

chapter 1

starting points

Who Will Benefit From Reading this Book?

I've written this book primarily for those of you who are parents and carers, and the information and advice have been tailored accordingly. Parents or guardians are usually the ones who have most responsibility for and influence over their children's development, at least in the early years, and this is particularly true when it comes to food and diet. What parents don't usually have, however, is easy access to reliable information about just how important good nutrition is to their child's development – and especially to their child's brain and behaviour.

Having said that, many of the parents I've met have taught me a great deal about the links between food and behaviour, and in this book I'll be doing my best to share with you the insights I've gained from working with these parents and their children. Many of them know a great deal more about this subject than most specialists in child behaviour, and I've sprinkled quotes from them throughout the book. They have often gained their knowledge the hard way, however, and sadly the professionals officially in charge of helping them and their children have not always been receptive to suggestions that diet could in any way be relevant to these children's difficulties in behaviour, learning or mood.

This book is about you taking charge and helping your child and yourself.

4 they are what you feed them

For this reason, although this book is written mainly for parents, I hope that the material here will also be useful to the many practitioners in health, education, social services or other fields who are struggling to help the children in their care, as well as to the many support groups and charities whose invaluable work has been helping to fill the huge gaps left by official research, policy and practice. In my experience, it is parents, along with some professionals and support groups, who have often been the unsung heroes who have actually made some of the most important discoveries about how diet can affect children's behaviour. Science is only just starting to follow up some of these discoveries – and, as usual, government policy tends to lag way behind.

Why I Have Written This Book

For almost 20 years now I've been involved in scientific research into the nature and causes of many common difficulties in behaviour and learning. The children affected may have been labelled with terms like *dyslexia*, *dyspraxia*, *ADHD* or *autism*. In many cases there is no official 'diagnosis' – and even when there is, this doesn't always lead to effective solutions. For those who know what to look out for, the first signs of conditions like dyslexia, ADHD or other syndromes are there from early childhood, but these are not always recognized until much later – if at all – while the effects of the unexpected difficulties with behaviour and learning usually last a lifetime. They can also cause untold distress and misery if not properly identified and treated.

Early recognition, along with effective help, can make all the difference.

My primary aim as a researcher has always been to find better ways of identifying and helping people whose lives are affected by these kinds of difficulties. From my earlier background in teaching I first became aware of just how many children were actually affected, although most of them were not being given the help they really needed. What was preventing most of

these children from achieving anything like their true potential, I realized, was our sheer ignorance of how human brains and minds really work – especially with respect to individual differences. This is what led me out of teaching and into the world of neuroscience research. At first, my scientific research had nothing to do with nutrition ... or so I thought! But that view began to change as I recognized that nutritional issues cut across everything I was studying.

What on Earth Is Really Going On?

In both research and practice in health and education, children who have particular difficulties with behaviour or learning are often diagnosed as having conditions such as ADHD (attention-deficit hyperactivity disorder), dyslexia or specific reading difficulties (SRD), dyspraxia or developmental coordination disorder (DCD) or autistic spectrum disorders (ASD). For children with behavioural problems, ‘conduct disorder’ and ‘oppositional defiant disorder’ are the terms commonly applied. Learning difficulties may attract diagnoses such as ‘speech and language disorder’.

Unfortunately there is still a great deal of controversy over what these labels actually mean. They may do a good job of *describing* specific patterns of difficulties that are common to many children, but they do little or nothing when it comes to *explaining* them. If help is to be effective, then it really is important to know what’s actually causing these children’s problems, but this crucial information is not something that any of these ‘diagnoses’ actually provides.

These so-called ‘developmental disorders’ also lack any clear boundaries. Not only do they overlap considerably with each other, but their core ‘symptoms’ also occur in milder forms in so many children in every classroom that it is a matter of opinion (and considerable controversy) where the dividing lines should be drawn. In the UK, around one child in every four or five would now meet the criteria for one or more of these ‘disorders’, leading many people to ask, ‘What on earth is really going on?’

Diagnostic labels like ADHD or dyslexia can obviously be very useful in some respects – perhaps most importantly because they provide official

6 they are what you feed them

recognition that a child is *not* 'lazy', 'careless', 'stupid', 'selfish' or something even worse.

Sadly, these very negative labels are all too often applied by people who know no better. If left unchallenged – and particularly if your child starts to believe them – such labels could obviously do irreparable damage to his or her self-esteem and opportunities in life. Many children and adults have told me what a relief it was when someone finally identified their difficulties as being typical of dyslexia, dyspraxia, ADHD or ASD. A diagnosis may also be invaluable in opening the way to appropriate treatment. In school, it should allow your child access to whatever specialist assistance may be on offer, because the school can probably get extra funding to meet your child's special needs.

