectancy in the US fell for the third year in a row and we could start to see that happening all

around the world. People might continue to live a long time, but in poorer quality health. On a bad day at work, with increasingly younger and sicker people, I feel like I'm losing the fight against ballooning rates of disease.

The reasons for this are everywhere. We live in a world that has created a perfect storm of commercial interests, imperfect community interventions, economic disadvantage, inactivity, too much unhealthy food, a persistent tobacco industry, and excessive use of alcohol. Our society pays heavily for this unhealthy way of life but pays very little to prevent it. For those of us who are in some way connected with the lifestyle diseases, personally or professionally, it is a soul-destroying battle.

We have completely lost sight of what health truly is. Our systems are broken and I worry that we are image obsessed rather than health obsessed. It means we take on a relentless and challenging pursuit of looking a certain way in the hope that it will bring us health. It won't; it is just complicating an already complex problem and making it sometimes impossibly hard to do what's actually good for us.

The illnesses that now take years off our lives and the life out of our years can be prevented, halted or at the very least slowed down, but that is going to take a new approach. One that cuts the ties linking beauty with health and unattractiveness with disease. A new approach will have to disregard the false hopes, unrealistic expectations, bad science, stigma and unkindness, replacing them with achievable goals, strong science and compassion. In order to be healthier, we need to re-examine every aspect of our lives.