MELISSA SWEET

the BIG fat conspiracy

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For Lorna Cameron,
a wonderful woman

Contents

Introduction

You might think that the title of this book is a blatant attempt to catch your attention. You'd be right about that, but only partly. There is something universally appealing about a wacky conspiracy theory, perhaps because we all know that sometimes life really can be stranger than fiction. There's no doubt that if any of your ancestors from the last 40,000 years or so had been told about the subject of this book, they would have thought it sounded like a fine old fairytale.

But this book is most definitely not a work of fiction. It's about a real conspiracy that is affecting the lives of all of us now and compromising the health and wellbeing of our children into the future. Some experts believe that the current generation of children will be the first whose life expectancy is shorter than their parents'. That's how serious it is.

So what is this conspiracy? It's called the modern world. Many aspects of our environment conspire to make us overindulge in some things and underindulge in others. It is no coincidence that this is to the benefit of many powerful interests—the food, marketing, advertising, media and car industries, to name just a few. But often it's not to the benefit of our health.

Being caught up in this conspiracy is like being swept along by a fast-flowing river. All the forces are pushing you in one direction and it takes some effort and strength to go against the flow. It's much easier to drift along, even though you know there are hazards ahead. The most obvious of these hazards is the growing girth of many adults and children in many countries. Overweight inspires so much public health and media attention because it's the huge rock sticking up out of the water. It's so obvious that you can't miss it.

But the world's ever-increasing weight problem is just the tip of the rock. The not-so-visible bit under the water can also do damage. Overweight can be seen as the most obvious expression of broader underlying health hazards—unhealthy eating and inactivity. The growing incidence of overweight is a symptom of an environment which can make it very difficult for parents and families to follow healthy lifestyles.

Many children, whether tubby or thin, are not enjoying good nutrition or the self-confidence that comes with being fit and active. Many are overfed but undernourished. Many are developing unhealthy food and activity habits which have not shown up in their waistlines—not yet, at least—but which may affect their health later; poor nutrition and inactivity contribute to many diseases, including diabetes, heart disease, strokes and some cancers, and therefore to many premature deaths.

Which brings us to another conspiracy: this time, it's a little one between you and me, the writer and the reader. This book was prompted by my concern about the growing numbers of children and young people who are overweight, and I hope it inspires you to take some steps to protect yourself and your family from the big fat conspiracy of modern life.

But the last thing I want is to make parents or children overly focused on weight. As anyone who has ever obsessed over the numbers on their bathroom scales can testify, worrying about weight is often entirely counterproductive. It encourages unhealthy anxieties and unhealthy eating patterns, such as dieting. Encouraging children to worry about their weight might just end up giving them a weight problem.

So our little conspiracy, in this book about weight, is to pretend that it is not about that at all. Let's focus on gaining health rather than losing weight.

One of the reasons for this approach is self-interest. I want you to read this book, but study after study has shown that the words 'obesity' and 'overweight' have magic properties. The mere mention of them makes otherwise sensible people close down, switch off and block their ears. This happens even with the parents of obese children. Many parents don't see fat as a health issue for them or their families—it is something that affects someone else's children. In the same way, many people think their lifestyle is more healthy than it really is—poor nutrition and inactive lifestyles are problems other people have.

But the main reason that this book does not focus solely on weight is that good health involves so much more than having a healthy weight. Children can be overweight but fit, active, and enjoying a nutritious diet. On the other hand, just because a child is thin, it doesn't mean their health is optimal. 'Thin does not necessarily equal health, and thin does not necessarily equal a healthy lifestyle,' says Dr Rick Kausman, a Melbourne doctor who specialises in treating weight problems.

A healthy lifestyle has many benefits other than helping to control weight. It helps make sure that children have plenty of

energy, sleep well, feel good, and enjoy learning. It also means they are less likely to suffer from problems like constipation and headaches. Strategies to prevent childhood obesity are likely to benefit all children, whether they are at risk of weight gain or not.

Overweight is a huge issue for adults, but this book focuses mainly on children and families because, as someone wise once said, an ounce of prevention is worth a pound of cure. This is particularly so in the area of weight control, where treatment is not spectacularly successful—one of the reasons obesity is so difficult to cure is that our bodies are far more efficient at gaining weight than they are at losing it. Most overweight children and adults who lose weight return to their previous size.[1]

It is true that not all fat children grow into fat adults, and it is true that some fat adults were thin children. But fat children are more likely to become fat adults and, with studies showing that obesity is becoming more common even among preschoolers, prevention efforts need to start very early in life, perhaps even in the womb (more on that later, in Chapter 9).

Another reason to focus on childhood is because some experts believe that obesity that begins early in life is more likely to cause health problems than weight gain at a later age. Others say that childhood is the best time for obesity prevention because it is when weight problems are best controlled—thanks to children's rapid growth, we can help them 'grow into their weight' rather than striving for weight loss.

There are also ethical reasons to focus attention on childhood. Children are dependent on us—not only on their parents, but also on other adults who shape their environments.

All of us owe them a duty of care. As well, the habits that develop in childhood may last a lifetime. Children who genuinely enjoy a healthy diet and being fit are more likely to grow into adults who do the same.

Although this book is about children's health, it is the family's behaviour that counts. This book is not about forcing children to eat their greens or run around the block. That sort of approach might do more harm than good (find out why in Chapters 7 and 10).

Have another look at that rushing river. What's the best way to get your children across safely? It's not by tossing them a pair of floaties and telling them to swim for it. You need to help make the journey across as easy and pleasant for them as possible. You do that by providing a helpful environment—the family boat which is chugging slowly and determinedly across the river. Everyone is on board and heading in the same direction. The parents are showing their children the way.

This is not an easy job, and it's no wonder so many struggle. It seems very unfair to blame parents or children for being swept downstream, when so many powerful interests are working towards exactly that result.

Yet there are plenty of people prepared to nail parents for the childhood obesity problem. They condemn parents for children's poor diets and inactivity. Broadly speaking, there are two types of people who make these sorts of comments. The first speak out of ignorance or prejudice. They have not studied the evidence coming in from around the world about the impact of the modern environment on health, and they see fat as a sign of personal failing. The second group includes those who have a vested interest in describing the issue as one

of individual choice and responsibility, thus deflecting attention from their own role. This group includes governments that are reluctant to make hard decisions about town planning and transport policies or television advertising to children. And industries that spend a fortune flogging junk foods to kids.

Many experts believe it will be difficult to achieve widespread, lasting improvements to children's health without making that journey across the river easier for families. This means major environmental changes—like stopping the advertising of junk foods to young children, like making it easier and safer for children to walk or cycle to school, like making vegetables and fruit more affordable and accessible, like making workplaces more family-friendly.

However, these changes will not come quickly or easily, despite the determination of many in the public health sector and the broader community. In the meantime, I hope this book inspires families to make some of the small changes in their daily lives which might add up to sizeable improvements to their health, now and in the future. It's not about asking you to do the impossible. It's about trying, within your family or community, to make healthy choices easier.

It's also about different strokes for different folks. What works for one family or community may not for another. What works for one family when the children are young may not work so well when the children are older. What works for your daughter may not work for her brother.

Despite all the alarming headlines and statistics about childhood obesity, this is not a book of doom and gloom or shame and blame. It celebrates the achievement, imagination and creativity of many families and communities, often in the

face of adversity. As some of the stories in this book show, many people have developed innovative strategies for countering what some child health experts have dubbed the 'toxic' or 'obesogenic' environment many children live in.

Read on, and find out about the wonderful Apple Slinky machine and how it is revolutionising school fundraising, the clever ideas being put into practice in remote Aboriginal communities (Chapter 12), and what children themselves think might be helpful (Chapters 6 and 8). If you don't already know about the importance of the 'division of responsibility' in helping children eat well, don't miss Chapter 7.

Above all, this is a book that says that enjoyment is the key to a healthy lifestyle and good health. You're so much more likely to cross that river successfully if it's an enjoyable trip.

Your survival guide to the Big Fat Conspiracy

This book is divided into three sections. It takes a broad and detailed approach, so don't feel you have to read it all. Just skip the sections that aren't relevant to your interests or needs.

The first section is called 'Understanding vs blaming'. Once you start to look at all the forces that affect children's health, you realise what a difficult job many parents face today. It also becomes clear that weight gain is an almost inevitable consequence of modern society, and that conscious action is needed to prevent it.

This section examines the issues affecting children's health in some detail, because there are so many sceptics—many of them in

powerful positions, such as politicians and media commentators—who persist in seeing problems with children's health and weight as the sole responsibility of parents. 'If only parents would stop giving their kids lollies and chips, the problem would be solved' is their typical comment—if only it were that simple! I hope this section will help all of us understand how our actions can affect children's wellbeing. If it is too detailed for you, head straight to the practical advice in the next section.

The second section is called 'What you and your family can do'. It looks at some of the ways families can make it easier for themselves to enjoy good health. It is packed with tips about how to build regular activity into your family's life and how to really enjoy healthy eating. It also contains useful advice on how to develop a healthy relationship with television and other screen-based entertainment, and specific information for families who are struggling with weight issues.

The third section is called 'The power of many'. It examines how communities can work together to make a powerful difference to people's lives. It has many examples from across Australia of schools, local councils, community gardens, farmers' markets, businesses, and other groups working to improve the environments which affect children's health. This section is a treasure trove of ideas which you can adapt to your own needs and circumstances.

Reading this book may take some thought and effort. It does not promise quick or easy fixes. If it did, it would not be worth reading, because quick fixes are rarely helpful or sustainable solutions to complex problems.

The big fat paradox

If this book hadn't been called *The Big Fat Conspiracy*, it might have been called *The Big Fat Paradox*. Here are just a few that spring to mind:

- We are living longer and have more wealth than ever at our disposal, yet we feel under more pressure to do more things faster. At the same time, we are moving less and our bodies are becoming slower. We email someone in the next room because we think we haven't got time to take 10 steps.
- Time-saving technology is more widely available than ever before, but people feel more rushed and time poor than ever.
- We spend more time renovating our kitchens than using them, whether for cooking or sharing a family meal. And it sometimes seems that we also spend more time watching TV shows about cooking, or reading about cooking, than we do actually cooking.
- We don't cook because we don't have enough time because we're watching TV, where the ads tell us we don't have enough time to cook and should instead buy the easy foods. You know, the ones full of fat, sugar and salt.
- As the range of low-fat foods, bestselling diet books and the weight-loss industry has expanded, so have our waistlines.
- Eating on the run is almost certain to pile on the kilos.
- People are more health conscious than ever—research shows that even young children frown upon the fat and salt in chips—but many do not meet the dietary recommendations for vegetables and fruit consumption.[2]
- Many people are overfed but undernourished.
- Many parents do not realise their children are overweight, or that this might have health risks. At the same time, many normal-sized children judge themselves to be overweight.

- Many of the symptoms of 'affluenza', the over-consumption syndrome which sees Australians throw away more than $5 billion worth of food and drink in a year, are also contributing to expanding waistlines.[3] On the other hand, in wealthy countries like Australia, obesity is more common among the poorer groups in the community, where financial pressure encourages unhealthy eating.
- Children are growing up faster than ever before—and not just because they are hitting puberty earlier and earlier—and yet they are moving more and more slowly.
- Children today are so sophisticated in so many ways. They recite brand names, know about the latest product launch and speak in the universal language of TV sitcoms. Six-year-olds talk about 'dumping' their boyfriend. The internet and other electronic media let them explore the world in ways that previous generations could never have imagined. On the other hand, they are less independent than ever. Many are not allowed to travel or explore their neighbourhoods by themselves or enjoy freedoms that were taken for granted by their parents.
- Parents grow ever more fearful and protective of their children, although in many respects the world is a much safer place than it was when they were growing up. Ironically, many parents who worry about letting their children loose in the local park have no qualms about taking them to the playground at McDonald's or encouraging them to sit quietly in front of the TV.

Understanding vs blaming

1. The big fat conspiracy

Many, if not most, people are at least a little sensitive about their shape or size. This is not surprising, considering the cultural and social expectations about how bodies should look, not to mention the deeply ingrained prejudices surrounding fat. Even health professionals who specialise in treating obesity share some of wider society's beliefs that people who are fat are lazy or greedy. Or both.

The rapid explosion in rates of obesity and overweight right around the world—in countries rich and poor—has forced a radical rethink of these stereotypes. The fact that so many people in so many different places are piling on so many kilos makes it clear that something much bigger than any single individual must be involved. Weight gain was once blamed on moral weakness, vulnerable personality types or bad behaviour, but it is increasingly being understood as a normal physiological response to a pathological environment.[1] Instead of being seen mostly as a medical problem, weight has become an environmental and an economic issue. Globalisation,

industrialisation, urbanisation, environmental change and economic development are blamed for creating conditions which support and encourage inactivity and over-consumption of food.[2]

For Bob Volkmer, a child health researcher at the Children, Youth and Women's Health Service in Adelaide, the analogy with intensive animal production is obvious. 'How do you fatten up an animal?' he asks. 'You coop it up and you feed it a lot. That's exactly what our modern environment does.' Others talk about free-range versus battery-reared children. In a similar vein, many studies have shown that wild animals carry far less fat than their domesticated cousins.

Some observers draw comparisons between obesity and infectious disease epidemics.[3] Germs might have caused the infections, but it was urbanisation and industrialisation that created the perfect breeding grounds for outbreaks of disease. Similarly, obesity can be viewed simplistically—as a consequence of overeating and inactivity—or as the result of a complex interplay of environmental factors, many of which are associated with increasing affluence and the growth of cities.

Take a trip

Taking a quick spin around the globe helps illustrate this. The pattern of obesity in countries tends to reflect their stage of economic development. The overweight epidemic started to spread rapidly in the high-income countries of western Europe, the US and Australasia during the 1980s and 1990s, and even more recently in middle-income countries.[4] Obesity is becoming prevalent even in poor countries, many of which are caught in a situation known as 'nutrition transition', where significant proportions of their people suffer from either under-

consumption or over-consumption. Within a population, obesity first becomes noticeable in middle-aged women, then middle-aged men, then teenagers and finally children.

In the early stages of the spread of obesity, the effects tend to be most obvious in the wealthy—those who are the first to enjoy the benefits of modernisation, such as cars, labour-saving devices, sedentary recreation, and the easy availability of rich foods. As economic prosperity spreads further, allowing ordinary workers to buy cars, TVs and takeaway meals, obesity becomes more prominent in the poorer groups. This is at least partly because their environments—which typically include much easier, cheaper access to fatty food than to vegetables and fruit—encourage weight gain.

The big picture[5]

The big fat conspiracy is not only a problem for Australia. It is an international problem, sometimes referred to as "globesity", as these figures show.

- Internationally, about 10 per cent of young people aged 5 to 17 are overweight, including 2–3 per cent who are obese. In 2000, an estimated 30–45 million worldwide were obese. Obesity is becoming the most common chronic condition in children in the Americas, Europe and the Near/Middle East. One study estimated that 3 per cent of preschool children in developing countries are obese.
- Data from Brazil and China shows that the rate of increase in obesity among children in some developing countries is similar to or even greater than in the US. Between 1974 and 1997, the prevalence of overweight and obesity in children in Brazil rose from

4 per cent to 14 per cent. In Chile, 12 per cent of 6-year-old boys and 14 per cent of 6-year-old girls were overweight in 1987; by 2000, the rates had jumped to 26 per cent and 27 per cent respectively.