The help on offer doesn't usually consider something very fundamental indeed: your child's diet.

Not every child with behavioural or learning problems will necessarily even qualify for any official diagnosis, of course. But even if they do, these officially recognized labels, which parents have often had to fight for years to obtain, don't always lead to the kind of help that parents really want. For instance, if the diagnosis is ADHD, their child will usually be offered treatment with drugs. If the diagnosis is dyslexia, then some special teaching help may be available. If the diagnosis is dyspraxia or DCD, then behavioural therapies or physiotherapy might be offered. And if the diagnosis is an autistic spectrum disorder, parents may well be told that there is nothing anyone can do.

There is always something that can be done. Don't ever believe it if anyone tells you otherwise.

One of the very real and fundamental issues that affects *every* child, and which *every* parent would benefit from knowing more about, is *nutrition*. The problem is that information and advice about food and diet currently feature absolutely nowhere in standard practice for either assessing or treating children's behavioural and learning difficulties. In my view, this situation is simply indefensible.

Over the years I have seen not just hundreds but thousands of children and their parents, as well as many adolescents and adults, all of whom have been struggling with difficulties in behaviour, learning and mood that neither they nor the experts they've turned to for help can really explain. I've also read and absorbed the findings from a huge and diverse range of the very best scientific research. In addition, I've attended and presented my work at many scientific and professional conferences in the UK and abroad, given hundreds of talks and lectures to both public and professional audiences, published numerous peer-reviewed research papers, contributed chapters to several books and written many articles for charities, support groups and the media.¹

As a result of the high profile my work has achieved, I receive thousands of enquiries and requests for advice from parents and professionals. These parents and professionals all have the same concerns and aims I have: *to help the children they care for, and find some effective, practical ways that can help these children overcome the behavioural and learning difficulties preventing them from achieving their potential.*

In my view, all of these people are being badly let down. They are often being told things that aren't true, and they are not being given the help that they need and deserve. I see huge sums of money being wasted in our health systems, our education systems, our social services and our criminal justice systems (let alone what happens within the worlds of employment and self-employment which generate the tax revenue that pays for most of these systems). It has also become very clear to me that a similarly large proportion of the resources devoted to research in the name of helping people is simply being wasted, because we continue to ignore some of the most basic facts that are staring us in the face.

Nutrition matters!

A Quite Extraordinary Denial

Food and diet are important to all of us at the most fundamental level, because without the right nutrients it simply isn't possible for our brains

8 they are what you feed them

and bodies to develop properly, to grow properly and to function properly. It is also a fact that the diets of a huge number of children (and adults) in developed countries like the UK simply are not providing all the essential nutrients they need. Official figures from the latest National Diet and Nutrition Surveys bear this out – but oddly enough, the shocking findings have not been given any media coverage.²

Results from the most recent official survey of the nutritional status of children in the UK, carried out in 1997 and published in 2000, are not even freely available on the Internet (like the results from the adult survey are), despite this research having been funded by UK taxpayers' money. Perhaps the Government would rather we didn't know? Later in the book, you'll read about some of these findings, and I hope you will agree that they really don't give us any cause for complacency.

We keep being told that 'a well-balanced diet can provide all the nutrients you need'. That may be true, but the truth is that many children's diets are a very long way from being well-balanced ... and the effects of this malnutrition on their behaviour and learning can be devastating. What I see going on in almost every sphere is a mixture of ignorance and a quite extraordinary denial of how food and diet can influence our brains and our behaviour.

They Are What You Feed Them

In recent years public concern has finally been mounting about the unhealthy nature of many children's diets, but it took Jamie Oliver's dramatic exposé about school dinners to put the shocking issues right in front of us. The British Medical Association, not usually known for its radical stance, has since joined in and demanded that something be done about children's nutrition.

The evidence is now undeniable that poor nutrition is putting children's physical health at risk. Many children are now expected to die *before* their parents – as a direct result of their unhealthy diets and lifestyles.

The epidemic of overweight and obesity in children is the most obvious sign that all is not well, and has become rather difficult to ignore. For years, the food industry and its supporters have always got away with blaming the expanding waistlines of our children purely on lack of exercise – but as anyone with half a brain can see, poor diets are equally, if not more, to blame.

