

CFS/ME: the 'Getting Better' Regime

The doctor

Dr David Geoffrey Smith qualified in medicine in 1969, at the same time, gaining an honours degree in neurophysiology. While working as a GP in Essex during the 1970s, he began to see patients suffering from a disorder dubbed 'Yuppie flu' by the media and largely dismissed as hypochondria by the medical profession. These early consultations led Dr Smith to question the explanation from his medical training (still the view of many doctors today) that anyone with a viral infection who is not suffering from glandular fever and who continues to be ill after six weeks, is actually suffering from depression.

He became a GP specialist in CFS/ME and began treating patients at his Essex clinic - eventually several hundreds of them over the following three decades, all referred by several NHS trusts mainly in the South East of England.

In 1978, Dr Smith was appointed Medical Advisor to the ME Association and in this position engaged in research to find the 'ME virus', in collaboration with many of the leading academics in the field, frequently in the full glare of the media. In 1990, however, he suddenly changed his mind about the disorder when new research findings convinced him that there is no 'ME virus'.

As an independent researcher and practitioner, following the break with the ME Association in 1990, Dr Smith went on to develop a unique and complex therapeutic regime based on the conviction that the physiological symptoms of CFS/ME are the result of an over-active immune system, permanently turned on by excessive stress that can be physiological (including viral) or psychological. Once entrenched, CFS/ME becomes a sleep disorder where the brain's 'battery charger', normally renewing mental and physical energy at night, fails to work properly - resulting in the well-known CFS/ME symptom of waking unrefreshed from sleep.

These observations led to the development of a unique approach to treating CFS/ME, using a combination of medication along with a graded activity regime using the key measure of waking refreshed from sleep. The treatment is not a quick fix, with patients warned to expect to devote their lives to recovery for up to two years.

In 2003, Dr Smith co-published peer-reviewed research in the journal, Archives of Childhood that demonstrated the efficacy of this regime with a group of children. He has also kept regular audits of the patients he has treated showing a high success rate. An active patient group is highly supportive of his work. However, the programme remains little known outside this devoted community of patients and their families.

Now close to retirement, Dr Smith has commissioned this booklet, describing in detail the therapeutic regime and how it differs in key points from that recommended by the NICE (National Institute of Health and Clinical Excellence) guidelines. The aim is to bring to the attention of healthcare professionals, patients and their families the details of a successful, complex therapeutic regime that Dr Smith is convinced can be replicated provided there is understanding of its purpose and commitment to its challenges from health professionals, patients and their families.

The disorder and its treatment today

CFS/ME is a chronic disabling disorder, affecting around 250,000 people in the UK, including up to 30,000 children. Symptoms usually begin suddenly and include post-exertional fatigue, chronic exhaustion, unrefreshing sleep, muscle and joint pain, sore throat, headaches of a type not previously experienced and difficulty with concentration. They normally last for several years, with a pattern of fluctuation that involves a sequence of good and bad days. As such it's one of the leading causes of time off work and school or college, significantly disrupting lives - sometimes permanently but more commonly resulting in sufferers adjusting to reduced levels of activity.

People who get CFS/ME are drawn from all social classes and ages though women in their late teens to mid-thirties account for a majority of sufferers - as do those with distinct personality traits including perfectionism, chronic anxiety, obsessive compulsive disorder, an obsession with accuracy and precision and a tendency to be controlling, all characteristics that are likely to have been inherited or acquired from one or both parents.¹

While there is little evidence as yet that the disorder is genetic, it is known to be significantly more common in developed Western countries including Britain, Northern Europe, Australia, New Zealand, South Africa and North America. 'One explanation for this could be the work ethic that is the cultural norm in these countries,' says Dr Smith.

A further characteristic of the disorder is an uncomfortable relationship with the medical profession. Doctors frequently describe patients with CFS/ME as being uncooperative and non-compliant while sufferers are often highly critical of the therapies they are offered.