- In the US, over the past 30 years, the obesity rate has tripled among children aged 2 to 5 (from 5 to 14 per cent) and youth aged 12 to 19 (from 5 to 17 per cent). It has quadrupled among children aged 6 to 11 (from 4 to 19 per cent) By 2010, it is expected that 20 per cent of children and young people in the US will be obese.
- The highest rates in Europe are found in the south. One survey found that 36 per cent of 9-year-old children in Italy and Sicily were overweight or obese, as were 26 per cent of boys and 19 per cent of girls in Greece, 27 per cent of children in Spain, and 39 per cent of teenagers in Crete.
- Several countries in North Africa, the eastern Mediterranean and the Middle East have high rates. More than one-quarter of preschoolers and 14 per cent of teenagers in Egypt are overweight or obese, as are 25 per cent of children in Cyprus.
- Even in very poor countries where obesity remains rare, it is on the increase. In Bangladesh, rates of obesity in preschoolers increased from 0.1 per cent in 1982–83 to 1.1 per cent in 1996–97. Mauritius and Tanzania are among the rare countries where obesity rates in children are reported to have fallen.

The rapid changes occurring in China show us a powerful case study of the impact of economic development on waistlines. Researchers investigated the impact of changing transport patterns between 1989 and 1997, when the car began to supplant traditional forms of transport—walking and cycling.[6] Those with access to cars also began to expand at the girth. Changes in transport were accompanied by changes in food habits, education, leisure time activity, computer and TV

ownership, and urbanisation. About 7.7 per cent of children in China are overweight, but the rate reaches 12.4 per cent in city areas and 29 per cent among preschoolers in city areas.[7]

Even in remote villages in Papua New Guinea, the impact of modernisation has been linked to expanding waistlines.[8] Researchers developed an 'index of modernity' based on education levels, type of housing, occupation, use of TVs and cars and how much modern technology was used in a particular village. Several villages were then rated on the modernity index and the people's weight was measured. As the level of modernity increased in a village, so did the level of fatness. One of the researchers involved in that study, a diabetes expert from Melbourne, Professor Paul Zimmet, links the obesity epidemic to the 'coca-colonisation' of the world. For experts like Zimmet, that particular soft drink has become a metaphor for something other than the glamorous lifestyle portrayed in its advertising. It is no statistical coincidence that rates of obesity have risen as soft drink sales have soared.

Of course ours is not the first generation to complain about the 'modern world'. It's been a constant complaint throughout history, just as every new generation has had to listen to its elders moan about all the things that are wrong with 'young people today'. Modernisation has indeed brought many benefits. Apart from enjoying great material wealth, children today—and perhaps even their parents—cannot even imagine the devastation of infectious diseases which were once commonplace. Childhood is in many ways safer than ever before. Nonetheless, there are other indicators that the news on modernity is not all good. Just pull out your old school photographs and compare them with your children's. You probably won't have to look too hard to spot what's changed.

On average, the kids in the colour photographs will be taller and chubbier than the ones in the black and white pictures. Not all of them, though. We are, as some wit once joked, all individuals, every single one of us. Everyone responds differently to the same circumstances or environment. Some people will be unlikely to gain weight no matter what's going on in their environment, while others will find it easy to pile on the kilos even when food is scarce. The majority fall somewhere between these two extremes, and will put on the odd kilogram if the environment encourages it. In experiments where people are deliberately overfed in closely controlled conditions, the amount of weight gain varies greatly between individuals. But identical twins tend to gain similar amounts, which suggests that much of the variation is genetically based.

Ancient genes a bad fit for a modern world

Our ancient genes are at the root of this modern epidemic. The human race adapted over millions of years to living in a world of scarcity, where you ate up when you had the chance if you wanted to survive. We developed a taste for sweet, fatty foods because they were rich sources of energy. There was little need for us to develop mechanisms to protect ourselves against overabundance.

Our bodies were programmed to respond to deprivation, not excess. No wonder it is so much easier to put on weight than to lose it. We were also programmed to conserve our energy for when it was really needed—in hunting food or defending ourselves. No wonder we now have such a great love affair with the couch and other energy-saving devices.

Our physiology hasn't changed much in thousands of years but our environment certainly has. The modern equivalent of hunting and gathering involves driving to a supermarket or, in the ultimate symbol of unhealthiness, a drive-through fast food outlet. Perhaps it doesn't even require that any more—now we can just pick up the phone to place an order, or do it over the internet. Our bodies' mechanisms for regulating appetite are not well equipped to deal with this world. When we are inactive, they are even less effective.

Aboriginal history holds the clues

Nowhere is the impact of westernisation more obvious and more devastating than among indigenous people such as Australian Aborigines.

Their traditional diets provided them with a wide range of nutritious foods. The wild animals they hunted were low in fat; the plants that they gathered provided fibre and carbohydrates that were slowly digested and absorbed. Wild honey was the only traditional source of carbohydrates loaded with calories.

Many of these foods were also rich in vital nutrients. A species of wild plum eaten in northern Australia has the highest vitamin C content of any known food, according to one study.[9] The nutty-buttery taste of the witchetty grub reflects a fat that has a composition very similar to olive oil, and a yam widely eaten in northern Australia boasts far more nutrients than its modern equivalent, the potato. Analysis of the composition of goannas, snakes, kangaroos, fish, wallabies, turtles, possums and other traditional sources of meat reveal low levels of saturated fats but a relatively high content of polyunsaturated fatty

acids, and particularly omega-3 fats, which may protect us against cardiovascular disease and have other health benefits.[10]

Hunter-gatherer societies are thought to have worked hard—but not too hard—for their food. It has been estimated that such societies probably spent no more than three to five hours a day earning their sustenance, which is far shorter than the typical working day in agricultural and modern societies. However, finding and preparing food could involve bouts of intensive activity.

Their traditional diet and lifestyle protected Aborigines from many of the diseases associated with 'civilisation', such as diabetes and cardiovascular disease. They were fit and extremely lean, but studies found little evidence of malnutrition. If Europeans were as thin as Aborigines were, they would be likely to be malnourished. Aborigines' blood pressure was low and, like their weight, did not increase as they grew older.[11]

Professor Kerin O'Dea, a scientist who has documented the impact of westernisation on Aboriginal people in northern Australia and is now based at St Vincent's Hospital in Melbourne, says studies of Aborigines and other traditional societies suggest that increasing blood pressure is not an inevitable consequence of ageing. Instead, it results from the western lifestyle and age-related increases in weight. She says Aborigines had two key survival strategies to cope with an irregular food supply: they maximised energy intake and minimised energy output. Apart from gathering and preparing food, energy was not squandered. The notion of deliberately working up a sweat for no particular purpose would have seemed absurd.

When they had food, they ate it. If there was plenty, they feasted, sometimes eating two to three kilograms of meat each at a single sitting. They particularly valued meats and energy-dense foods such as honey. Their 'thrifty' metabolism also helped them make the most of their food during times of abundance: their bodies stored any excess

as fat, so it could be drawn upon in times of scarcity. The 'thrifty genotype' hypothesis, which arose in the early 1960s, says that many indigenous peoples are extra effective at metabolising glucose, which is beneficial when food is in short supply.

But all these factors that were so advantageous to hunter-gatherers combined to ensure a health disaster when Aborigines moved to a western diet and lifestyle. This has been the case for many other indigenous people as well. Their thrifty metabolism, their traditions of feasting, and their preference for energy-dense food meant they soon put on weight in their new environment, and many developed non-insulin-dependent diabetes and cardiovascular disease. Feasting on lamb or other domesticated meats that have a high fat content means your calorie intake is two to four times higher than when eating the same quantity of kangaroo meat, which is very lean, according to O'Dea.

However, there are concerns that focusing on the 'thrifty genotype' hypothesis might distract attention from all the other factors which have made it extremely difficult for Aborigines to maintain healthy lifestyles in the modern world. The recent history of the Pitjantjatjara people in central Australia, as told by Stephan Rainow, the public environmental health officer for the Nganampa Health Council, which provides the area's health services, shows us a powerful example of this. He says local people first came into sustained contact with outsiders during the testing of atomic bombs in the region during the 1950s. They were moved onto missions or other settlements, and were given rations, mainly flour, sugar and tea. Later, community stores were established—at first they were run by government, then by the communities themselves.

Rainow remembers living in one remote community (in the late 1970s) which received a planeload of perishables once a week. They would be consumed within a few days, leaving limited supplies for the rest of the week. In many communities, people still relied on bush

tucker for most of their food. They hunted and gathered, assisted by modern technology in the form of rifles and motor vehicles. And women who went out digging for rabbits inevitably came home with dozens, says Rainow.

Two events changed this hunting and gathering pattern. The Port Arthur massacre of 1996 led to tougher gun laws, which had a dramatic impact on locals' ability to hunt. The release of the calicivirus was also disastrous—the rabbits disappeared. Rainow says the end of rabbit hunting also affected women's health: they were no longer using as much physical energy as when they had to dig up rabbit burrows.

People began to rely more on the community stores. Many of these had limited ability to store fresh produce, so they tended to stock ready-to-eat foods that were high in fat, sugar and salt. Soft drinks have traditionally been one of their highest selling lines. Lack of housing and other infrastructure meant that even if fresh produce had been more widely available, many people wouldn't have had the facilities or skills to prepare it. Poor access to healthy food is reflected in poor health; Rainow says people in their 20s are being diagnosed with type 2 diabetes.

The Nganampa Health Council is now working at getting the community stores to stock foods that have a higher nutritional value and improving the management practices of the stores. They are also working closely with businesses to improve the range and affordability of their food supply. 'Our primary concern is to make sure people have access to affordable healthy food,' says Rainow.

The Pitjantjatjara story is not unique. Surveys have consistently shown that fresh food is extremely expensive and often of poor quality and variety in remote Aboriginal and Torres Strait Islander communities. In other words, some of Australia's poorest and most unhealthy people are expected to pay the highest prices for fresh food of variable quality. At the same time, junk food, takeaways and soft

drinks are often readily available, widely promoted and relatively more affordable. Not surprisingly, studies have shown that in some Aboriginal communities fruit and vegetable consumption is much lower than it is elsewhere in Australia, and sugar consumption is far, far higher.[12]

Some studies suggest that the key to improving the health of Aboriginal people and other Australians lies in the past. Professor Kerin O'Dea was involved in a series of studies in the 1970s and 1980s that showed the benefits of a traditional diet and lifestyle for members of the Mowanjum community in Western Australia's Kimberley region. Small groups returned to a traditional lifestyle for periods ranging from 2 weeks to 3 months. The composition of their food was carefully analysed and the study participants were extensively tested before, during and after the studies. Their health improved markedly, even after just a fortnight in the bush. In one project involving 10 people with diabetes, the participants lost between 3 and 12 kilograms during the 7 weeks of the study and their diabetes control and cardiovascular risk factors improved markedly. O'Dea and her colleagues concluded that the hunter-gatherer lifestyle was effective in treating obesity, non insulin-dependent diabetes, high blood pressure and coronary heart disease.

The studies have been described as among the most important pieces of Australian health and medical research in recent decades. Apart from their scientific significance—showing that dietary and lifestyle changes could have a major effect in just weeks on a condition which takes years to develop—the work also had political and cultural impact. For instance, bush tucker was once prohibited in some areas, but now it is promoted in some indigenous health education campaigns as a way of managing chronic disease. O'Dea has spoken to all sorts of groups about how the traditional hunter-gatherer lifestyle can teach western communities how to treat and prevent many chronic diseases.

Running backwards

In 2000, 14 men were asked to wear a small device around their waists to measure their activity levels. It was sensitive enough to record even their fidgeting.

Seven of the men were actors at Old Sydney Town, a historic theme park north of Sydney, where they played the parts of Australian soldiers, convicts and settlers in the early 19th century. During the study, they agreed to avoid the use of modern technology as much as possible when not at work. Two took the project so seriously that they abandoned modern life altogether during the study, and stayed at the theme park all the time. The other seven men involved in the project went about their lives as usual, working as accountants, information technology buffs, doctors, and taxi drivers. One was an entertainer.

The researchers found that the old-timers were far more active than the modern workers; the difference was the equivalent of walking an average of 8 kilometres a day.[13] The difference for the two men most dedicated to the traditional lifestyle was equivalent to walking about 16 kilometres a day. This is about the distance people think our hunter-gatherer ancestors travelled each day, foraging for food.

The researchers concluded that the widespread use of labour-saving technologies means we are unlikely to be as active as our forebears unless we make a conscious effort. When you add these lower activity trends to our abundant, energy-dense food supply, say the researchers, it seems that obesity is 'almost an inevitable consequence of modernisation'.

Unintended consequences

Throughout history, people have aimed to build a better future for their children. They didn't want their offspring to go

without, as perhaps they had done, or to work as hard as they had done to put food on the table. Their dreams have come true. Never before has food been so easily available, for so little sweat.

'We have spent thousands of years trying to create this environment,' says Garry Egger, Adjunct Professor in the School of Exercise and Nutrition at Deakin University in Victoria. 'We never thought of the downside. We applaud every advance in technology without thinking of the negative effects.' It's a reminder to be careful what you wish for. The best intentions can have unintended consequences. Here are a few examples:

- After the hardship years of World War II, many countries developed 'cheap food' policies, supporting farmers as they boosted production of crops and animals. One history has documented how this allowed even the poor to eat plenty of meat, butter, fats and sugar. Governments wanted to ensure children's growth and a strong workforce.[14] One of the consequences, however, was a huge epidemic of coronary heart disease, which emerged first in the more affluent and agriculturally innovative countries.
- Labour-saving devices have transformed our lives, and not only on the factory floor. Push-button technology saves us from getting off the couch to change the channel, from getting out of the car to open the garage, from beating eggs by hand, from walking to the clothesline to hang out the clothes. These days you don't even have to work up a sweat scrubbing the bathroom—a spray and wipe will do. These are small, everyday things, so you mightn't expect them to add up to much. But they do; research increasingly suggests that the loss of exactly this kind of everyday, incidental activity contributes to weight gain. Technology can also have other, indirect effects on health. Microwaves might be convenient but they also make it easier to

eat on the run, rather than sitting down to the table as a family, a ritual that has been shown to promote healthy food habits.

• We want our children to have every opportunity. We send them to the best schools, which often means travelling further than the closest one—and the closest one is the one most likely to be within walking distance. We push schools to provide the best academic opportunities possible, even if this means there is little time left in the school day for running and playing. In 1999, a South Australian study documented how many schools reduced the time students spent in physical education classes to accommodate academic demands.[15] As one teacher told the researchers: 'How many parents complain in your parent-teacher interviews that their kids aren't doing well at fitness?' The study showed that dedicating time to PE did not harm academic attainment.

• We designed our suburbs with cul de sacs, thinking this would provide safer play areas for children. But what it also has done is discourage us from strolling around our neighbourhoods, because walking to the park or the shops became such a circuitous, unappealing exercise. We are much more likely to walk around our neighbourhood if the streets are in a grid pattern and there is a visible destination, such as a corner shop.

• The double or triple garage doors that dominate the face that many houses present to the street mean there are fewer windows facing onto the street and hence less of a feeling that children on the streets are being watched over. Dr Paul Tranter, a senior lecturer in geography at the Australian Defence Force Academy in Canberra, cites this as just one example of how modern urban design makes the streets less safe for children to use.[16]

Social changes

Many of the social changes which have accompanied economic development have also had a marked impact on children's lives. More families have both parents working—or in single parent families where the single parent is working—and often for long hours. One large study that tracked the lives of more than 10,000 Australian children and their families found that 40 per cent of children were younger than one when their mother returned to the paid workforce.[17] And two-thirds of 4 and 5-year-olds had a mother who had returned to paid work at some stage since their birth. In that same study, 47 per cent of working parents said they often or always felt rushed. Interestingly, so did 36 per cent of parents who were not in the paid workforce. Meanwhile, a national survey in 2004 found that about a third of full-time workers with children agreed with the statement 'Your work means you currently neglect your relationships with family and friends but you plan to make up for it in later years'.