The physical health problems that accompany, and in most cases precede, such unhealthy weight gain are not usually so obvious to the naked eye. The underlying problems that are leading to Type II diabetes (in which the body stops responding normally to insulin), even in children, often go unnoticed until this has already caused major health problems. Type II diabetes used to be a rare disease that occurred mainly in old age. If you follow the advice given in this book, however, I can almost guarantee that your child will not fall victim to this ‘silent killer’.

The effects of food on behaviour are also invisible, but very real. The brain is part of the body, and it relies on the same food supply to meet its needs. However, despite this obvious fact, almost no attention has been focused on the importance of nutrition for children’s behaviour and learning.

Many children’s diets are high in sugar, refined starches and the wrong kinds of fats, as well as artificial additives. They are high in calories (energy), but lacking in essential nutrients. The risks to physical health of such a ‘junk food’ diet are now recognized, but their potential effects on children’s behaviour, learning and mood are still largely ignored. The (very limited) research that actually exists into human requirements for different nutrients has never even taken brains and behaviour into account.

Spending on Behaviour Doesn’t Include Diet

In the UK, the Government has recently been forced to spend an additional £342 million on school behaviour-improvement programmes, and the World Health Organization predicts a 50 per cent rise in child mental disorders by 2020.³

10 they are what you feed them

The brain, like the body, needs the right nutrients to function properly.

But scientific research aimed at finding out the extent to which better nutrition could improve children's behaviour and learning is not something that anyone seems prepared to fund – so our ignorance continues.

Nonetheless, as this book will reveal, there is in fact already evidence to show that for many children (and adults) the improvements in behaviour, learning and mood that can follow from some remarkably simple changes in diet can be quite dramatic. The problem is that too many people don't even know about this research. Instead, far too many parents who actually suspect that food may be part of their child's problem – and have good evidence of their own to support this – are often told dismissively by the supposed experts, 'Oh, there's no evidence that diet can make a difference.'

This is simply untrue. There is quite a lot of evidence, and much of it is first-class ... but it tends to be in different places, and is rarely pulled together. If you add it all up, the case for doing something to improve the diets of children in the UK (and other countries) is now overwhelming.

This book will tell you how to go about improving your child's diet, with particular emphasis on the impact this can have on mood, behaviour and learning.

In my view, it's actually verging on negligence for any professional to deny to parents that food and diet *can* affect their children's behaviour – although of course there will always be other factors to consider, and dietary approaches should always be complementary to other proven management methods. However, I can't really blame individual professionals for reflecting the training that they've been given and the culture in which they live and work.

We Need to Change Our Legacy

The real problem is that we're dealing with a legacy of ignorance and complacency about nutrition that has now gone on for many decades. In relatively rich, developed countries like the UK, it's simply been assumed that no one is really likely to be at risk of malnutrition. Rising rates of obesity are taken as evidence to confirm this – but of course there is a big difference between being overfed and being well nourished. What too few people seem to recognize and acknowledge is that our diets – and particularly children's diets – have changed out of all recognition during the past few decades. To make matters worse, the education that any of us receives about how our brains and bodies work, and what nutrients we need not just to stay healthy, but to allow our minds and brains to function properly (let alone at their best), is extremely limited.

School syllabuses do cover diet, but there is little time to teach children what they really need to know. What's more, healthy eating messages can easily be subverted by the heavy advertising of 'junk foods' and peer pressure that our children face. Generally speaking, most adult education in this area is limited to information in the media. Sadly, most of this actually comes from the food, supplement and diet industries, and is often little more than marketing and advertising for their latest products and services. This doesn't help anyone to make properly informed choices.

Over the years, many parents have asked me where they can get information that they can really trust on the food and diet issues that most concern them as they try to do the best they can for their children. When you've read this book, if you'd like more information about the scientific research in this area that is *independent* of commercial influences, and any further details on some of the information provided here, you can find it on the website of the charity Food and Behaviour Research (see www.fabresearch.org).

Where to Go Next

I'm not going to pretend that we have all the answers, because we don't. There's still a huge amount that we don't know about how nutrition can affect mental health and performance. Many of the answers to key questions would not actually be hard to find if there were a will to investigate. If this kind of research received just a tiny fraction of the resources that go into pharmaceutical and other approaches that have so far failed to deliver, we would have much of the evidence we need. This is why I've dedicated the entire proceeds of this book (which would otherwise go to me, the author) to the Food and Behaviour (FAB) Research charity.

I hope you enjoy this book, I hope you learn something from it that will be useful to you, and I also hope you decide to act on its guidelines. Please know that I'd prefer it to become 'dog-eared' and covered in highlighter and notes than put neatly on a shelf to gather dust. There are numerous issues I've not been able to include or cover in depth here, and no doubt many corrections that you can help me with. I'm open to your feedback. Please let me know how you get on.