¹ "Report of the Working Party on CSF/ME to the Chief Medical Officer for England and Wales" (PDF). Department of Health. January 2002

At the root of the problem is the fact that a research effort over several decades has failed to link a set of disabling symptoms with any physiological abnormalities. 'Essentially CFS/ME is a disorder with big symptoms and, apparently, nothing to show for it,' says Dr Smith. As the National Institute for Health and Clinical Excellence (NICE) puts it: 'Many different potential aetiologies for CFS/ME, including neurological, endocrine, immunological, genetic, psychiatric and infectious, have been investigated but the diverse nature of the symptoms cannot yet be fully explained'.

This tension is reflected in the different names by which it is currently known: ME (myalgiv encephalomyelitis), CFS (chronic fatigue syndrome), CFS/ME as well as ME/CFS (This booklet uses the term CFS/ME, the term used by the NICE, throughout).

As far as treatment is concerned, the NICE guidelines recommend only two therapies: cognitive behavioural therapy (CBT) and graduated exercise therapy (GET) both of which are largely associated with psychological disorders, particularly depression. Defenders of these guidelines insist that there is nothing derogatory about this. 'People really do believe that any connection with psychiatry is tantamount to saying there is nothing wrong with you, you are making this up, go away, you are not really ill,' Professor Simon Wesseley, a psychiatrist at Kings College Hospital, told Radio 4's Today programme recently. 'That's profoundly misguided. They fall victim to the label, and believe that the mere involvement of psychiatry denigrates them and denigrates the condition.'²

The NICE recommendation for CBT and GET is now supported by a large, much-quoted clinical trial, demonstrating that the two therapies provided 'some' benefit for people with the disorder whose main symptom was fatigue. However, the evidence from this trial suggests that the impact of these therapies is modest. Further, says Dr Smith, it's often forgotten that these treatments were first shown to be effective in patients who had been referred to Professor Wessley's clinic at Kings College Hospital - and were therefore almost certainly tertiary referrals.

'By the time most people with physiological symptoms are seen by a psychiatrist, they are likely to have done the rounds of other specialists and probably been ill for many years. They may well have lost their jobs and their self-esteem, too often along with their homes and families. It's little wonder if Dr Wesseley then went on to find that they responded to therapies that are known to be effective for depression,' says Dr Smith.

'Of course there is a place for treatments that combat depression and other psychiatric disorders. But there needs to be a distinction between therapies that are useful in combating the consequences of CFS/ME and those that actually treat the disorder itself,' says Dr Smith.

²http://news.bbc.co.uk/today/hi/today/newsid_9550000/9550947.stm

Meanwhile, a minority of patients pursue a campaign of harassment against academics in the field involving online abuse, personal threats and trumped up complaints to the General Medical Council, a campaign that is 'stifling scientific progress', according to a recent BMJ editorial.³ Indeed, Professor Simon Wessely of the Institute of Psychiatry abandoned research into the disorder in 2002, has abandoned research into CFS/ME to work with war veterans suffering from Post Traumatic Stress Disorder, saying famously: 'I now go to Iraq and Afghanistan where I feel a lot safer'.

The ME Association, while condemning the behaviour of extremists, insists that patients have a 'justifiable complaint which is about the fact that there has been little Government-funded research into the bio-medical causes of the disorder,' Dr Charles Shepherd, the ME's medical director told the BBC recently. 'At the moment we have the NICE guidelines recommending only psychiatric treatments which don't work or make them worse. That's the context to the anger,'⁴

The search for the ME virus

For many people, the case for a viral explanation for CFS/ME was made long ago - and all that remains is the small matter of finding the rogue virus. Indeed throughout the 1980s, the clinical research community was largely united in the belief that CFS/ME was indeed a chronic post-viral disorder.