How ironic is that: technology was meant to give us more time, not less. As journalist Carl Honoré points out in his book challenging the cult of speed, that particular prediction was spectacularly off target.[18] Honoré cites Benjamin Franklin's vision of a world devoted to rest and relaxation. In the 1700s, Franklin predicted that men would soon work no more than 4 hours a week. Similarly, George Bernard Shaw predicted we would work less than 2 hours a day by 2000, and in 1956 Richard Nixon told Americans to prepare for a 4 day working week in the 'not too distant future'.

When Australian National University researchers recently asked 50 leading Australian experts why they thought obesity levels had skyrocketed, they nominated time as one of their top culprits. Or lack of it. When your days and weeks disappear in

a frenzy of clock-racing, it's hard to find time to play with the kids or shop. Or is it? Australians spend hours each day in front of the telly, where many of the advertisements tell us we are too busy to cook, and should buy this or that convenient product, whether it's a processed meal, a takeaway, or the latest gizmo for saving our precious time and energy. Marketing surveys show that a third of the food budget in Australia is spent on foods prepared away from home, which tend to be much fattier than home-cooked meals.[19]

American journalist and academic Ellen Ruppel Shell argues that many people have been sucked in by industries with a vested interest in spreading the word about the scarcity of time.[20] People have been persuaded that spending a few minutes refuelling in a fast food outlet is 'fun', says Shell, whereas a family dinner at the kitchen table is an 'obligation'. Similarly, walking a few blocks a day is a dreary chore, while spending hours transfixed by a cathode ray tube is 'relaxing'. She says the image makers who produce and market TV have succeeded in convincing the masses that they are too exhausted to do anything after work other than collapse in front of 'can't miss' programming. Just savour the many delicious ironies in this image: the couch potato is ploughing through takeaway while salivating over the delectable celebrity chef Nigella Lawson, at work on the TV with her electric pepper grinder. Who needs to cook when you can watch someone else doing it? It's a bit like sex, according to the same logic. Apparently many of us are having less sex than our parents did, though there is more sex than ever on TV, billboards and in so many other parts of daily life.

It's not only adults who race the clock. Some children, if their parents can afford it, are also way too busy to kick a ball

around a park. Academic coaching, music lessons, drama lessons and being driven from one engagement to another leaves little time for unstructured play, which is important for children's development in lots of ways. Young children talk about scheduling time to play with friends, sometimes weeks in advance. One study of Year 5 students (aged about 10) in western Sydney found one-quarter reported having no or minimal time for free play during the 3 days of the survey. Forty per cent of the children spent an average of 60 minutes or more after school doing homework.[21] Some education authorities recommend that 30–45 minutes would be more appropriate for 10-year-olds.

The fact that people are becoming parents at older ages today than they did 50 years ago is also having an effect, points out a 46-year-old friend with two young children and a demanding job. This friend is constantly running between her children and her work. She doesn't have much time or energy left for running around the backyard or park with her kids. Her partner's long working hours don't help. 'Older parents often don't have the physical stamina to run around with their kids,' she says. 'And because we're further into our careers than younger parents, we tend to have more responsibilities at work, and we are often expected to put in long hours.'

When parents don't have as much time or energy for their children as they or their kids would like, what do they do? Try to make everyone feel better. Often that involves buying a treat. Perhaps the latest computer game. Or, more likely, some junk food. It's not just dads who only see their kids on weekends who try to compensate for their absence with sweets. A Victorian Government report into nutrition in childcare centres describes parents sometimes using food as compensation for children

attending childcare or as a means of dealing with their own guilt.[22] Parental guilt is, of course, well nourished by marketers, who make a living out of both cultivating it and preying upon it.

For many child health experts, the rising rate of obesity in children is just one effect of a whole set of social changes, including an increasing focus on the rights of the individual rather than collective responsibility. Other symptoms, according to Newcastle community paediatrician Professor Graham Vimpani, include increases in reporting of child abuse, and increasing concerns about behavioural problems in children. 'The group of people in society that has had responsibility for the care of children has shrunk from 80 people—if you think of clans in traditional societies and extended families—down to one or two caring for three or four kids,' he says. 'The support available for those caring for the kids has diminished considerably, so the stress of parenting is greater than it may have been once. The fragile nature of the modern family and the difficulty of achieving work–life balance for parents is a real challenge and struggle.'

The fear factor

Two marriages have put public health researcher Garry Egger in a good position to reflect on how the job of parenting has changed in recent decades. His first son is now in his 30s and has a young daughter. Egger also has two young children, aged 13 and 10.

'It's much harder now than when I was bringing my first son up,' he says. The most obvious change relates to heightened safety concerns, resulting in overprotective parents wrapping their children in 'cotton wool' or engaging in 'helicopter parenting', the term for when parents hover anxiously around

their children. It's so different from when Egger was a lad, he says, when he vanished with his mates and roamed the neighbourhood all day, far from parental supervision. Just about every parent of a similar age tells a similar story. Professor Louise Baur, a paediatrician at Sydney's Westmead Hospital who specialises in treating and researching childhood obesity, reminisces over her memories of growing up in Sydney in the 1960s and 1970s. 'We had bushland at the end of the street where we used to disappear,' she says. 'There was the corner store where we got milk and bread. We rode our bikes to school. Today there is a motorway where the bush was. The shop has gone and the school bans kids from riding bikes to school.'

Fear rules many children's lives, in ways great and small. It seems a bit unfair, however, to blame parents for being so anxious when so many interests have a stake in promoting public fear or an exaggerated sense of risk. It helps to sell everything from soaps to medicines, from newspapers to government policies. Politicians, doctors, lawyers and many other powerful agents in society use fear when they want to influence our behaviour. It is very difficult for parents to resist such emotional blackmail and to dispassionately examine the reality of the risks facing their children. The media, in particular, has a huge impact in distorting the community's perceptions of risk. Relatively uncommon events, such as a child abduction, are more likely to attract headlines than more everyday events such as traffic accidents. Most people believe crime is becoming more common, for instance, when the opposite is true, according to research cited by the Australian Institute of Criminology.[23]

Risk and its management has become a huge industry. It sustains an army of consultants, experts, researchers and

bureaucrats. Charles Landry, an international authority on urban renewal, observes that risk has become a prism through which any activity is judged. 'It subtly encourages us to constrain aspirations, act with over caution, avoid challenges and be sceptical about innovation,' he says. 'It narrows our world into a defensive shell. The life of a community self-consciously concerned with risk and safety is different from one focused on discovery and exploration.'[24]

Many studies show that concerns about risk limit children's opportunities for play and adventure. 'The way the world is today, you don't let them play out in the street. It would be nice to let them just run around as we used to do, but you can't any more,' one parent told researchers who were investigating the influences on where children play.[25] People who worry about their neighbourhood's safety are also less likely to be physically active. Not surprisingly, people living in poorer areas are more likely to report safety concerns about their neighbourhoods. If you don't feel safe walking to the shops or in your local park, health promotion campaigns to encourage walking are less likely to have an effect. This is perhaps another reason why being overweight tends to be more of an issue for families struggling to make ends meet.

Parents are not alone in their worry that something dreadful will happen if they don't keep their children on a tight rope. Fear also motivates how schools, local councils, community groups, childcare centres and other institutions shape children's lives. It's an issue that often frustrates Sydney father Alan Barclay, who would like his children to have the opportunities for physical play that he enjoyed as a child. He has been fighting a losing battle to have their primary school replace playground equipment, which was removed a few years

ago because of safety concerns. The school has also removed its bicycle racks, which makes it very difficult for his children to cycle to school as there is nowhere to safely store their bikes. Organisations' concern about safety risks can also affect children in other ways. Fears about liability and government risk management policies mean some childcare centres put far more resources and effort into preventing food poisoning than they do into ensuring that children have nutritious meals, according to one report. The Victorian Government's investment in food safety is limiting early childhood centres' ability to focus on healthy eating, that report says.[26]

Ironically, safety concerns may add to children's risks. Some parents prefer to drive their children to school to reduce the risk of 'stranger danger', and thus they add to traffic hazards. 'If all parents allowed their children to walk or cycle to school, they would be safer in terms of both traffic danger and stranger danger,' says Dr Paul Tranter.[27] 'They would be safer from traffic, as there would be fewer cars (especially near schools). They would also be safer from strangers because they would be in larger groups and hence could benefit from safety in numbers.'

Some experts believe the trend towards smaller families and older parents also contributes to 'bubble wrapping' of children. It means parents have a greater investment in fewer children. And it's not only children's waistlines that suffer when they are kept carefully cooped up. Professor George Patton, a child psychiatrist in Melbourne, warns that limiting children's independent exploration, risk-taking and physical activity may have profound effects on their physical, cognitive and emotional development.[28] Suffering—and surviving—scraped knees and other setbacks helps prepare children for the ups and downs that life will inevitably throw their way.

Unhealthy development

It's fair to say that children's health and wellbeing has not traditionally been a front-of-mind issue for town planners and developers. You can tell that is a fair comment just by looking around our cities and suburbs. So many aspects of urban design make it difficult for children to enjoy healthy, active lives. These include the scarcity of fresh produce outlets and public transport infrastructure in many new housing estates, and the lack of opportunities for children to safely walk or cycle to destinations in their neighbourhood such as school, the shops or a friend's place. Some researchers have gone so far as to suggest that much planning and development is designed, presumably unintentionally, to promote crime and reduce safety.[29] Even when planners have tried to do the right thing by providing open public spaces such as parks and ovals, their efforts have not always been productive, according to Ed Blakely, Professor of Urban, Regional Planning and Policy at the University of Sydney. These spaces might be useful for people wanting to play sport, but they are unlikely to engage a broad range of people in diverse activities, he says. People need to be 'seduced' to use such areas, by the use of paths, signs, aesthetic features such as lakes and the opportunity to undertake a variety of activities. Dog walkers as well as footballers, playground enthusiasts and power-walking grandmothers need to be welcomed.

However, healthier town planning means much more than better access to well-designed green spaces. Many experts believe our entire approach to town planning needs an overhaul. Everything from the pattern of streets to the size of pavements, the design of suburbs and community centres, and the placement of public facilities needs to be rethought so that

it creates opportunities for physical activity, especially walking and cycling. People are more likely to walk when they have a destination. Planning that puts residential, commercial and public areas close together means people can walk to the doctor, to school or to the train station. 'You need to have paths that take you some place, whether to a shop or a lake,' says Blakely. 'Our footpaths are organised more as decoration at the front of the house than as something people would use. They are not wide enough, and when houses are set back behind fences and hedges, it's unfriendly. Most of our suburbs do not have interesting places to walk.'

While a few places, notably Western Australia, are implementing a more healthy approach to urban planning, this is still the exception rather than the rule. 'We live in cities that were designed to use energy—but not our own,' says Blakely.

Car crush

It's no coincidence that car advertisements appeal to our emotions rather than our reason. Australians' all-consuming love affair with our sleek, sexy, speed machines—whoops, that's the subliminal power of advertising at work—just isn't rational. If reason ruled, we'd be calling the whole thing off. Instead, in some cities cars are multiplying at a faster rate than people.[30]

Putting aside issues such as pollution and petrol prices, let's simply consider the impact of cars on kids. Children are spending more and more of their time in cars. Many are no longer allowed to walk or cycle to school because their parents are frightened of the traffic. So they are driven instead, adding to the traffic their parents are frightened of, and to the general congestion on the roads. Because there are fewer kids walking, the streets are emptier and don't feel as safe. Kids don't get to

Telly-commuters

know their neighbours or neighbourhood, reducing the sense of safety that comes with familiarity. The closure of many local shops, because of the big shopping centres, also reduces the number of people pounding the pavements—and adds to the traffic jams. Many roads are busy even on weekends as parents chauffeur their children to sports. Our cars are driving us in ever more vicious circles.

In Britain, it has been suggested that the typical family now spends more time together in their car than at the family meal table. Which brings us to the ultimate in unhealthy relationships: the union of the car and takeaway. It is consummated, of course, at the junk-food drive-through. For those who might sniff in disapproval at such a partnership, Australian National University researcher Dr Jane Dixon points out that most of us, whether drive-through lovers or not, suffer from a 'car-centred diet'. She contrasts the Australian way of food shopping, which for most people involves a drive to a

supermarket, with the traditional 'pedestrian-friendly diet' that involved a walk to local shops or markets. 'Very few of us can provide the household with food without the car, which is dispiriting,' she says, 'especially if you care about an active population and the environment.' One government planning department developed a 'litre of milk index' which showed on a map the locations where a litre of milk could be bought. This graphically revealed that shops selling milk in older suburbs were accessible by foot. But in the newer suburbs where many young families live, milk was sold in shops that were almost impossible to reach by foot.

Dr Mayer Hillman, an English authority on transport and the environment, offers a fresh perspective on 'stranger danger' too. The most dangerous strangers for children and young people are those otherwise harmless people behind a steering wheel. He argues that danger should be removed from children rather than vice versa, and suggests that cars have helped create an environment for children which shares many of the characteristics of a prison. Like prisoners, children have a roof over their heads, meals and entertainment provided—but they are not free to come and go.

The rise and rise of the motor car is helping to breed child-unfriendly cities and attitudes. One study found that children in Canberra and Sydney were far less likely to be allowed to come home from school alone, to travel to places other than school alone or to catch a bus alone, compared with children in German cities.[31] One of the study's authors, Paul Tranter, a geographer at the Australian Defence Force Academy in Canberra, says Australian cities are not as child-friendly as some other cities that are more materially deprived. Some researchers believe that one of the key characteristics of a

child-friendly city is that its young have freedom to explore their environment, uninhibited by physical, social or cultural constraints. Australian cities do not rate highly on this scale, says Tranter, who blames both our culture and our urban design. In Germany, there is a greater sense of collective responsibility for children, and parents are more likely to trust that other adults will look out for their children. The higher population density also means children are more likely to be in walking distance of schools, friends' homes and community facilities. The other key factor, says Tranter, is the widespread use of public transport, by rich and poor, and the fact that it is generally perceived as safe and reliable. As well, Germans are more enthusiastic users of their public spaces. 'Our lifestyles are much more privatised here,' he says.

One way the car has contributed to the privatisation of formerly public space, Tranter argues, is by stealing residential streets from the children who once played on them. Growth in the levels and speed of traffic in residential areas means fewer kids gathering to play cricket or hopscotch on the roads outside their home. As the volume, speed and noise of traffic increases, children are forced off the street and onto the footpath; then into their front yards and then further, into the back or private parts of their home territory.

The 50 Australian experts asked for their views on why obesity rates were increasing were also quick to single out our obsession with cars.[32] The study's authors say strong government investment in the car industry and inadequate government promotion of mass transport systems have both contributed to and been driven by an increasing reliance on the car. Similarly, urban planners and developers have responded to and reinforced the dominance of the car. New

housing developments are situated on major car routes rather than public transport routes, and new development approvals often require the provision of adequate car parking rather than the provision of walking or cycling facilities.

Cars are doing more than stealing children's freedom, argues Tranter. Children who are driven to school have less opportunity for the joy of exploring their natural environment, not to mention learning how to deal with the grumpy old woman on the corner who yells at them for picking her flowers. It's all part of developing a sense of place and an understanding of their neighbourhood. 'That's really important, not just as a feelgood thing, but for their health,' Tranter says. 'Feeling connected with people and having a good network of friends and community is probably far more important to your physical health than whether you drink, exercise, or eat well. We're very social animals.' In his book *In Praise of Slowness*, Carl Honoré cites studies showing a correlation between car ownership and sense of community. The less traffic that flows through an area, and the more slowly it flows, the more social contact there is among the residents. In suburbia, he says, many people know their neighbours' cars better than they know the neighbours themselves. Tranter believes that giving the streets back to children might also help their elders bond and develop stronger communities. 'Children are an effective way of breaking down the natural reserve between adults,' he says.