FAQs

My doctor doesn't believe in food intolerances and pooh-poohs what I say. What should I do?

There are some more enlightened doctors out there who keep up with the research in this field; try to seek one out. To be fair – their workload makes it almost impossible for most doctors and other health professionals to find time to read up on nutrition. What's more, most of them still receive very little training in this area – and as you'll see in Chapter 6, the whole area of food allergies and intolerances is a highly complex one that still needs more research. Do tell your doctor about the FAB Research website, though, because many health professionals I know find this a very useful resource, allowing them to see some of the scientific research for themselves. I also don't think many doctors would take issue with most of the dietary advice

you'll find in this book, but the decision on what to do has to be up to you. If I were you, I'd get a second opinion from a doctor who does listen – but I'd also read up as much as I could, talk to other people and then make my own choices. In any case, I wish you the best of luck.

I'm a teacher and have three main frustrations: because of the crowded syllabus I have so little time to explore the need for good nutrients with my pupils; we have vending machines that sell soft drinks and sweets (the Head says we need them to fund non-teaching staff); since we were forced to put the school dinners out to tender, they have gone from healthy spreads to mainly junk food.

I hear these frustrations a lot. Show this book to your head teacher, other staff and governors. Write to your local MP and the education minister, and join FAB Research and the many other not-for-profit groups who are campaigning for things to change.

Summary

1. This book is mainly written for parents, but it is also for anyone in the health, education and social services who has children in their care.
2. I've written this book to share my discoveries with you about how food and diet can affect children's behaviour, learning and mood. This may be particularly relevant to those affected by conditions like autism, ADHD, dyslexia and dyspraxia, but the fundamental issues affect all of us – because we all need to get from our diets the nutrients needed for mental as well as physical health.
3. Labels like *ADHD*, *dyslexia* or *autism* can be useful, but they do little or nothing to explain these conditions, and they have many features in common with each other and with what's considered normal functioning.
4. If your child has been given one of these labels, you may have been told there's little or nothing you can do. You *can* do something, and one very fundamental thing that may help is to look at your child's diet.

14 they are what you feed them

5. The latest official survey of the nutritional status of children in the UK shows that many of them are lacking in essential nutrients. Little publicity has been given to these findings or their potential implications for physical and mental health. Results from the survey are not even freely available on the Internet, despite this research having been funded by UK taxpayers' money.
6. Many school meals are unhealthy, and the limited education that children do receive on food and diet cannot begin to compete with the promotion of unhealthy foods via advertising and other media. Many of the adults who care for them are no better informed.
7. Rising obesity has been blamed mainly on lack of exercise. This can obviously be a contributory factor, but in most cases diet is equally if not more important.
8. This book will present evidence that children's diets can affect not only their physical health but also their mental health and performance.
9. 'Junk food' diets are now being recognized as a serious risk to the physical health of our children, but their effects on behaviour, learning and mood are still largely ignored.
10. You can help to redress this neglect – starting with your own child.

chapter 2

Facing the Facts

When it comes to how much we – the public – usually get to know about the foods we eat, and what we've been feeding to our children for years now, I'm afraid it's rather like the old joke about the 'mushroom' style of management, namely: 'Keep them in the dark, and feed them ****.'

For a long time, both the food industry and successive governments have effectively kept quiet about many things they've known (or should have known) about the appalling nutritional quality of much of our food – and children's food in particular. Many of these appalling facts are available to anyone willing to read up about this subject (although, ironically enough, I've found that some of the best books are often in the 'politics and economics' section of bookstores rather 'nutrition').¹ It took Jamie Oliver's stunning TV series on the state of school dinners to bring some of these issues to public attention and make the UK Government finally admit that there is a problem.

A poor diet leads to poor health.

The real trouble is that cheap, low-quality foods and drinks bring big profits to those who get away with selling them. (All the better if the contract is with a Government agency and lasts for years, as some school dinner contracts do.)

Reading through this chapter, have a think about whether there might be a connection between diet and why your child misbehaves, gets moody, is often tired, or has problems learning. If you saw *Jamie's School Dinners*, you

may remember that many people interviewed spoke about the dramatic changes in some children's behaviour after 'dumping the junk' and feeding them with real, freshly cooked food. When the media followed up on this, they naturally wanted to track down the 'scientific evidence' for this remarkable phenomenon, and speak to the scientists involved in such research. So on one particularly memorable morning, I got four different phone calls on my mobile as I dashed between meetings in Oxford, London and Cambridge (via Luton airport to pick up a colleague!). When even the *Financial Times* joined in I realized that the 'food and behaviour' issue really had hit home. This was the aspect they all seemed to be interested in – and no surprises there, really. The only trouble was there clearly weren't enough scientists to go around, so I found myself deluged for some time.