As Medical Officer to the ME Association from 1977 to 1989, Dr Smith was closely involved in this research. Collaborating with leading scientists in the field, he recovered several different live viruses from the guts and muscle tissues of people who had suffered from the disorder for several years- apparently causing demonstrable physical abnormalities in muscle tissue that then led to distinct CFS/ME symptoms with a 'glandular fever model' easily distinguishable from that triggered by chickenpox virus.

Around one in five of cases appeared to be caused by members of the enterovirus group including Coxsackie A, Coxsackie B and ECHO virus as well as three polio viruses. A further one in four cases involved antibody responses that suggested a reactivation of a previous infection by Epstein Barr, the common virus that causes

³ Ending the stalemate over CFS/ME <http://www.bmj.com/content/342/bmj.d3956>

⁴ http://news.bbc.co.uk/today/hi/today/newsid_9550000/9550992.stm

glandular fever, among other infections.⁵

These studies were published in peer-reviewed papers and widely reported in the media. 'I believe that various abnormalities and similarities within defined subgroups show there is something going on, something immunologically or virologically active, with increasing evidence of a persistent virus effect,' Dr Smith wrote in an article for the GP newspaper, Pulse, in 1989.

Yet just a year later, Dr Smith was to radically alter this view. The change of heart began in the spring of 1990 when Dr Smith spent ten days studying with Professor Richard Edwards of the Department of Medicine at Liverpool University, an international expert in the way that skeletal muscle obtains and uses energy. While particularly focusing on muscular dystrophy, Professor Edwards had recently published groundbreaking research showing that people with CFS/ME had no demonstrable fatigue in their muscles.

'I realised this research was probably very significant,' recalls Dr Smith. 'If true, it meant that the presence of viral particles inside the muscle had no demonstrable impact on the muscle's ability to produce power or work output. In other words, the viruses recovered from the muscle tissue of CFS/ME sufferers were not the cause of that person's muscle fatigue.'

He contacted Professor Edwards and arranged the visit - at the end of which he recognised that muscle fatigue could not be a post-viral symptom. Other research findings that had been put to one side took on greater meaning: the fact that viral particles had been found in only around one in three CFS/ME patients studied; a small study documenting evidence of enterovirus antibodies in the blood of a group of *healthy* Epsom schoolchildren, almost certainly relating to an enterovirus outbreak in the school two years earlier.

If viral particles in muscles had no abnormal impact, could this be true of viral residue found elsewhere in the body? Was it, in fact, quite normal, even common, for viral particles to remain in the body for months, even years without causing damage or indeed having any effect whatsoever?

Dr Smith had been commissioned to write a paper for the Royal College of General Practitioners' 1990 Yearbook describing the research that he had been conducting over the past ten years with the support of the ME Association. He had planned to document what he and other researchers believed were clear links between particular viruses and particular post-viral symptoms, most notably between enterovirus infection and muscle pain and between Epstein-Barr virus and fatigue.

Yet the Liverpool visit had turned that research on its head; the task of writing the article, originally an exciting opportunity to update the GP community about the latest research in the field, proved 'agonisingly difficult'. 'Having watched Dr Edwards' experiments, I could no longer believe that a patient's symptoms made it

⁵ Smith, DG, Crawford D Journal of Infection 1989: *Active Epstein Barr Virus Infection in Post-viral Fatigue Syndrome*.

possible to identify the virus that had caused the disorder,' he recalls.

Dr Smith decided to test this view with the help of Dr Timothy Peters, head of the Department of Cellular Research at Northwick Park Hospital in London. Together they came up with the plan involving 12 patients who between them had been shown to have four different types of viral residue and antibodies.

Dr Peters then invited a group of doctors who still supported the post-viral explanation for CFS/ME including consultant psychiatrists, neurologists, immunologists and physicians to investigate these patients in whatever way they wanted in order to identify the virus responsible for each patients' symptoms - something none of them achieved.