The saddest scenario for Tranter involves children who walk direct from their home into the car sitting in the garage. By the time the electric doors roll up, they are already transfixed by a small screen in the car and don't even look out the windows on their drive to school. Once at school, Tranter's research suggests, their environment is often structured and supervised

to minimise their freedom and their contact with earth and nature. 'Adults restrict children's freedom in school grounds because this simplifies adults' lives,' he says. 'It keeps children out of the way, or easily supervised—it keeps children in their place.'

And if unforeseen circumstances meant these children had to walk home, there's a good chance they might not be able to find their way.

2. Commercial Time™

Random thoughts

- Pizza is home-delivered in just about every suburb and town across Australia. It's not nearly as easy to have fresh, affordable vegetables and fruit delivered to your door...
- A burger with chips and a Coke is sold at just about every blip on the map. But in many small country towns, fresh vegetables and fruit are expensive and limp, if they're available at all...

They're your little darlings. But that's not what some others see when they look at your kids. They see consumers, and they want to get their hooks into them and their spending power, now and into the future. The commercialisation of childhood has given new meaning to that old Jesuit saying, 'Give me the child until he is seven and I will show you the man.' The modern equivalent is more along these lines: 'Give me the child and I will have a customer for life'. It's a little like

treating children as calves—brand them young and they will forever bear the imprint.

In a world which increasingly runs on marketing principles and which regards everything from schools to sports stars as brands, children have become the targets of some extremely clever, powerful adult persuasion. One problem with this is that the relationship between child and marketer is utterly unbalanced. Young children do not have the cognitive skills to pick ad-speak from adult speak which can be trusted. According to an investigation into advertising and children by the American Psychological Association, most children under 4 or 5 have little awareness of the concept of advertisements. They then start to recognise them as different—because they are funnier or shorter than normal television programs. Children younger than 7 or 8 usually lack adults' ability to understand that the source of the message has other perspectives and interests from them, or that the message intends to persuade and is biased and therefore needs a different interpretation from other messages. The Association cites research showing that fewer than 50 per cent of 8-year-olds understand advertising's persuasive purposes.[1]

What does this mean? It means that young children tend to accept commercial claims and appeals as truthful and accurate. Even when they grow older and wiser, they remain vulnerable to the power of the promo. After all, even the most sceptical and intelligent of adults can be sucked in. What chance do children have? They are bunnies caught in the mega-wattage of the marketers' spotlight. The American Psychological Association laments the use of child psychology in marketing. It cites books with titles such as: *Kids as Customers: A Handbook of Marketing to Children*; *Marketing To and Through Kids*; *What Kids Buy and Why*: *The Psychology of Marketing to Kids*; and *Creating*

Ever-Cool: A Marketer's Guide to a Kid's Heart. Researchers investigate how best to get kids to act as lobbyists. The target, of course, is parents and their purses. One marketing guru has identified a number of varieties of 'pester power'.[2] These include: the persistent nag, who begs, pleads and grovels; the demonstrative nag, who threatens tantrums or worse; the forceful nag, who is pushy and may use threats such as, 'Well I'll just ask Dad then'; the pleading nag, whose favourite expression is 'Please, please, please'; and the sugar-coated nag, who promises affection in return for indulgence.

It wouldn't be surprising if these descriptions sound like someone you know; the same marketing expert claims that 75 per cent of spontaneous food purchases can be traced to a nagging child. It's not only parents' wallets that suffer as a result. Parents often feel trapped: if they constantly refuse their children's requests, they feel mean; if they give in, they know they are paying an unhealthy price for peace. Some commentators argue that advertising-induced nagging is transforming relationships between parents and children.[3] Advertising often treats parents as obstacles for children to get around, they say, rather than as figures of authority whose opinions should be respected.

'Sometimes I feel that my main job as a parent is saying no to my children,' says a friend who is a father of five. He feels he is constantly battling the marketing and other social forces encouraging his children into unhealthy consumption.

Dream thieves

Market researchers intrude into every aspect of children's lives. They ask about their dreams and fantasies, and even study their artwork in search of inspiration for marketing campaigns. Cartoon characters have been shown to be particularly

effective at helping children recall and identify products. The American journalist Eric Schlosser describes how marketers conduct surveys of kids in shopping malls, organise focus groups for toddlers, hire children to run focus groups, and stage slumber parties where the questioning goes into the night. As well, he says, cultural anthropologists quietly and surreptitiously observe children's behaviour in their homes, at the shops and at fast food restaurants.[4] 'Making emotional connections and building relationships with kids' was the title of one talk given at a conference in the United States for those who market food to young children.[5]

Apart from the ethics of exploiting the cognitive vulnerability of young people, another problem with child-centred marketing is that so much of it is flogging products that many kids would be better off without. Children are developing 'emotional connections' and 'relationships' with foods rich in sugar and/or fat, as well as with the toys used to promote these foods. In the United States, about 80 per cent of all advertising directed at children is for toys, cereals, confectionery or fast food restaurants.[6] The food industry is the second largest advertiser in the United States, after the automotive industry.[7] In 2004, the fast food industry was estimated to have spent about $3 billion on advertising aimed at kids in the United States, while the food industry as a whole spent $10 billion in advertising and marketing aimed at young people.[8] Those figures come into perspective when you consider estimates that children in the United States spend about $36 billion of their own money each year, and influence another $200 billion in household spending. The market is obviously much smaller in Australia, but even so it involves billions of dollars. It is estimated that Australians spent $8.5

billion on fast foods in 1999. We also have the dubious distinction of being the world's fourth largest consumers of snack foods, behind the United States, Britain and Ireland.[9]

The price of food relative to incomes and other goods has dropped significantly in recent decades. The food industry is fiercely competitive, and has to fight hard for its customers. Its major weapon in this battle is advertising. Food lends itself to advertising because it is bought often, consumer views can change quickly, and it is one of the most highly branded items. According to University of Minnesota academics Mary Story and Simone French, a child's first request for a product to be purchased usually occurs at about 24 months, and three-quarters of the time this request occurs in a supermarket. The first such request is most likely to be for breakfast cereal; this is likely to be followed by requests for snacks, drinks and toys. Studies show that in such situations, parents say yes to children's requests for lollies and other food about 50 per cent of the time and for drinks about 60 per cent of the time.

(Healthy) fast food

For those who might hope that the situation is different in Australia, the results of a 1996 study comparing international trends in advertising to children will be bad news. Consumers International monitored TV advertising to children in 13 countries over a 3-month period. Australia, the United States and the United Kingdom had the most food advertisements: between 10 and 12 an hour or about 200 in a 20-hour period. This was twice as many as in Denmark, Germany and France, and 6–10 times more than in Austria, Belgium and Sweden. Confectionery was the largest category, accounting for nearly a fifth of all food advertising.[10] When Victorian researchers asked parents about what influences the food choices of their 5 and 6-year-old children, the answer came back loud and clear: advertising of junk foods.[11]

The internet and other new media have opened up a whole new world for marketers. It is estimated that one website, nabiscoworld.com, attracts about 800,000 kids per month.[12] Sites like this have developed the concept of 'advergames'—games about the foods being promoted. At some websites, children earn points by playing marketing surveys to help industries finetune their strategies. Product placements in films and the use of Hollywood characters in food promotion are other marketing strategies. According to Eric Schlosser, the cross-promotion between Hollywood and the fast food industries means that the popular culture of American children has become indistinguishable from the fast food culture.

School rules

Schools these days have become so much more than places of learning and play. They are, from some perspectives at least, fabulous 'marketing platforms'. Not only is the audience

captive, but any messages that become associated with the trusted environment of school are also more likely to be trusted.

Numerous investigations have revealed the infiltration of junk food marketing into schools, in the United States in particular. Soft drink and fast food companies have contracts giving them exclusive rights to market and sell their products in schools. Screensavers on school computers and scoreboards on sports grounds advertise fast foods. In some US schools, reading incentive programs give students a free pizza if they read a certain number of books. Then there's the McDonald's Spellit Club, which rewards good spellers with food from you can guess where. Food companies have also developed games and counting books for use in classrooms. According to one estimate, there are more than 40 children's counting and reading books featuring various food brands.[13] Some people call these teaching tools, others call them advertising. There seems no limit to the lengths to which some companies will go. In 2001, a multinational food company tested an advertising campaign which involved 10 primary school teachers in Minneapolis driving to school in cars plastered with advertisements for a sweetened cereal. The teachers earned $250 a month for their efforts as 'freelance brand managers'. The campaign was cancelled after 3 weeks because of public protest.[14]

If you're thinking, *Well that's America—it couldn't happen here*, think again. While many Australian schools are making great efforts to lift their nutritional game (and not a minute too soon), many remain at the front line of junk food marketing. This is not a one-way relationship; some schools are happy to work with these companies if it will boost their coffers. One Queensland home economics educator recently wrote about the negative influence of food companies on schools, and described

a recent conversation with a high school principal who was proud of his canteen's profits.[15] The principal was delighted about making a deal to buy a certain cola drink at a much reduced price so the canteen would make even more money.

With so much media coverage about childhood obesity, you might hope that schools would be reluctant to promote Krispy Kreme doughnuts. But the company has had little difficulty finding schools and related organisations willing to enter into fundraising partnerships. Within 8 months of opening in Australia in 2003, Krispy Kreme had reportedly provided cheap doughnuts for fundraisers in hundreds of NSW schools.[16]

Meanwhile, when researchers surveyed 18 primary schools in Victoria in 2004, they found that of the 17 that had a food service, all sold meat pies but only five sold fruit regularly. The researchers concluded that most schools do not see providing food as part of their core business, and lack the inclination and resources to take on this added responsibility.[17]

The location of fast food outlets near schools is also cause for concern. A survey of teachers at a Perth school located directly opposite fast food shops suggested that the McDonald's outlet was being used as a 'babysitting' service before and after school. Parents rushing to work told their children to stay at McDonald's until school opened. A teacher of a Year 5 class told the researchers: 'I know some kids whose parents take them to McDonald's for breakfast on the way here, and often they will go on their way home from school as well.'[18]

Meanwhile, well-meaning teachers often use sweets as rewards in the classroom. Many parents do not realise how frequently this happens. One Sydney mother was surprised when her daughter Clare came home from primary school and asked if she could attend Scripture class. The family was not

particularly religious and Clare had never shown such an interest before. It turned out that sweets were handed out in the Scripture class. Clare, who had been brought up to be conscious of the tricks of marketers and advertising, wasn't impressed with the use of lollies as 'bribes', she told her mother—she just wanted to join the class so she could be with her friends. Clare's mother was not impressed either.

However, many other parents have fallen for the advertisers' line that children need treats every day. Surveys of the contents of lunchboxes suggest that foods that used to be used as occasional treats, such as potato crisps and chocolates, have become everyday foods. One Australian study found that the majority of parents think daily food treats are acceptable.[19] Providing a new take on the notion of a 'balanced diet', a parent told the researchers: 'School lunch is only one meal of the day. If it's balanced throughout the day [by other meals], it's OK for kids to have treats in their lunch.'

Food industry marketing and promotions do more than normalise treats. They can make eating an apple or a piece of fruit seem a bit odd. Why would children need or want fruit when they can have a fruit bar or some other sugary concoction? Consider the message conveyed by a package of hot cross buns which were on sale one recent Easter. 'Specially made for kids,' said the label, 'NO FRUIT'.

As a senior cancer researcher, Dr Christine Paul is extremely aware of the importance of good nutrition for health. Even so, she sometimes finds it a struggle to ensure a healthy diet for her two young children because of the junk food culture. When she walks with her children around their local shops in Newcastle, NSW, friendly shopkeepers will often hand them a sweet. 'The kids are just used to being given things,' she says.

Christine feels guilty if she doesn't send her kids to school with a muesli bar or a chocolate in their lunchboxes, even though she's not happy about doing it. 'You feel as if you are starving them if you just give them a piece of fruit and a sandwich to take to school,' she says. 'That's not what children eat today. You feel like an ogre if you don't give them a bit more. I give them the treat even though I don't want to. It's the mother guilt. You just feel like you have to provide in the same way that other children are provided for. I hear about other people's lunchboxes all the time—"So and so has chips every day, so and so always has a chocolate bar"'.

How unsporting

Australians' love of sport is legendary. Sport symbolises strength, fitness, skill, endurance, courage and many other admirable qualities. Thanks to the skill and power of marketing, sport has also come to be associated in no small way with alcohol. Advertisements, sponsorships, logos and many other techniques are used to reinforce the idea that sport equals grog. It's no wonder sporting successes tend to be celebrated with a six-pack or six.

Food companies have worked hard to expand the equation so that sport also equals their particular brand. Many children's sports and athletics clubs have proven eager partners. Sometimes these alliances have helped to promote healthy foods. But too often, they have not. The partnering of sport and junk food sends young children a powerful message, cementing in their minds a connection between fun and achievement on the one hand and foods that are high in fat and/or sugar on the other. This is not peculiar to Australia. British sport reportedly received more than £40 million from the fast food,

confectionery and soft drinks industries in 2003. The only sectors which contributed more generously to British sport were the financial services industry and alcohol manufacturers.[20]

When Ben Ross took his two young sons to Little Athletics meetings not long after moving to Hobart, Tasmania, he was hoping it would give them the opportunity for exercise and to make some new friends. He was not impressed when he realised that McDonald's was a sponsor and, among other things, provided vouchers as prizes. At one meeting Ronald McDonald mingled with the kids while McDonald's representatives received a formal acknowledgement from the meeting's organisers for their sponsorship. Ben was horrified by the notion that taking his kids to athletics might lead to them wanting to go to McDonald's. He told the meeting's organisers his views and said that his family wouldn't be returning. The Little Athletics organisation in Tasmania seems quite unperturbed by such concerns. A spokeswoman insists that the relationship with the fast food company is 'absolutely not a problem'. 'Just because McDonald's are sponsoring us doesn't mean that we're promoting eating their cheeseburgers,' she says. She does add, however, that McDonald's now offers a range of healthy foods.

This comment encapsulates just why the association that McDonald's has forged with Little Athletics (and many other sporting and community groups) is so valuable for the fast food company. In the world of public relations and marketing, there is nothing more powerful than the so-called third party endorsement. For McDonald's, an endorsement from a trusted and valued community organisation like Little Athletics is priceless. It is far more valuable for the company than spending huge sums of money on more traditional forms of advertising.

What such an endorsement does for the credibility of Little Athletics—and the wellbeing of its young charges—is another matter.

It seems that even the spokeswoman must have considered this at some level; she admitted to being surprised that more people hadn't complained, particularly given the strong community support for Tasmanian potato growers, who had had a falling out with McDonald's. 'We thought we'd have more negative feedback,' she says.

But many parents are concerned by such blatant attempts to insinuate fast foods into children's lives. Brisbane scientist David Frazer is passionate about fostering a healthy lifestyle for his children, and was excited about taking them to a recent sign-up day for weekend athletics. He was horrified when each child was given a bag stuffed with soft drinks, potato crisps and vouchers to McDonald's. They were also expected to compete in a shirt that had a big M on it, signifying their sponsor.

However, David says it is his children's schools that are his major concern. Sausage rolls, pies and soft drinks are the main fare at school sports days, and one of his sons can buy soft drink for less than it costs to buy water from the canteen. His children regularly come home with bags of lollies from their teachers. 'I know my kids get junk foods 5 days a week just by going to school,' he says. David and his wife are seriously contemplating home-schooling for their youngest child, even though they don't think it's ideal socially, because they fear they cannot win the battle with the junk food culture found in many schools.

Karen Campbell, a dietitian in Melbourne who specialises in researching childhood obesity, often finds it difficult to juggle her roles as professional and parent. She is conscious that it is not appreciated when she raises concerns about the use of lollies as rewards in the classroom, or when she suggests to the tennis coach that he reward her children with a pack of tennis balls rather than soft drink. She was appalled when her son recently won a McDonald's voucher as a reward for a good game of footy. When she raised her concerns with the local football club, they were not taken seriously.