Where's the Good Evidence?

The reason so many enquiries came to me is that when it comes to the kind of research that really can provide firm evidence of cause and effect,² there are actually remarkably few studies of how food and diet may affect children's behaviour and learning. Fewer still are by researchers in the UK. My own investigations of this kind have mainly involved omega-3 fatty acids (found in fish oils) – belatedly recognized as essential 'brain food' as well as beneficial for your heart, joints and immune system. In our latest study, children given omega-3 showed faster reading and spelling progress, better attention and memory, and less disruptive behaviour than a matched comparison group over a three-month period. We still need more evidence, but I can understand why parents, teachers and the media are interested. You'll hear more about these special fats – and our research findings – in Chapters 8 and 9.

Healthy Strawberry Yoghurt, Anyone?

Check your labels:

- 'strawberry yoghurt': contains some real strawberry
- 'strawberry-flavoured yoghurt': there's a tiny bit of strawberry, somewhere
- 'strawberry-flavour yoghurt': no strawberries at all

The cheaper ones are usually the last of these three, and some of their ingredients can be dubious: gelatine, pectin/gum, flavourings, colourings, and corn sugar.

Low-fat 'healthy' yoghurts usually contain even more thickeners (corn starch this time) along with plenty of sugar or artificial sweeteners.

Other scientific studies have looked at other aspects of diet. For example, many well-controlled trials have looked into whether artificial food additives might aggravate hyperactivity and related behaviour problems. Many of these were carried out years ago, but variability in their designs and results made it hard to know what to believe. More recently, two important studies have confirmed that some common food additives with no nutritional value really do seem to *worsen* behaviour in many children. Might your child be one of them? How much more evidence will we need before we take action? When you read about these issues in Chapter 6, you can decide for yourself (and your children) what you want to do.

'Cheap Trick' Frozen Chicken Nuggets*

Ingredients

- Chicken carcasses
- Chicken skin
- 'Mechanically recovered' bits of bird
- Artificial additives (colourings, flavourings, preservatives, texture-modifying agents)
- Hydrogenated (bad) fats

Procedure

- Scrape the skin and other bits off the machinery or factory floor.
- Add to chicken carcass and put in high-speed blender.
- Add the bad fats, texture-modifiers and other additives.
- Form into nugget shapes and cover with 'bread crumbs' (more additives).
- Freeze and package attractively.
- Sell to parents to feed to their children.
- Sell to schools and restaurants en masse for the same purpose.

**with due credit to J. Oliver and Co for showing that consumers do often change their preferences when you tell them what they're really eating.*

It's not just what has been added to our food that matters – it's also what's been taken away. In Chapter 4 we'll look at essential nutrients. As you'll see, there are lots of these – but many are seriously lacking from the diets of children, adolescents and adults in the UK. How would you know? Well, deficiencies in some nutrients lead to well-documented physical symptoms, but these are not always recognized as such – and may be treated with medications that can make matters worse. What about mental symptoms? Can a poor diet alone really cause bad behaviour? Later, you'll hear more about a rigorous study of young offenders carried out in a high-security prison.³ In this study, giving just the recommended daily amounts of vitamins and minerals (with some essential fatty acids) with no other changes actually *reduced* the number of violent offences by more than 35 per cent. Can you imagine that effect translated into the wider community? What might be achieved in your child's school, or your neighbourhood, if aggression and antisocial behaviour fell by that amount? Given the potential implications, wouldn't you think the Government would be keen to follow up on these kinds of findings? In the UK, sadly the answer is 'No, not yet.' The funding for this particular research (including replication studies now underway) has been provided almost entirely by charities.⁴

Healthy Apples?

Supermarkets force producers to grow larger apples (so people end up buying more) which means the apples' vitamin and mineral content declines.

Want Fries with That?

McDonald's got into trouble for selling their fries as fit for vegetarian consumption when their reformed spuds had been cooked in beef tallow.

So they switched to vegetable oil (which incidentally produces bad trans fats when heated). Now the distinctive taste of the fries comes from an infusion of *synthetic* beef tallow.

In fact, many of the flavourings now used in our foods are synthetic chemicals: you can't smell or taste the difference, but there is no nutritional value in them.

Slowly But Surely ...