If health professionals, with all their expert knowledge and authority, have trouble swimming against the tide of junk food, the task must be even more daunting and difficult for others. It's another reminder of why parents need help—not accusing fingers—to combat the big fat conspiracy.

Food for thought

Unless you are old enough to remember what shopping was like in the 1950s, you may not appreciate the huge changes that have occurred to our food supply. Shoppers were once individually served in specialised shops such as the grocer, greengrocer, baker, butcher and milk bar. According to one history, the advent of supermarkets in the 1960s brought in self-service, reducing the requirement for staff and thus helping to make food cheaper.[21] Increased efficiencies in production and manufacturing also contributed to food becoming cheaper. Ever since, food companies have competed for market share by increasing their range of products. In the 1960s, it is estimated that Australians had access to 600 to 800 different foods, varying with the season. The average Australian supermarket now stocks 12,000 to 15,000 items, and many in the United States have up to 10 times that number.[22]

It is no coincidence that the range of products and the size of supermarkets have expanded at the same time as our waistlines. We are more likely to eat more when we are dizzied by choice. How many times have you left the supermarket with items you had no thought of buying when you arrived? Experiments show that even when people feel satiated by one particular food, they will continue to eat when a new food is presented.[23] As well, many of the new

products are high in fat and/or sugar. The food industry knows our weaknesses. It is also where their profits lie; fats and sugars are extremely cheap inputs for manufacturers, and they make far more money from selling and promoting 'value-added' processed foods than they do from fresh produce. The advertising statistics reveal where the profits lie: nearly 70 per cent of food advertising is for convenience foods, confectionery and snacks, alcoholic beverages, soft drinks and desserts, and a mere 2 per cent is for the staples of a healthy diet—vegetables, fruit and grains.[24] Even in health magazines, the advertisements for foods high in fat and sugar far outnumber those for grains, vegetables and fruit.[25]

It's not only what we eat but how we eat that has changed so much in recent decades. Where once eating out of the home was reserved for a treat or special occasion, these days it has become the norm. According to figures cited by the National Heart Foundation, Australia now has more than 58,000 commercial food service outlets, including fast food outlets, restaurants, hotels, clubs and cafes. In 2004, Australians ate 4.8 billion meals and snacks out of the home, an average of four meals eaten out each week by each Australian. One in three people eat out almost every day, and this trend seems to be increasing. When it comes to fast food consumption, we're a world leader. Thirty per cent of Australians eat out at fast food restaurants every week, placing us in the world's top 10 fast food consumers. Hong Kong topped the list (at 61 per cent), followed by the US (35 per cent). Our favourite takeaways are sandwiches, hot chips, hamburgers, cakes and pastries.

It's not surprising, when you consider the size of the food industry, that it wields such power. It would be naive, says Dr

Tim Gill, Co-Director of the NSW Centre for Public Health Nutrition at the University of Sydney, to expect public health goals to dominate food policy, given the industry's political and economic clout.

'It's the second most powerful industry in the world,' he says. 'Policy on food is going to be driven by economics well before it's driven by public health.'

The eminent US nutritionist Professor Marion Nestle (whose name, it should be pointed out, is not pronounced like the food company's) first became aware of the food industry's influence on government policies and nutrition experts when she moved to Washington DC in 1986 for a new job. She was to manage the first (and only) Surgeon General's Report on Nutrition and Health, a comprehensive review of research linking dietary factors to chronic disease. It appeared as a 700 page book in 1988. The job was political dynamite. On Nestle's first day, the rules were made clear: no matter what the research suggested, the report could not recommend eating less of any category of food. Later Nestle wrote about the experience in her book, *Food Politics*. She said she had come to realise—through her work in academia, on government advisory committees and as a consultant to food companies, that many of Americans' nutritional problems, including obesity, could be traced to the food industry's interest in encouraging people to eat more. The industry's primary objective is to increase sales and income, not to encourage good nutrition, she says.

However, nutrition claims are often used to promote foods. Many observers have raised concerns about the close relationships between the food industry and nutrition

organisations and researchers, and the potential for these links to influence and distort research and policy.[26] These connections also result in a proliferation of commercially motivated nutrition messages, some of which contradict others, creating unnecessary confusion about what constitutes a healthy diet. Yet the basic messages about healthy eating have not changed for years, despite a new nutrition controversy appearing every other week. Some commentators argue that the food industry deliberately creates controversy as a marketing strategy; first it creates the confusion, and then it sells the solution in the form of a product. Using nutrition claims to market foods also encourages people to focus on a particular aspect of their diet rather than on the overall picture. It's not surprising that the explosion in low-fat items coincided with widespread weight gain. People were so busy worrying about their fat intake that they didn't realise that many processed foods marketed as being low-fat are also high in sugar and calories. Filling your shopping trolley with low-fat foods can be very fattening.

Nestle also documents how food companies work hard to oppose and undermine advice to 'eat less'.[27] Messages to eat less meat, dairy and processed foods upset a host of interests, including primary producers and the many other industries which rely for their living on the promotion and consumption of these foods. Other experts point out that health messages promoting increased vegetable and fruit consumption also challenge the status quo. Economists from the US Department of Agriculture say that eating more fruit and vegetables and fewer animal foods would upset the existing 'volume, mix, production and marketing of agricultural commodities' and would require large 'adjustments' in international trade.[28]

Buyer beware

When doing my grocery shopping, I tend to buy the same old things while keeping an eye for a bargain. I'm interested in health, of course, but I'm usually most interested in trying to escape the supermarket as quickly as possible. Recently, I decided to take a different approach, to see what happens when I linger in the aisles, searching out products promoted on some sort of health basis.

I zoom past the fruit and vegies, there's nothing telling me to stop there, but am waylaid in the heath food section which offers an impressive range of confectionery and mixed messages. Finally I settle upon a chocolate bar marketed both as 'decadence double chocolate' and 'a fast and easy way to lose weight'. It is also promoted as a good fibre and protein source, and for having a low glycaemic index (GI).

Next stop is the spreads section where I can't resist the Nutella. Not only does it contain 12 small packs, perfect for popping in a school lunch box, but it also bears a reassuring low GI symbol. Must be good.

There I also meet Mr Fluffy, the cartoon character used to sell Fluff, 'the delicious American marshmallow spread'. Fluff is packed with sugar but you have to look hard to work this out. It's the 'fat free' star on the front which is so eye-catching.

I am reminded of some of my favourite pieces of dietary advice: never eat anything which has a cartoon character on the front, don't eat anything your ancestors wouldn't recognise as food, and if something sounds too good to be true...

The cereals section is another minefield of dietary confusion. You wouldn't believe from looking along this aisle that, technically speaking at least, the only health claim currently allowed on food relates to folate reducing the risk of having a baby with a neural tube defect.

Whether something amounts to a high-level health claim in the legalese of food regulation is, however, all in the detail and interpretation. Just because Uncle Tobys has a cereal called 'Healthwise, for Heart & Circulatory System' and bearing a tick from the National Heart Foundation does not mean that we should interpret this as 'eating this cereal might help reduce your risk of heart disease'. Of course not.

Naturally, I can't go past Kellogg's Coco Pops, that outstanding example of successful nutritional marketing. The adult equivalent must surely be 'Wild Oats Cluster Crunch': 'wholesome, wholegrain crunchy oat clusters oven-baked with pieces of hazelnut & chocolate'. The front of the packet boasts a low GI stamp and on the back is an extensive blurb about the health benefits of breakfasting on something that tastes like dessert.

By the time I finally check out, my trolley is reeling from the massive sugar and fat hit accumulated from so many 'health' foods.

For doubting Thomases who think my random supermarket survey was too unsystematic to warrant drawing sweeping conclusions, I'd have to agree that it was more about having a bit of fun than serious science.

Consider this though: in late 2005, three dietitians spent six weeks trawling through the shelves of a large supermarket in Sydney. Of the 7,000 different foods on the shelves, they analysed the nutrition and marketing claims of 4,200 packaged items.

Alan Barclay, a dietitian currently doing a PhD at the University of Sydney, and his colleagues found that 63 per cent of these foods carried some sort of nutrition or health-related marketing claim. 'The chances are that a significant proportion of those are not what you might call "everyday foods",' says Barclay.

One-third of those carrying a health or nutrition claim breached either the Food Standards Code or Code of Practice on Nutrient Claims. One of the most common offences was to imply a product was low-

fat by saying it was, for example, 92 per cent fat-free, when a low-fat claim is allowed only on products that are at least 97 per cent fat-free.

Barclay says the study's results reflect Australia's lack of an adequate surveillance system for food marketing and claims regulators have traditionally been more focused on ensuring safety of the food supply than truth-in-marketing.

'There is an onus on our governments and regulatory authorities to provide better surveillance of the food system particularly in this current environment of overweight and obesity', he says.

It's an issue which is about to become even more relevant thanks to moves to allow a greater range of health claims on foods. Food companies argue they should be allowed to tell their customers if their products have health benefits. But many public health experts fear that such labelling will encourage distorted eating patterns and will only exacerbate the marketing advantage of processed and packaged foods (which we mostly need to eat less of) over vegetables and fruit (which most of us should eat more of).

'Health claims are a big misnomer', says Associate Professor Mark Lawrence, a public health nutritionist at Deakin University in Melbourne. 'Health claims aren't about health; they are primarily about creating commercial opportunities for food manufacturers.'

Needless to say, I've resumed my normal supermarket routine, which means spending most time in the aisles with the least 'health claims' marketing the vegetable and fruit section. Happily, this usually also means a quicker, easier exit from the supermarket.

Super-size you

It is not only the range of food products has expanded. Food portion sizes have been steadily increasing since the 1970s and are an effective strategy for attracting customers and boosting

profits. Paying only slightly more for a lot more food or drink is a bargain which few of us can resist. One study examining the consequences of super-sizing found that an average 12 per cent increase in purchase cost increased calorie intake by 23 per cent, while fat intake rose by 25 per cent and 38 per cent more sugars were consumed.[29] Super-sizing might sound like a bargain, until you remember that old maxim of retailing: the customer always pays, one way or the other.

In the United States, serving sizes of hot chips, hamburgers and soft drinks are now two to five times larger than they were in the 1970s. Ironically, even pre-prepared meals for the weight conscious now come in bigger serving sizes.[30] Restaurants are using larger dinner plates, bakers are selling larger muffins, pizzerias are using larger pans and fast food companies are using larger drink and french fries containers. Nestle and colleagues have also documented how recipes for cakes and desserts in new editions of classic cookbooks specify fewer servings, meaning that portions are expected to be larger. In the United States, one super-size serve of a popular soft drink contains the equivalent of more than one-third of many people's daily energy requirement.

The United States may be the world's heavyweight champion when it comes to super-sized portions, but we've also done our share of super-sizing in Australia. In some restaurants, a child-sized meal might once have been considered standard fare. A University of Sydney study found large increases in portion sizes between 1995 and 2003 in a wide range of foods. These included pre-packaged foods sold in supermarkets and takeaway foods such as hot chips and pizza. A photograph illustrating a near-tripling in the size of muffins provided a particularly graphic example.[31] As part of the study, 100 people were shown bulk quantities of different foods and asked to

estimate a standard portion size. Even some of the dietitians among the study's subjects struggled with this task. The researchers concluded that the food industry's move towards larger portion sizes had influenced individuals' knowledge about what is an appropriate amount to eat. It's not surprising that some research suggests serving sizes of home-cooked meals have also grown.[32] Once piling your plate in public becomes both socially acceptable and a habit, it makes sense that many people would automatically do it at home too.

Super-sizing takes many guises. Sydney journalist Jenny Tabakoff has described the 'super treat' phenomenon, in which foods leap the 'species barrier'. Ice creams interbreed with biscuits while Easter eggs cross with chocolate bars. The development of Double Coat and Chewy Choc Fudge Tim Tam biscuits makes wolfing down an old-fashioned Tim Tam suddenly seem like 'self-restraint', writes Tabakoff.[33] Now that's a sign of twisted times: when scoffing a biscuit rich in fat and sugar, which was once marketed as the ultimate in self-indulgence, becomes an act of self-deprivation. Interestingly, however, a recent US study found less than a third of adults believed that portion sizes at restaurants had increased over the past 30 years. They also tended to describe the portion size they usually ate as 'medium', regardless of how big it actually was.[34]

Then there's the super-sizing phenomenon which is the dream of developers and the nightmare of public health experts and environmentalists. In the new suburbs that are sprawling along our city fringes and growth corridors, which are often the most affordable housing option for young families, huge houses crowd their small blocks. They leave little room for gardens, trees or places where children can run and play. But there is plenty of room for super-sized TVs and super-sized cars.

According to one investigation, the average floor area of new houses increased by 31 per cent between 1985 and 2000, and the size of apartments increased by 25 per cent. In the mid 1950s, new houses were about half the size of houses built today. In 1970, an average new house had 40 square metres of floor space per occupant; today's has 85 square metres.[35]

Can it be a coincidence that waistlines are increasing as the size of houses expands to accommodate smaller and smaller households? Professor Brendan Gleeson, of the School of Environmental Planning at Griffith University in Queensland, argues that the modern suburban 'mega-house' internalises activity, allocating large amounts of space to passive recreation such as home theatres, lounges and computer games, as well as to 'monster' garages. They are part of the new 'sedentary residential landscapes' where children are not allowed to ride bikes, climb trees or go to the park by themselves.[36]

Environmental injury

Over-consumption hurts the environment as well as our waistlines, and not only through the obvious waste produced by packaging and promotions. Nutritionist Dr Rosemary Stanton says it takes 640 kilojoules of energy to produce a can of low-kilojoule soft drink that contains 4 kilojoules of energy and has no nutritional value. Fake fats use even more energy and resources. Over US$200 billion has been spent so far developing Olestra, a kilojoule-free sucrose polyester to use in place of fats. She says it is ecologically absurd and enormously wasteful of energy and water to grow crops to feed animals, which is what happens with feedlot beef. It takes 16 kilograms of grain to produce 1 kilogram of beef, she says.

'Is it morally right to use limited resources to produce a mind-boggling array of foods for people who already eat more than their health can handle while others starve?' Stanton wrote in a recent nutrition newsletter.[37] 'We do not need fake foods. We do not need more packaged goods. We do not need foods to be available out of season, when they invariably have less flavour and lower levels of phytonutrients. We do not need fortified foods bearing health claims. We do not need imported food products and we certainly do not need hormone-implanted, lot-fed cattle or intensively reared chickens.

'Australia faces huge problems of salinity due largely to the way we have pushed agricultural growth, forcing the land to support many times our own population. Rivers have become silted, blue–green algae generated by fertiliser run-off choke many waterways, erosion follows overstocking, and pesticides pollute groundwater as we strive to produce more from every patch of earth.'

Poverty amid plenty

For a country as a whole, the growth in waistlines comes with increasing affluence and consumption. But for some sections of society, the battle of the bulge is associated with the battle to make ends meet.

Professor Adam Drewnowski, of the University of Washington in Seattle, has been at the forefront of research into the links between poverty and weight gain. Many factors are involved: people living in poor suburbs typically have easy access to fast food, but may have fewer shops selling fresh produce or fewer safe, affordable opportunities to walk and exercise.

Drewnowski's research shows that energy-dense foods which are high in fat and/or sugars are cheaper on a dollar per kilojoule

basis than nutritious foods such as fruit and vegetables. He argues that public health campaigns have often been elitist because they have failed to acknowledge that their recommendations for people to eat lean meats, vegetables and fruit tend to cost more. Being on a tight budget encourages people to maximise calories per dollars spent. According to Drewnowski's calculations, the cost per unit of energy provided by potato crisps is about one-fifth of the energy cost of fresh carrots. As well, foods which are high in fat and sugar are less filling than nutritious foods, which tend to be more bulky and thus more filling. This means it is easier to over-consume when your diet is full of fatty, sweet foods.[38]

These are very real issues for the many families who watch their budgets closely. A large study found that almost a third of Australian infants and children were living in families with a combined income of less than $800 per week in 2004.[39] The latest National Nutrition Survey, conducted in 1995, found that about 5 per cent of people over the age of 15 report having not enough food to eat sometimes or often.[40]

Fruity Friday

Sydney is the capital of consumerism in Australia, and a city of incredible material wealth. Yet in significant chunks of the city, many families are closely acquainted with hunger.