Even if policymakers are lagging behind, it seems that consumers are beginning to turn. Sales of bagged snacks, sugar confectionery, fizzy soft drinks, frozen meals and pizzas have apparently declined over the last year, while sales of fruit juices, cheeses, bread and drinking yoghurt have increased. McDonald's has had to close at least 25 of its UK branches (even though it began to introduce supposedly 'healthier' ranges – but let's not go there!). The media tell us that confectionery and soft drinks companies such as Cadbury-Schweppes may be planning to put health messages on their packaging (is this to provide them with some defence if they find themselves sued like the tobacco companies?). The makers of sausage rolls and pasties are apparently seeing a large drop in profits. And I know I'm not the only one pleased to see that one of the big supermarkets has finally

20 they are what you feed them

taken a certain brightly coloured, additive-laden drink pretending to look like orange juice off its shelves. 'Surly Despair' would be a better name for this one, given the amount of sugar and artificial additives it contains. If I had a pound for every time a parent, professional or support group leader has complained to me about the way that this (and similar drinks) can 'send our children up the wall', we could probably fund our whole next year's research programme on the proceeds. As it is, these kinds of companies have been raking in the money and yet few people have seen the need to finance research to see what these and other 'junk foods' might really be doing to our children's brains.

Not All Sweetness and Light

A survey for *Food Magazine* in 2004 revealed that a single drink of Ribena or Lucozade could give your child more than a whole day's recommended sugar intake.

- 500ml bottle Ribena: 70g sugar (equivalent to at least 15 teaspoons)
- 380ml bottle Lucozade Energy: 64g sugar
- 330ml bottle Coca-Cola: 25g sugar

That means a bottle of the soft stuff can give your child the same 'sugar hit' as one to four packets of sweets. In some cases, the sweetener may be in the form of high-fructose corn syrup (which is cheaper to produce than sugar).

'No added sugar' varieties just put in artificial sweeteners instead, which some good evidence shows may carry different kinds of risks.

Regular consumption of fizzy, sweet drinks can lead to a decline in body levels of important minerals

In the news, we hear that 40 per cent of patients in our hospitals are suffering from malnutrition – which can add serious complications to their treatment and care, and significantly slow their recovery.⁵ In most cases it probably

contributed to their illness too – but at least the links between nutrition and physical health are starting to be acknowledged by our health services. (They have long been recognized by top performers in physical sports!) What we need now is a similar acceptance that food and diet also affect *mental* health and performance. It really should be ‘barn door’ obvious. The brain is part of the body – and has nutrient and energy requirements of its own. But remarkably little systematic effort has so far been devoted to finding out what those requirements really are – and just how our mood, behaviour and learning really can be affected when these needs are not properly met.

Still, it’s encouraging to see that consumers are beginning to wise up to some of what’s been going on, and to change their shopping and eating habits as a result. For the sake of your children, I do hope you are one of them – and I hope this book will give you some of the help you’ll need.

There Is a Good End in Sight

Before we go any further, let’s just consider what’s possible, and what isn’t. Right now, your child’s mood, behaviour and learning (or all three) are probably giving you cause for concern, or you wouldn’t be reading this book. I can guess that what you’d really like to find here are some simple, rapid and effective solutions to your child’s difficulties. Well, I obviously can’t promise that this book will solve *all* your particular problems. But if you choose to act on the information I’ll be giving you, the rewards *could* actually be greater than you might think possible. If you’re sceptical – I don’t blame you. But by feeding your child well, you can at least be confident that you’ll be taking some fundamental and necessary steps towards unlocking your child’s true potential.

What’s more, I hope you’ll also apply what you learn here to your own diet. (If you want to improve your child’s eating habits, then ‘Do as I do’ is much more effective than ‘Do as I say!’). If you do, expect benefits not only for your child, but also for yourself and any other members of your family who are willing to join in. Better health is one thing that should definitely follow from this plan – and for that reason alone you’re unlikely to regret it if you choose to take the advice I’ll be giving you. If you understand *why*

22 they are what you feed them

you need to improve the dietary choices that you and your child have been making, then learning *how* to do it is so much easier – although I’ll be helping you with that as well.

Food and diet really are key to making the most of your child's potential, both mentally and physically. *We are what we eat, and our children are what we feed them.*

I can give you the information, but putting it into practice is clearly up to you, and I’m not going to promise that this will be easy. Quite a lot of people will probably tell you that you are wasting your time. Some of them may do more than that to try to undermine your efforts. Remember that such an attitude is *their* problem, not yours. In Chapter 10 you’ll find plenty of tips on how to get in the right frame of mind to move ahead without making it difficult for yourself.

You’ll probably find yourself changing a good deal more than your child’s diet if you choose to follow the plan completely. Whether you’ll want to do this or not is again for you to decide, but presumably what you’ve been doing so far hasn’t been working too well, or you wouldn’t still be looking for new solutions. So isn’t it worth trying something else? Something that is completely natural, involves no drugs and no special equipment, and costs you very little? You’ve already taken an important step by picking up this book.

Hopes and Promises

One other thing I want to make very clear at the outset is that this book is not about ‘miracle cures’. We are all prone to believing all kinds of things that turn out not to be true, simply because they fit in with what we want to believe. It’s called ‘the triumph of hope over experience’ and we are all prone to it. Our society tends to emphasize the ‘quick fix’, and the wonders of modern technology have led to a situation in which we’re surrounded by all kinds of goods and services – from electronic gadgetry to air and space travel – that seem to ‘work like magic’.

Amazing brain-imaging techniques can show you how your brain lights up when you solve a problem; global satellite navigation systems can talk you through the narrowest side-streets in a foreign country; guided missiles are said to need no human intervention to find their target; wonder drugs will apparently rescue men's failing sex lives and turn them into super-studs overnight. Yes, really. Advertising has become so clever and so insidious that we are all prone to falling for promises of things that either couldn't possibly be delivered – or which come at a cost (often a hidden one) that none of us can actually afford.

Against this background, we are all too easily fooled into parting with good money for some miracle treatment that will reverse ageing, cure baldness, allow us to eat all that we like and still lose weight, and more. If you've already fallen victim to promises like these, you are certainly not alone. But perhaps it's time to try a different approach. The plan set out in Chapter 11 really needn't cost you much money, and in fact may turn out to save you a great deal.

Good nutrition (and the avoidance of toxins as far as possible) can of course only provide your child with the basic foundations for better mood, behaviour and learning. Many other factors are important, including general health, physical activity and sleep, as well as a wide range of social, educational and cultural factors. Could parenting skills or the family situation be in need of a rethink? What educational input is your child really getting – and from whom? Does your child seem to be more influenced by his friends, or by what's on TV, than by anything you or his teachers say or do? Children are exposed to all kinds of influences in our modern age – many of them quite pernicious⁶ – so your child will need all the help you can give him or her. Only minimal guidance on these issues can be provided here, but plenty of good books have been written on these subjects. You'll find some of these in the References and Resources chapter, which also includes helpful sources of information.

'Miracle cures' are certainly not common, but when the dramatic changes that can attract this label do happen, they usually reflect something very important – and often very simple – that has hitherto been overlooked. The story of Patrick, an eight-year-old

boy whose moody and defiant behaviour had his loving parents at their wits' end, is a good case in point.

A highly intelligent and sensitive child, Patrick suffered unpredictable mood swings and temper-tantrums. He was underachieving at school, found it hard to make or keep friends and knew how to manipulate his parents and siblings. Most of all, he was clearly unhappy. Talking about the situation with him just seemed to make things worse.

Patrick also looked unhealthy and tired when I saw him, but, with his mother's help, we gathered some basic information and drew up a plan that he was willing to try. It quickly turned out that he was very intolerant to cows' milk and anything made from it. Once milk products were removed from his diet, Patrick's 'moody' spells simply vanished.

His mother Sarah wrote to me: 'Patrick is a transformed child following your diet. His aunts and uncles just couldn't believe the change in him after such a short time. They want to know how I did it. I can hardly believe it myself, but I will never be able to thank you enough. Keep up the good work.'

The media are very fond of 'miracle stories', of course – and one superb example of how to influence public opinion with no more than anecdotes came from the BBC TV series *Children of Our Time*. Children born in the millennium year are monitored at intervals for the purposes of this popular TV series. Early in 2004, one episode focused on just two of these children, who had been showing serious behavioural problems. 'Miraculous' improvements were reported after their diets were supplemented with fish oils. It certainly made great TV – and the Internet bulletin boards were buzzing for some time afterwards. Sales of all fish oils (many of dubious quality and content, and some quite unsuitable for these purposes) went through the roof, and I found myself on the receiving end of yet another deluge of enquiries from the media, public and professionals, as the only UK scientist who'd actually done controlled trials in this area. As the more responsible journalists pointed out (and as I tried to emphasize), there were many other possible explanations for the improvements shown by these two particular children.

Whenever possible, try not to base any important decisions you make on purely anecdotal evidence. If we want to be able to predict anything with reasonable certainty, we need to adopt ‘scientific methods’.