A recent study involving residents in Sydney's poorest suburbs—Villawood, Warwick Farm and Rosemeadow—found that about 1 in 5 households sometimes or often do not have enough food to eat. About half of all single parent households in Villawood reported what is known in public health jargon as 'food insecurity'. When the researchers investigated the local food supply, they discovered large

areas of the suburbs that had no easy access to local shops. They also discovered that prices in some of the large chain supermarkets were higher than the same outlets in wealthy suburbs.

Public health workers in the area have been trying to build links between community and business groups to help make it easier for struggling locals. A café has been set up at Villawood offering a free healthy lunch to all comers once a week, and a food action group is also working to improve the quality of the local food supply.

Warwick Farm Public School, whose 250 students come from more than 40 nations, is also doing its bit to try to improve the community's health. About 35 children breakfast for free at the school each morning and food parcels are sometimes sent home with them. After noticing a falloff in students' fitness in recent years, the school introduced a daily fitness program, including activities such as power walking, cross-country running, aerobics and dance. 'Everyone does something every day,' says the school's principal, Lyn Flegg.

Teachers report that the children tend to be better behaved in class as a result and more engaged in their lessons. The school also takes the children on active outings each term, to give them a chance to experience activities that otherwise might not be available to them, such as ice skating, ten pin bowling and indoor climbing.

Every now and then a local fruit shop sets up a taste-testing stall in the playground, so children can try new flavours and sensations. Sometimes it's 'Munch and Crunch Wednesday', other times it's 'Fruity Friday'. As well, for 10 minutes each day, students are encouraged to eat a fruit or vegetable in the classroom while their teacher reads to them.

Ms Flegg says the canteen's fruit sales have increased. 'There's nothing nicer than walking into a classroom and smelling a fruit break,' she says. 'We're ensuring they have a clear knowledge of what they need to do if they want to lead a healthy lifestyle—that's the most empowering thing we can do for our children.'

Cost is also a barrier for many people living in rural and remote areas—fruit, vegetables and other fresh produce can be prohibitively expensive, if they are available at all. The Queensland Government regularly does a survey of the cost and availability of a standard basket of healthy food items that would be enough to feed a family of six for 2 weeks. In 2004, people living in very remote areas paid 29.6 per cent or $113.89 more for the basket than city shoppers, and about 1 in 10 of the healthy food items were not available in remote areas. The price difference between urban and remote areas was much less for tobacco and takeaway foods.

There is also evidence that the price of nutritious foods has risen faster than the price of other foods.[41] In Brisbane between 1998 and 2004, the price of bread increased by 17 per cent, the price of milk by 22 per cent, and the price of fruit and vegetables by 33 per cent. In contrast, the price of soft drinks, waters and juices dropped by 3 per cent. Drewnowski has documented similar trends in the United States, where the price of fresh fruit and vegetables rose by almost 120 per cent between 1985 and 2000, while the price of soft drinks increased by only 20 per cent.[42]

Looking forward

The commercialisation of childhood encourages an early start to many unhealthy habits. Apart from building relationships with unhealthy foods, it teaches children to search for happiness and fulfilment at the shops. While this may bring some people transient happiness, more and more people are realising that a life filled with rampant consumerism is not so full at all.

In late 2004, a survey of more than 1600 Australians found that four-fifths believed our materialistic society makes it more

difficult to instil positive values in young children. The survey was conducted as part of research for Clive Hamilton and Richard Denniss' book *Affluenza*, which challenges the view that increased consumption and economic growth will deliver increased wellbeing for society as a whole. Their book also cites research showing that most young people want more time with their parents rather than more money (acquired through the longer hours their parents are working). It is a finding which resonates with many psychologists, psychiatrists and other health professionals working with troubled young people. And yet so many forces in society, including governments and employers, seem to be making it more and more difficult for parents to find a healthy balance between their work and their family.

A significant minority of Australians are voting with their feet, opting to downsize their incomes, stresses and material aspirations in exchange for what they hope will be a better quality of life for themselves and their children. Of course this option—known as the downshifting, tree-change or sea-change movement—is not a realistic or desirable alternative for everyone. But its popularity does suggest that many people are seriously re-evaluating their lives and what is important to them. Time and time again they find that the answer lies in their relationships and their family.

It might sound as if I've come over all nostalgic in these first two chapters, harking back to earlier, happier times when hunter-gatherers ruled or when kids were free to roam the streets before bringing home a healthy appetite for the cheerful occasion of the family dinner. Don't be fooled. Every era has its problems. Taking a rose-coloured view of the past will not help us deal with the present or the future. But understanding

where we've come from and having a careful look at our modern lives does yield some helpful clues for those who are concerned about children's health.

The first step along the road to making any kind of change is awareness. We have to acknowledge and work with the realities of our lives before we can make change. If you are interested in creating better health for you and your family, it is important to be aware of some of the forces shaping your life and your aspirations. Anyone who tries to tell you that it's as simple as eating better and moving more is telling you only part of the story.

3. Time for some measurements

Have you noticed the food industry's habit of highlighting the importance of physical inactivity as a cause of weight gain? When it funds awareness campaigns and research about obesity, these tend to stress the benefits of exercising more, rather than suggesting that eating or drinking too much might be involved. Of course you can't blame the industry for this; it is just doing what business does—trying to maximise profits and maintain a favourable environment for its operations.

But there can be little doubt that debate about which side of the energy equation—energy intake or output—contributes most to weight gain has been more than convenient for those who profit from maximising our food and drink consumption. It helps distract public attention from uncomfortable questions about the industry's role in a looming health, economic and social crisis. It also gives false comfort to Joe and Josephine Public, who wonder why they should bother changing their ways when even the experts disagree about what's important.

However, the debate does raise some interesting questions. It is not as easy to work out the relative importance of food and inactivity in weight gain as you might think. Here are a few reasons why:

- People either cannot refrain from little white lies or are genuinely deluded about themselves or are just hopeless at measuring things. When research is based on people's own reports of how much they eat, it inevitably suggests that they eat less than what is found when their food intake is independently verified. Somewhere in the universe there must be a huge black hole sucking in vast quantities of food and drink—something has to account for the mismatch between studies documenting how much food is available per capita versus studies based on people's own estimates of their consumption. Waste and spoilage cannot account for the discrepancy. Heavier children and adults are more likely to under-report how much they eat.
- Similarly, people are not very accurate when they tell researchers their weight and height. Short people tend to overestimate their height, and overweight people tend to underestimate their weight. The fatter people are, the more they underestimate their weight.
- When researchers try to overcome some of these problems by conducting surveys which carefully and independently measure people's weight, their findings may also be biased—by the reluctance of overweight people to participate in such studies.
- It is time-consuming and expensive to accurately measure how much energy individuals expend each day, but surveys based on self-reports of how much people exercise can be misleading. Even if people are playing more sport than they

did 10 years ago, their overall energy expenditure may have declined because there is less activity in their daily lives. With experts encouraging us to move more, people may well be tempted to exaggerate their sweat levels. Most people want to be seen to be doing the right thing, or at least to believe that they are. As well, the answers that researchers get depend on the questions they ask. Thus one survey found that the proportion of Australian adults who are sedentary rose from 13.4 per cent to 15.3 per cent between 1997 and 2000. However, the Australian Bureau of Statistics found a trend going in the opposite direction, with 31 per cent of adults being sedentary in 2001, an improvement from 1989–90, when 37.5 per cent were stuck to the couch.

- Physical inactivity is both a cause and a consequence of obesity. It can be difficult at times for researchers to disentangle one from the other.

So keep those caveats in mind when considering the rest of this chapter.

What are children eating and drinking?

The short answer is: too much of the unhealthy things and not enough of the right stuff.

Major changes have occurred in what children eat and drink in recent decades. Their energy consumption has increased significantly. They are scoffing more processed, unhealthy foods such as potato crisps and other snacks, lollies, soft drinks and takeaways. These foods tend to be energy-dense and high in fats and/or sugars. Some studies suggest that the more people eat of foods that are energy-dense and nutrient-poor, the less likely

they are to eat nutritious foods. It is ironic that so-called health bars are a major source of saturated fats for many children; and we know that many are eating more saturated fats than is advised.[1] As well, many children are not eating anywhere near enough of the foods they need for healthy growth and development, particularly vegetables and fruit. Many are more likely to have soft drink than milk. It's often the cheaper option.

Children are not only eating different foods compared with previous generations of children. Like the rest of us, their patterns of eating have also changed, and often not for the better. Many skip breakfast, a habit that is linked to increased risk of weight gain and unhealthy eating. They are more likely to snack—one Swedish study suggested snacks contribute more energy to most teenagers' diets than their three main meals[2]—and are also more likely to eat out. Takeaways and restaurant meals tend to contain more fat and salt than those prepared at home. According to one report, some single portions of fast food have an entire day's worth of calories and fat.[3] One analysis of the economic factors underlying obesity trends in the United States calculated that the increase in the number of restaurants per capita accounted for 61 per cent of the population's weight increase.[4]

Many researchers moan that we don't have more comprehensive and up-to-date national data about children's eating, but most of the studies that have been done point in a similar direction. Rather than bore you rigid with pages of statistics, here is a summary of some key findings, from Australia and elsewhere:

- The best Australian data date way back to 1995 and the last National Nutrition Survey. It found that children were consuming significantly more calories, snacks, soft drink and

sugar than they had a decade earlier. The increase in their energy intake was much greater than that seen in adults over the same period. Boys aged 10 to 15 were consuming the equivalent of 15 per cent more calories; girls had an 11 per cent increase in their calorie intake. These increases equate to eating the equivalent of an extra three to four slices of bread per day.[5] Snacks, lollies and other 'non-core foods' made up about one-quarter of children's total fat intake and one-fifth of their total energy intake.[6]

• It seems unlikely that the situation has improved much since 1995. In 2003, WA researchers asked children to keep a food diary for 24 hours, and found that 45 per cent reported eating confectionery such as lollies and 30 per cent ate snacks such as potato crisps.[7] Meanwhile, Sydney research suggests that ice creams, potato crisps, lollies, chocolate and hot chips are typical after-school fare. Almost two-thirds of the children surveyed said they made their own choice about what type of snack they had after school.[8] And another study in New South Wales found that 7–12 per cent of boys (depending on their age) drink more than 1 litre of soft drink per day, and about half of all students drink more than a glass each day.[9]. Many children say they usually have soft drink with meals at home and with lunch at school.

• You couldn't have missed all the news about the fabulous health benefits of fruit and vegetables even if you've been living under a rock—which just goes to show that knowing what you should do doesn't make it happen. Study after study shows that many children are missing out on these essential building blocks for lifelong health. A Western Australian study suggested that children's fruit and vegetable consumption fell between 1985 and 2003.[10] A large national study in 2004 found

that roughly 1 in 6 children aged 4 to 5 ate little or no fresh fruit or vegetables.[11] In 2001, a large study of NSW children found that well under 20 per cent were reported by their patients as eating recommended levels of vegetables. The news on fruit was more encouraging: at least 70 per cent were enjoying the benefits of a healthy dose of fruit.[12] In another study of children aged 6 to 18, 1 in 6 had eaten no fruit or vegetables in the 3 days before being surveyed. As well, 1 in 3 had either skipped breakfast or made do with a drink. Some even had cordial or soft drink for breakfast.[13]

- Teenagers are particularly vulnerable to unhealthy food habits. A Western Australian study found that almost one-third of adolescents skipped breakfast at least 4 days a week.[14] A New South Wales study of 15-year-olds found that more than 80 per cent did not eat enough vegetables, while more than one-third of boys did not have enough fruit.[15] Almost half of the boys and about a third of the girls had more than one cup of soft drink a day. In 1999, a national survey of children aged 12 to 17 found that three-quarters had eaten fast food in the past week. Ten per cent of boys and almost the same proportion of girls had eaten fast food at least four times in the past week.[16]
- Fast food plays a large part in many young children's diets. In 2001, more than two-thirds of New South Wales children under 13 were reported by their parents as eating at least one serve of hot chips a week. About one-quarter ate two or more serves a week, while 1 in 10 had hot chips at least three times a week. The survey also found that just over a quarter of children aged 2 to 4 reported drinking at least one cup of soft drink, cordial or sports drink per day, as did just over 40 per cent of children aged 5 to 12.[17]

• A study investigating the diets of more than 3,000 children and teenagers in the United States found that 16 per cent did not meet any of the dietary recommendations, and only 1 per cent (1 per cent!) met all of them.[18]

How fit are children?

It may sound confusing, but a few different issues are important here: how inactive are children, how active are they, and how fit are they? It is likely that the answers to these three related questions have the same worrying implications for children's health.

Many children are now spending more time watching TV, playing with computers or sitting in cars than being physically active. A large NSW study found that two-thirds of girls and three-quarters of boys in secondary schools spent more than 2 hours a day in front of a small screen in 2004.[19] These sedentary habits start very young—even babies spend long hours in front of the mesmerising screen.

Research on trends in children's involvement in sport and other forms of recreational exercise produces mixed results. There is little doubt, however, that fewer children are active as part of their daily life; for example, there has been a dramatic fall off in walking and cycling to school. It has been estimated that up to a quarter of children are not sufficiently active for their health, that 30 per cent are unfit and that 60 per cent have moderate to poor motor skills.[20] And activity and fitness levels tend to fall off as children get older—teenagers are the masters of lounging.

• When researchers asked more than 10,000 families to keep a diary of how their children spent a day in 2004, they found that 45.5 per cent of infants watched TV, a video or a DVD on

that day, for a mean of 1.4 hours. About 90 per cent of 4 and 5-year-olds did likewise, for an average of 2.3 hours per day. This was more time than these young children spent walking, running or doing other exercise. In fact only 66 per cent of 4 and 5-year-olds engaged in these activities at all on the day in question. Another 25.6 per cent used computers or computer games for a mean of 1.1 hours per day.[21]

- Almost a third of children aged 5 to 14 reported skateboarding or rollerblading in a 2 week period, compared with 97 per cent who watched TV or videos, and 69 per cent who had played electronic or computer games.[22]
- Cars are taking over the school transport run. Although 60 per cent of primary school students in Western Australia live within a 20 minute walk of school, 60 per cent of these students travel mainly by car.[23] In 1981, 24 per cent of Adelaide children went to school by car, 42 per cent walked and 14 per cent cycled. By 1997, 60 per cent went by car, 20.5 per cent walked, and 4.5 per cent cycled.[24]
- Studies produce mixed results about whether children are exercising more or less. A South Australian study of children aged 9 to 15 found that 51 per cent reported at least three vigorous bouts of physical activity in the previous week. By 2004, 76 per cent said they were doing this.[25] A large NSW study found that in 2004, three-quarters of boys and girls aged 11 to 16 met recommendations to have at least 1 hour of moderate to vigorous physical activity each day. This was a significant increase from the proportion who reported these activity levels in 1985, although fewer were walking or cycling to school in 2004.[26] However, other researchers note that there are significant gaps in what is known about the trends in children's active play and participation in school

physical education and sport.[27] A WA study found that almost 30 per cent of primary students and over 50 per cent of secondary students reported doing no physical education. By age 12, only about 50 per cent of young people engage in aerobic activity at least four times a week; by age 16, only about a quarter maintain this level of activity.[28]

- The aerobic fitness of children around the world is declining, and this is most marked in older age groups, according to one international analysis.[29] Studies in South Australia and Tasmania have documented similar trends.
- However, there is some good news. Recent efforts to promote activity in schools in New South Wales seem to have had an impact. A large study testing the fitness levels of children in Years 4, 6, 8 and 10 found that more students were fit in 2004 than in 1997. Even so, many children did not pass the test: about 40 per cent of boys and 20–30 per cent of girls were considered unfit.[30]

And what about children's size?

Children are taller and heavier than ever before. They also reach puberty younger. Their increasing height does not explain all their extra weight: their waistlines are expanding and they are getting fatter. Fatness is becoming more common even in very young children. The trend became noticeable in the 1980s, and some researchers believe it is accelerating. If current trends continue, it has been predicted that between a third and a half of all young Australians will be overweight by 2020.[31]

- In 2003, boys were on average 3.2cm taller and 5.1kg heavier than boys of the same age in 1985. Their waists had increased by a mean of 5.6cm. On average, girls were 2.8cm taller and 5.1kg heavier, and their waistlines had increased by

7.4cm. These figures come from a study comparing WA children's measurements in 2003 with a national survey in 1985.[32] Another study concluded that between 1899 and 1999, children's height and weight increased at an average rate of about 1.02cm and 1kg per decade.[33]

- In a large study involving about three-quarters of all 4-year-olds in South Australia, researchers examined what proportion were overweight or obese in each year from 1995 to 2002. In 1995, 3 per cent of boys were obese and 7 per cent were overweight. By 2002, 4 per cent were obese and 13 per cent were overweight.[34]
- A study conducted in the Barwon–Southwestern region of Victoria in 2003–04 found that 19.8 per cent of children aged 4 to 13 were overweight, and a further 8.3 per cent were obese. Girls were more likely than boys to be overweight.[35]
- A 2004 study of almost 5,000 children in New South Wales, aged from 5 to 16, found 25 per cent of boys and 23.3 per cent of girls were either overweight or obese. Some of the highest rates were documented in children aged 9 to 12 (in Years 6–8): 1 in 3 boys in Year 6 were classified as overweight or obese.[36]
- A study examining data on children's weight which was collected in South Australia, Victoria and New South Wales between 1969 and 1997 found that the results for each state between 1985 and 1997 were surprisingly similar. The proportion who were overweight increased by about 60 per cent, the proportion who were obese trebled, and the proportion who were either overweight or obese doubled. South Australian data showed that between 1969 and 1985, the proportion of girls who were overweight or obese did not change, but among boys the prevalence of overweight and

obesity increased by 60 per cent. In other words, weight gain has been most pronounced in the last decade or so. 'These results should increase our sense of urgency in identifying and implementing effective responses to this major threat to public health,' the researchers concluded.[37]

4. What's the worry? Weighing up the health issues

Around the world, some rather eminent knickers are in a knot. Many authoritative organisations and experts—from the World Health Organization down—are alarmed about what the growing problem of children's weight might mean for the future. Problems once thought of as afflictions of middle age and beyond, such as type 2 diabetes and cardiovascular disease, will be diagnosed at younger and younger ages, they warn. Health services will be stretched and unable to cope with the burden of illness as more and more people begin to develop the complications of diabetes at younger and younger ages, they say.

The thing to remember when you hear these sorts of predictions is that they generally are referring to the impact of increased rates of obesity across the entire population. Looked at on this scale, even a relatively small increase in the incidence of a common health problem such as type 2 diabetes or

cardiovascular disease can have large repercussions for society generally. It is much less clear what these sort of predictions mean for any individual child who is overweight. Some overweight children may suffer serious health complications because of it, but most will be perfectly healthy children, depending on how much excess weight they are carrying and whether or not their family history puts them at increased risk of future obesity and serious conditions such as diabetes.

For most overweight children, the most likely health issue is the strong probability that they will grow into unfit, overweight adults who are at increased risk of a range of potentially serious diseases, especially type 2 diabetes. However, not all fat children become fat adults; nor were all fat adults overweight as children. Similarly, most people who develop type 2 diabetes are overweight—but not everyone who is overweight is destined to have diabetes; they are simply at greater risk of getting it.

Any individual child's risk of suffering current or future health problems will depend on many factors. These can include: how overweight they are; how old they were when they put on excess weight; and their family history—for example, are one or both of their parents significantly overweight, or do close family members suffer from type 2 diabetes or heart disease? A child who is mildly overweight but has parents or aunts and uncles with type 2 diabetes may be at greater long-term risk than an obese child whose parents are trim and healthy. An overweight child who is physically active and has a generally healthy diet is likely to do better than a thin child who is inactive or has a poor diet. For many children, however, being overweight is a sign of a poor diet and inactivity, which are significant health risks in themselves.

Obesity and overweight are often lumped together as if they are the same. Generally speaking, however, obesity is far more likely to result in serious health problems. The health implications of simply carrying a few extra kilograms are still being debated by experts. On the other hand, with so many forces conspiring to add to our weight and with our bodies so clever at retaining weight gain, it is likely that many people who start off just a bit overweight may end up with the more serious problem of obesity.

It should also be remembered that the distinctions between being a healthy weight, overweight and obese are somewhat arbitrary. These categories provide a general guide to what are considered healthy or not-so-healthy weight ranges, but falling into a particular category is no guarantee that someone is healthy or unhealthy. A more intensive investigation is needed to establish this. According to Melbourne weight loss specialist Dr Rick Kausman, it is possible—and not uncommon—for someone to be overweight according to a chart but to be at the most healthy and comfortable weight that is possible for them.

None of this means that excess weight is not an important issue for children. It can cause current or future health and social problems for the individual. At a broader societal level, it seems likely that the growing incidence of overweight will put a huge strain on health services in the long term, especially given that health services already often struggle to provide appropriate care to those in need. An American study has already shown a huge increase in rates of hospital treatment for obesity-related conditions in children and teenagers over the past 20 or so years.[1] The epidemic may also have less obvious ramifications for the economy and society. Defence forces, for example, say the growing incidence of obesity is contributing

to difficulties finding fit, healthy recruits.[2] It may also reduce productivity more broadly, with one report showing higher levels of absenteeism among obese workers.[3]

However, numerous studies show that many parents do not recognise the potentially serious consequences of their children's overweight; many simply see it as a matter of appearance. Indeed, many people equate chubbiness in children with good health, or see it as a phase that children grow out of. For most children, living in today's obesogenic environment, that is not the case. Many children will carry excess weight from their preschool, primary or high school years right through into adulthood.

Living with uncertainty

Many people do not acknowledge how much uncertainty surrounds some of these dire warnings about the impact of childhood obesity. Most people have difficulty dealing with uncertainty—we often prefer to be given concrete 'facts'. And when experts, governments and others communicate with the public through the media or other avenues, their messages are often simplified so that they will be easy to understand and have the most impact. This often leaves little room for the uncertainties to be acknowledged or explained.

Here are a few reasons why there is some uncertainty about the impact of being overweight as a child:

- The future can rarely be predicted with certainty. Most medical predictions are based on estimates of the probability that something might happen rather than a cast-iron guarantee. We are all individuals, and we all react differently to the same environment and circumstances.
- Widespread obesity is an extremely recent problem in terms of the long history of humanity. Many estimates about the

health effects of obesity come from studies done decades ago, when the environment was not so obesogenic and obesity was far less common than it is today. So the results may not be terribly relevant to today's children; indeed, some experts fear that those studies may greatly understate the impact of the current levels of obesity. The epidemic is so new that long-term studies tracking its impact will not be available for decades.

- Rather than waiting another half a century to work out the impact of overweight on the future health of today's children—whether, for example, they will develop earlier or more serious forms of heart disease in middle and old age—researchers often look for 'surrogate' measures of poor future health. These might include increased levels of risk factors such as high cholesterol or high blood pressure. However, it is difficult to be sure what increased levels of these risk factors in children might mean for their future health.
- Because obesity tends to continue from childhood into adulthood, it can be difficult for researchers to separate the effects of obesity in childhood from its effects in adulthood. Similarly, it can be difficult to establish whether a problem that is more common among overweight people is a cause or an effect of weight gain. Unhealthy eating patterns, such as binge eating, might be both a cause and effect of weight gain, for example. In other words, people who binge eat might be more likely to put on weight; and people who are worried about their weight may be tempted to try fad diets, which can lead to unhealthy eating patterns. A similar problem arises because of the circular relationship between fat and lack of fitness: obesity can be both a cause and an effect of lack of activity. Researchers have had great

difficulty untangling the contributions of overweight and unfitness to poor health—this issue is the subject of ongoing medical debate. Similarly, heavier girls tend to mature early, and early puberty is associated with poorer self-esteem. It can be difficult to distinguish between the relative impact of overweight and early maturity on girls' self-esteem.

- Many studies on the impact of obesity have involved children undergoing treatment at specialist clinics. It is likely that these studies are not representative of the broader population of overweight children, and they may underestimate or overestimate the impact of weight gain on children. Many of the studies of the psychological impact of obesity, for example, have involved children undergoing treatment for their weight, who might be expected to have more severe physical or mental health issues than children who are not undergoing treatment.
- It is relatively simple to measure a child's weight. Knowing when it signals a health risk is much more difficult. Body mass index (BMI)—the measure of a person's weight relative to height—is generally accepted as giving the best available correlation between body weight and increased risk of poor health. In adults, a BMI of 25 to 30 suggests that someone is overweight, and a BMI of above 30 signals obesity. BMI charts have been developed for children using comparable cut-off scores and taking into account their stages of growth and development. Like most tests, though, this one does not always give reliable results. Because the BMI reflects a person's weight rather than their degree of fatness, two people with the same BMI may have quite different physiques. One person may be heavy and

muscular and the other may be heavy and fat. The interpretation of BMI scores should also take ethnic background into account. Asian children, for example, may be overweight at lower BMI scores than children of Caucasian background. People who are obese are not all the same; the degree and distribution of excess body fat varies greatly, and so do the associated health risks. Having a lot of fat concentrated around the stomach is particularly undesirable.

How does the child measure up to the adult?

Overweight tends to be a persistent problem—as mentioned in previous chapters, our bodies are particularly good at retaining weight gain. Fat children are more likely to become fat adults. This is especially likely if one or both of their parents is overweight, because parents and children share similar genetic and environmental influences. The later in childhood and adolescence that weight gain occurs, the more likely it is to be carried into adulthood.

Many of the studies investigating weight trends have been done overseas, but Victorian researchers have provided some local estimates of how children's weight changes over time.[4] In 1997, they examined more than 1,400 children aged 5 to 10, and found that 15 per cent were overweight and 4 per cent were obese. When they checked again in 2000, 20 per cent of the children were overweight and 5 per cent were obese. Of the 1,160 children who had a healthy weight in 1997, 125 had become overweight and 4 had become obese by 2000. Only 55 of the children who had been overweight or obese in 1997 had lost weight over the following 3 years.

Predictions

Many of the estimates about the implications of childhood weight come from a large study which has been running for more than 30 years in Louisiana in the United States, tracking the health of more than 16,000 children and adults. It centres on Bogalusa, a semi-rural community which lies about an hour's drive north of New Orleans; it takes its name from a creek which the local Indians called 'Bogue Lusa', meaning smoky or dark waters.

The Bogalusa Heart Study found that between 53 per cent and 90 per cent of overweight children become overweight adults (depending on how old they were when they became overweight), and that only about 7 per cent of normal weight children became obese adults. Only 20 to 25 per cent of obese or overweight adults had been overweight as children.[5] However, obese adults who had been obese as children were significantly heavier than those who only put on weight as adults.

Some other predictions about the future of fat children come from a study involving 854 people born in Washington State in the United States between 1965 and 1971. The researchers checked their vital statistics early in life, and when they were aged 21 to 29, and also examined their parents' medical records.[6] Their findings included that:

- Those children who were obese at 1 and 2 years of age were unlikely to be obese as young adults if their parents were not obese. Only 8 per cent of these children were obese in adulthood.
- At the other end of the spectrum, about 80 per cent of children who were obese between ages 10 and 14 were obese as young adults if they had at least one obese parent.
- Children were far more likely to grow into obese adults, whether or not they were overweight in childhood, if they had at least one

parent who was obese. Among non-obese toddlers, 28 per cent of those with at least one obese parent were obese as adults, versus 10 per cent of those whose parents were not obese. Among obese preschoolers, 24 per cent of those with non-obese parents became obese adults, whereas 62 per cent of those with at least one obese parent became obese themselves in adulthood.

- The researchers cautioned against intervening to treat young children for obesity unless they also had at least one obese parent. After age 10, though, decisions about whether to intervene could be made primarily on the basis of the child's own weight. On the other hand, it is never too early to encourage healthy eating and activity in children and babies.

Health issues for children

Broadly speaking, excess weight has two major consequences for physical health: it puts an extra load on the body, and it causes metabolic changes which increase the risk of problems such as type 2 diabetes.

1. Orthopaedic problems

You only have to carry a bag of potatoes around the supermarket to realise what a strain it must be for the body to lug around an extra load all the time. Overweight children and teenagers are more likely to suffer ankle sprains and fractures, flat feet and other orthopaedic problems. In severe cases of obesity, this can lead to bowing of leg bones or problems with hip joints. Sore feet, legs and backs, heat rash, shortness of breath and general physical discomfort are common complaints. These things can have a marked effect on children's quality of life.

2. Disturbed sleep

Extra weight can also make it difficult for children to breathe normally while they sleep, which can result in heavy snoring, reduction in air flow or even temporary cessation of breathing (sleep apnoea). As a result of disrupted, poor-quality sleep, children and teenagers may feel tired during the day or have difficulty concentrating and learning. Their growth and development may also be affected. An American study found that obese children and teenagers were four to five times more likely to suffer from disordered breathing during sleep than those who were not obese.[7] Sydney specialist Professor Louise Baur says obesity and sleep disturbance can become a vicious circle; overweight children who feel tired because of poor sleep are less likely to feel like being active, which in turn affects their sleep and weight.

3. Other medical problems

Overweight can exacerbate other conditions, particularly asthma; weight loss can improve asthma management. Almost a third of obese children have asthma, and they use more medications, have more wheezing episodes, and more unscheduled visits to hospital than lean children with asthma.[8] And obese children and teenagers may be more likely to have difficulties with health care generally, because medical procedures and medicines may be more risky or less effective.

4. Risk factors for cardiovascular disease and diabetes

The Bogalusa Heart Study has helped show that many of the physical changes that lead to cardiovascular disease begin in childhood. Anatomical changes, such as thickening of artery

walls, have been documented in children as young as 5. The study found that about 60 per cent of overweight school children had one risk factor (such as high blood pressure, cholesterol or trigylcerides) and 20 per cent had two or more risk factors. They were also more likely to have elevated fasting insulin concentrations, which is a risk factor for diabetes, as explained below in 'Old names no longer fit'.[9] Among the 5 to 10-year-olds, overweight children represented 7 per cent of the children with no risk factors, 22 per cent of the children with one risk factor, and 80 per cent of the children with three risk factors. Overweight children were about 10 times more likely than other children to have two risk factors, and 44 times more likely to have three risk factors.

Old names no longer fit

Diabetes, a long-term condition, has been described as one of the leading threats to the health of Australians.[10] It is a group of conditions characterised by too much glucose in the blood and urine, and broadly speaking, there are two main types. Type 1 occurs when the body's own immune system destroys the cells in the pancreas that produce insulin. Insulin is a hormone which is vital because it enables the body's cells to take up and use glucose and other nutrients that circulate in the blood. This type of diabetes is sometimes known as juvenile-onset because it usually affects children and young adults. It is treated with injections of insulin, and was once also called insulin-dependent diabetes; this name is no longer used because many people with type 2 diabetes also need insulin treatment.

Type 2 diabetes develops more gradually—symptoms often take years to emerge—and is called a 'lifestyle disease' because of its

association with overweight, high blood pressure and high cholesterol. People with type 2 diabetes produce insulin, but their bodies do not respond to its action properly. Insulin resistance may develop because the person is overweight and has too many fat cells, which do not respond well to insulin. Also, as people age, their cells becomes less effective at responding to insulin.