To be confident that any treatment really does ‘cause’ positive changes, we ideally need what are called ‘randomized controlled trials’ (RCTs), as explained in the Appendix, page 375. These are very difficult to carry out, however, and are in some cases just not feasible. In these cases, other evaluation methods have to be used. Even then, the best we can do is to assess probability. Your child may be different from the ones studied. In short, there are no miracles and no guarantees, I’m afraid.

Having said this, ‘scientific’ is the word to describe many of the case studies carefully carried out by parents and practitioners I’ve met. Often, these people have observed and experimented with dietary changes for years, and many of them have done so despite the scorn of the so-called ‘scientific establishment’. Although some of them may be misguided or plain wrong in what they have come to believe, it is my view that we would do well to pay more attention to some of their ideas, as I’ve always tried to do. In many cases it’s their insight and observations that have led to some extraordinary breakthroughs, opening up new and highly fruitful lines of scientific investigation.⁷

Whom and What Can You Believe?

Most of the parents I see have already consulted many other specialists and experts in their search for some effective solutions to their child’s apparent difficulties in mood, behaviour or learning. Some of the advice they’ve received has been helpful; some of it has been anything but. Many have also read numerous ‘self-help’ books and articles from magazines or newspapers, and these days a good proportion will also have spent hours and hours on the Internet trying to find out how to help their children. The feedback I usually get is that when it comes to food and diet, the amount of conflicting information leaves most people totally confused. People ask, ‘What am I supposed to believe when so many people are telling me such different things?’

Well, to start with, just ask yourself, 'Who really benefits if I believe this?' Apart from weighing up carefully the potential risks and costs of any course of action, the best advice I can give you is: always consider who will actually gain from your believing any information you are given. Sadly, I've come across a great many unscrupulous companies and individuals who are happily making money for themselves by exploiting parents' desperation.

Rule number one: don't be too gullible. Always think first about whether anything you are recommended could actually do your child harm, but also be particularly wary when it comes to parting with your money.

Companies' Influence Isn't Always Obvious

You can of course get plenty of information and advice about food and diet for free. Quite enough to drown in! In these cases you want to ask, 'Do the people giving me this information really know any better than I do?' Let's start with the newspapers and magazines. Some are more reliable than others, but sadly, very few allow their journalists time to research a story properly.⁸ Deadlines are the name of the game. Press releases, for instance, are often picked up and turned into articles without anyone checking the sources or their credentials. Basically, the fact that you 'read it in the papers' or 'saw it on TV' is no guarantee that it isn't just a cleverly disguised advertisement. I'm sorry to say that much, if not most, of what passes for 'news' on food and health in the media is likely to have come from some company that stands to make money if you'll only believe what they're telling you. Remember, virtually all papers and magazines and most TV channels are supported by advertising revenues, either directly or indirectly.

It's well over 10 years now since my own research first started making headline news, and if it hadn't been for my own personal experience of the media I really wouldn't have believed the extent to which what you see or

hear through these channels is influenced by companies who will benefit when you believe their stories. The food and drinks industry is a massively powerful force to be reckoned with. Quite apart from the direct advertising that they do – which is powerful enough – they exert a huge degree of less visible control over the information you are given and the choices available to you. The name of the game for big companies is sending out press releases, holding press conferences, wining and dining journalists and hiring the experts they need to back the stories that will benefit them.

‘I was looking at websites which talked about the effects of sugar substitutes, as I’d heard that some of them are bad for you. One site in particular did a very good job of listing everything wrong with artificial sweeteners ... but it was only later that I found out that this site was hosted by a sugar company! Now I know why they said nothing at all about avoiding sugar itself.’ – Sonia

Worse still, the enormous profits that the big food and drink companies make can allow them to ‘buy’ only the research they want to see done (as also happens with pharmaceutical products, of course). And if they know they aren’t going to like the results, they’re just not going to do the study. Truly independent research looking into how food can affect behaviour really has been extraordinarily limited, because, apart from a few charitable trusts, nobody has been prepared to fund this kind of work. There’s just no profit in it for the companies – and Government agencies and other conventional funding bodies have been either too blind, too conservative, or maybe too much ‘under the influence’ to look into this rather important area. As well as the conventional food industries, we have the ‘diet industry’, the ‘health food industry’ and the ‘food supplement industry’. All of them are in the business of making money, whatever else they may tell you. As long as you keep this in mind, you can actually get a lot of useful information from these sources – but always take care to read around, weigh up the different points of view, and make your own decisions.

Read around, weigh up the different points of view, and make your own decisions.