Early warning signs for diabetes include high levels of insulin, when measured in a fasting patient. This may indicate that extra insulin is being released because of high levels of glucose in the blood or because the body's cells are less sensitive to insulin. Elevated levels of blood glucose in a fasting patient may indicate that not enough insulin is being released from the pancreas to lower the blood glucose, or that cells have become resistant to insulin action. Obesity almost always causes insulin resistance, but only some obese people with insulin resistance develop diabetes. It is more likely that they will if they have a family history of diabetes. Obesity and insulin resistance tend to cluster with other risk factors for cardiovascular disease, including high blood pressure and cholesterol. This clustering of risk factors is known as the 'metabolic syndrome', and it is associated with a greatly increased risk of heart disease and strokes. One study found that 30 per cent of overweight teenagers had the metabolic syndrome, compared with only 4 per cent of lean teenagers.[11]

People with type 2 diabetes or its precursors are generally advised to lose weight and become more active. The impact of such lifestyle changes was dramatically illustrated in the research mentioned in Chapter 1, which involved Aboriginal people in northern Australia reverting to a traditional lifestyle. In just a few weeks, their diabetes improved significantly.

Type 2 diabetes was once also called adult-onset diabetes, but that is no longer an accurate description—obese teenagers and even young children are now being diagnosed with it. Reports first began to

emerge of adult-onset diabetes affecting young indigenous people in North America and Australia in the late 1970s and early 1980s. There have since been increasing numbers of reports in other obese young people. Twenty years ago, type 2 diabetes accounted for less than 3 per cent of all diabetes cases diagnosed in children and adolescents in the US. These days, it accounts for 30 to 45 per cent of diabetes diagnosed in adolescents and young adults.[12] One study of 167 obese children and adolescents in the United States found more than a fifth had impaired glucose tolerance, which can lead to diabetes. Even more worrying, 4 per cent of the adolescents had undiagnosed type 2 diabetes. In Cincinnati, the prevalence of type 2 diabetes in teenagers increased tenfold between 1982 and 1994—from 0.7 to 7.2 cases per 100,000 population. Similar increases have been noted elsewhere in America.[13] In Europe, type 2 diabetes and impaired glucose tolerance are also being reported among obese adolescents. A study of obese teenagers in Hungary found that about 2 per cent had type 2 diabetes and 15 per cent had impaired glucose tolerance; cases have also been reported in UK teenagers.[14]

It is difficult to get precise figures on the numbers of young Australians with type 2 diabetes, but there are several indications that it is becoming more common. One study found that 43 children and teenagers were diagnosed with type 2 diabetes at the Princess Margaret Hospital in Perth between 1990 and 2002. They were aged between 8 and 17, and just over half were of indigenous origin. The researchers said their findings suggested that there had been a significant increase in the rate of diagnosis rate of type 2 diabetes in children and adolescents in Western Australia, particularly over the past 7 years, and that this was in line with the increasing incidence of obesity.[15] The Mater Hospital in Brisbane is reported to have diagnosed 12 children with type 2 diabetes over a 2 year period, with the youngest patient being only 9 years old.[16] It is likely that some

hundreds of Australian children and teenagers are living with type 2 diabetes, and it is widely expected that diagnoses of type 2 diabetes in young people will become more frequent. A recent NSW study, which involved blood tests of Year 10 students in Sydney, found worrying levels of risk factors. 'Almost 1 in 5 adolescents have high insulin concentrations, which is a significant step along the path to type 2 diabetes,' the researchers said. The rate was much higher among obese teenagers, reaching almost 70 per cent among obese boys.[17]

The actual numbers of young people with type 2 diabetes are still relatively small, but the fact that there are any is causing great alarm—it means the disease's serious complications, which usually begin to emerge 10 to 15 years after the disease develops, will become more common in adults who would otherwise expect to be in their most productive years. These complications are the end result of the body's muscle cells being unable to take up and use the fuel they need to function effectively. They include cardiovascular disease, kidney failure, blindness and neuropathy, which sometimes leads to gangrene and limb amputations. It has been estimated that 10 per cent of overweight teenagers with type 2 diabetes will develop kidney failure in adulthood—they will require lifelong dialysis.[18]

Professor Paul Zimmet sees a bleak future for many of these young people. 'If a child or young adolescent gets type 2 diabetes, they could be faced with up to 60 years of drug therapy and they might only be in their late 20s when they start to get complications,' he says. The effect on indigenous, Pacific Islander and other ethnic communities which are at increased genetic risk for type 2 diabetes could be devastating, he warns. Other experts warn that the twin epidemics of obesity and type 2 diabetes mean that coronary heart disease could become a disease of young adulthood.[19] Another concern is that the effect of standard drug therapies for type 2 diabetes on children has not been adequately evaluated.

As if all this isn't bad enough, some experts suspect that the rising incidence of type 1 diabetes, which has been documented in children in Australia and elsewhere, may also be linked to the increase in childhood obesity.[20]

* Type 1 and type 2 account for most cases of diabetes. Another type is gestational diabetes, which develops during pregnancy. It usually disappears after the baby is born but is a risk factor for developing type 2 diabetes later in life. Other types of diabetes can develop as a result of a drug reaction, genetic defect or disease.

5. Fatty liver disease

Non-alcoholic fatty liver disease is a serious health problem which can eventually progress to fibrosis, cirrhosis and end-stage liver disease. It has traditionally been seen only in middle-aged and older people, but its very early manifestations are being found in obese children. Most will show no symptoms, but some may complain of feeling unwell, or fatigue or discomfort in the upper right abdomen.[21]

6. Puberty blues

Weight gain has a different effect on the timing of puberty for boys than it does for girls. Overweight boys tend to mature later, whereas increases in girls' weight and height are thought to contribute to earlier puberty for them. One American study found that on average, girls are experiencing the start of breast development when they are between 8 and 9 now; this is a year younger than 20 years ago.[22]

Another study, which tracked almost 200 girls from the ages of 5 to 9, showed a strong correlation between weight gain and early puberty.[23] It found that 89 per cent of girls who were

early developers were overweight or obese at age 9; only 29 per cent of girls who hit puberty later were obese at age 9. The researchers said their findings were cause for concern, because there is other evidence that girls who reach puberty young are more likely to smoke, drink and have behavioural problems in adolescence, possibly because they are more likely to associate with an older peer group. Earlier puberty is also associated with an earlier start to sexual activity, an increased risk of eating disorders, and an increased risk of developing breast cancer in later life.

The social scene

Many experts believe that social stigma and related problems such as bullying are the most common immediate problems for overweight children. It is not only other children who are unkind. Sydney specialist Professor Louise Baur has seen young patients who have been given a hard time about their weight by family members, teachers and health professionals. She has even heard of strangers on the street passing derogatory comments in front of overweight children.

Several studies have shown that children seem to share broader society's negative views about overweight. Even young children who are not overweight say they want to lose weight. They are less likely to want to play with overweight children. Negative attitudes towards obesity have been documented in children as young as 3.[24] Children as young as 6 have been shown to associate obesity with things like cheating, laziness and stupidity.[25] When researchers asked 10 and 11-year-old children to rank who they liked best out of a series of drawings of children with various handicaps, they ranked the obese child last. They would prefer to be friends with children with a wide range of

physical disabilities, including facial disfigurement, than with fat children. This study was conducted first in 1961 and again in 2001, and it seems that the increasing prevalence of childhood obesity has not softened attitudes. Another study, of 9-year-old girls, found they and their parents generally tended to attribute positive characteristics to thin people and negative ones to overweight people, even though many of the girls and their parents were overweight themselves.[26]

Given findings like this, it may seem surprising then that the evidence about the effect of obesity on young children's self-esteem and psychological wellbeing is mixed. Some studies suggest it has little effect; others suggest that it is damaging. Evidence about it being harmful for the psychological wellbeing of teenagers is much more consistent. Some researchers think that this may be because younger children's view of themselves is based largely on the messages they receive from their parents, but as they get older, it comes more and more from the broader culture and community.[27]

Debate has also raged about what comes first: poor self-esteem or a weight problem. One study, which followed 1,520 children for 4 years from the ages of 9 and 10, found no significant difference in their self-esteem according to their weight at the start.[28] By the time the children reached early adolescence, though, obese girls and boys were more likely to report lower self-esteem than other children. Those obese children whose self-esteem fell during the study were also more likely to report feeling sad, lonely and nervous. They were also more likely to smoke and drink than obese children whose self-esteem increased or remained unchanged during the study. One of the interesting findings was that many children's self-esteem fell as they grew older, regardless of their size. Overall, 69 per cent of obese white girls had a decrease in self-esteem over the 4 years of the study, compared with 43 per cent of non-obese white girls. By the early teenage years, 14 per cent of obese boys had low self-esteem,

compared with 9 per cent of non-obese boys. The researchers said they could not be sure that obesity itself caused low self-esteem. Other factors associated with obesity, such as inactivity, depression or being poor , may contribute to lower self-esteem levels in obese adolescents.

An Australian study found similar trends in younger children.[29] It involved a representative sample of 1,157 Victorian children aged 5 to 10 who were examined in 1997 and then again 3 years later. At the start of the study, overweight and obese children were slightly more likely to have lower self-esteem than other children; this difference was much more marked 3 years later. The researchers said their findings suggested that weight gain played an important role in reducing children's self-esteem.

Obesity can have a lasting effect on psychological, economic and social wellbeing. One large study found American women who were obese as adolescents had lower education levels, earned less money, were less likely to marry and were more likely than women who had not been overweight as teenagers to be poor.[30] The researchers blamed discrimination against the obese for this, and concluded that overweight during adolescence has greater social and economic consequences than many other chronic physical conditions. A study in Britain produced similar results, leading those researchers to conclude that obesity may be the 'worst socio-economic handicap' for young women.[31] Other research has documented discrimination against obese people in the workplace, in medical and health care services, and in housing.[32] Obese adults are more likely than non-obese adults to suffer depression, anxiety, poor social relationships and generally worse mental health.[33] A survey involving thousands of Australian women found that those who were overweight or obese were less likely to report being satisfied with their work, career, study and close personal relationships, although the differences between the groups of women were not huge.[34]

Health issues for adults

Many experts believe that the most significant consequence of childhood obesity is its impact on coming generations of adults, who are likely to suffer higher rates of heart disease, stroke, type 2 diabetes, certain cancers, gall bladder disease, osteoarthritis, endocrine disorders and other obesity-related problems. The result, many warn, could be a significant fall in life expectancy.[35] No less an authority than the Surgeon General of the United States says that preventing obesity in children has the potential to prevent cardiovascular disease in adults. Meanwhile, the National Health and Medical Research Council suggests that in Australia, about 66 per cent of type 2 diabetes, 22 per cent of coronary heart disease, and 29 per cent of hypertension is due to obesity.[36] Being overweight can also affect women's ability to conceive, and being overweight during pregnancy can mean risks for both mother and baby.[37]

There is some evidence that obese adults are more likely to suffer associated health problems if they put on weight as children or teenagers rather than in adult life.[38] Dr Tim Gill, Co-director of the NSW Centre for Public Health Nutrition, based at the University of Sydney, says that overweight children who continue to put on weight as adults are more likely to develop type 2 diabetes than overweight adults who were trim as children. Research in Finland suggests that the metabolic syndrome is especially common among obese adults who were also obese as children.[39]

It may also be the case that being overweight early in life brings increased risks even for adults who have since trimmed down.[40] One US study found that men who were overweight as teenagers were more likely than those who weren't, to die prematurely and to suffer coronary heart

disease and other problems, regardless of their weight as adults.[41] But other researchers believe that most of the health problems associated with childhood obesity are in fact due to its persistence into adulthood. Yet others suggest that the risk may be highest among normal-weight children who become obese adults.[42]

While it seems clear that obese adults are more likely to die prematurely, debate continues about the impact of simply being overweight. Some studies show increased rates of diabetes, gallstones, hypertension and heart disease in overweight adults,[43] but others have found no evidence that being overweight, as distinct from obese, increases the risk of premature death.[44] (You can find out more about the difference between obesity and overweight in Chapter 11.)

Risks of inactivity

Is it fitness or fatness that matters most? This tricky question has provoked many a heated debate. Because people who are overweight tend to be unfit, it has been difficult to work out the impact of each characteristic. The relationship between fitness and fatness is complex, too. Physical activity does more than simply burn up calories; it also helps sleeping, digestion and appetite mechanisms—all of which are important for weight control.

Many experts believe that being inactive and unfit is just as big a health risk—if not a bigger one—than being overweight. People who are lean and unfit may be more likely to have health problems than fit fat people.[45] Others say that even if obese people become fit, it may not make up for all the health risks associated with their weight, and that it is important to shed some kilograms too.[46]

People who are inactive are more likely to develop insulin resistance and type 2 diabetes, regardless of their weight.[47] According to Professor John Hawley, an expert on the effects of exercise on metabolism, based at the RMIT University in Victoria, exercise is one of the best ways of making the body's muscles more sensitive to insulin. And the International Agency for Research on Cancer, based in France, estimates that physical inactivity is responsible for 14 per cent of all cases of colon cancer and 11 per cent of postmenopausal breast cancer cases.[48] There can be little doubt that inactivity is a major health problem.

Rather than focusing on your family's weight, it makes far more sense to put your effort into encouraging everyone to be more active. And don't assume that because your family is lean, it doesn't matter if they don't exercise. Here are a few things to consider:

- Children who are overweight are less likely than others to develop the skills and confidence to participate in sport and other physical activities. They are also less likely to be fit.
- Being physically active has many benefits for children and teenagers, apart from weight control. It helps build and maintain healthy bones, muscles and joints, promotes the development of movement and co-ordination skills and self-confidence, and prevents and controls mental health problems such as depression and anxiety. A WA study found that physically active young people had higher self-esteem and reported fewer emotional problems than those who were sedentary. Seventeen per cent of teenagers who exercised regularly reported mental health problems, compared with 30 per cent of the couch potatoes. The study also found a link between regular exercise and better academic performance. On the other hand, children and teenagers who are physically

inactive are more likely to smoke, drink, take drugs and have behavioural problems. Children and teenagers who are in the habit of being physically active are thought to be more likely to be active as adults.[49]

- Adults also gain many benefits from being physically fit. It reduces their risk of dying prematurely, and developing heart disease, stroke, high blood pressure, and type 2 diabetes. It is estimated that 30 to 40 per cent of cancers are preventable by appropriate eating habits plus physical activity.[50] Active adults are also less likely to suffer falls, and are more likely to have healthy bones, muscles and joints.[51]

Perspective

Childhood in the 21st century is, in many ways, safer than ever. Today's children are less likely than previous generations to suffer infectious diseases and accidents or to know the pangs of hunger and deprivation. Children living in wealthy countries such as Australia enjoy a standard of living their ancestors could not have imagined. But their physical and emotional health and development are under threat. Canadian researchers have coined the term 'modernity's paradox' in response to evidence of increasing rates of mental health, social and drug and alcohol problems in children and young people, despite the fact that they live in an era of economic growth and wealth.[52] Two of the most pervasive problems for children are physical inactivity and poor diet, and these are often seen in expanding waistlines. It is a terrible reflection on our society and its priorities that children born today may have a lower life expectancy than their parents' generation.

There are many reasons why encouraging weight obsession is not a good idea (more about this in Chapters 5 and 7). But

helping families and children enjoy physically active lifestyles and tasty, nutritious food will have profound health benefits for current and future generations. It may help people who need to lose weight do that, and it may help others maintain a healthy weight. And as a Queensland Government report has noted, it would also help with all of Australia's national health priorities: asthma, cancer, cardiovascular health, diabetes, injury prevention, mental health, arthritis and musculoskeletal conditions.[53]