It was a 'road to Damascus' moment for Dr Smith. 'If these doctors could find no discernible difference between symptoms caused by different viruses, then all the patients must be suffering from the same disorder. As you can't have one illness caused by a number of different viruses, then the virus may be a trigger for the disorder but it cannot be the cause. That was the only conclusion that I could take from this experiment.'

A number of doctors changed their views around this time, many concluding that a non-physiological disorder must be psychological. In 1988, Professor Edwards had commented: 'A primary role for psychiatric/psychological factors was deduced from a formal comparison between CFS and myopathy (muscle disease) patients'. In 1992, two years after the Northwick Park experiment, Professor Wessely co-authored a paper published in the BMJ contesting the view that CFS/ME was a post viral disorder - and calling for the World Health Organisation to reclassify it as a psychiatric disorder.

This suggestion has been widely followed. In 2007, NICE recommended psychological therapies as being the only evidence-based treatments for the disorder - with a mini-review by NICE in 2011 confirming that CFS/ME is 'a psychological disorder with physical manifestations'. In April 2008, the Royal College of General Practitioners classified CFS/ME as a 'mental health disorder'.

For most sufferers and some doctors, however, the newly emerging evidence was an irrelevance. The ME Association continued (and continues) to lobby for funding to find the ME virus. Another organisation, the CFS Research Foundation, launched in 1992, was set up to raise such funds and support researchers who continue to investigate the muscle biopsies of CFS/ME patients.

Over the years, researchers have published evidence of a variety of suspect viruses including Coxsackie B3 virus and enterovirus nucleic acid. There are persistent claims that large doses of anti-viral medication (gamma globulin can cure CFS/ME by eradicating parvovirus B19 and Epstein Barr retroviruses and that antibiotics can be effective by) Chlamydia infection as well as Lyme Disease. Indeed, thriving private practices offer a range of poorly evidenced treatments such as chelation therapy, 'enzyme potentiated desensitization vaccine', anti allergy treatments and intravenous anti viral medication.

In 2009, scientists at the Whittemore Peterson Institute in California, USA reported that a retrovirus called XMRV had been found in 96 per cent of patients with CFS/ME, compared to just four per cent of the normal population - along with the suggestion that the disorder could be successfully treated with anti-retroviral drugs. A major bid to replicate the study's findings failed, however - and there is now evidence that the finding was caused by laboratory contamination.

For Dr Smith, the change of heart was momentous and he overcame initial dismay at what seemed like a decade's wasted effort to quickly understand that the finding was good news for patients. 'There was this huge expectation that an anti-viral pill will be discovered that would cure CFS/ME. But that was never going to happen, there still is no medication that can penetrate cells and kill a persistent viral infection,' he points out. 'The only treatment that we could recommend was rest,' he says. He recalls an appearance on daytime television in the late 1970s with Professor James Mowbray, then consultant neurologist at Charing Cross Hospital, where both clinicians encouraged patients to take to their beds. 'It's not a good memory as we now know that rest on its own is probably the worst possible response to the disorder,' he says.

However, in the years following his dismissal from the ME Association, Dr Smith was able to develop a therapeutic regime for acute-onset CFS/ME that was to prove dramatically effective in treating - even curing - the growing number of NHS patients with the disorder that he saw at his Essex clinic. Taking on board all the research findings of the previous decade, the treatment also encompasses what Dr Smith regards as one of the most important areas of new research of the last two or three decades.

A different approach

Psychoneuroimmunology (PNI) is the study of the interaction between personality and the neurological and immunological abnormalities that cause much, perhaps most chronic illness - with a series of breakthroughs in our understanding of human psychology and physiology.

First is the new understanding of the important role and interactive nature of the immune system. 'The medical model of my early years as a doctor regarded the immune system as an autonomous system, repelling viral and biological attacks on the body in a mechanical way. But over the last two decades or so, scientists have mapped the way the immune system is affected by hormones and other chemicals secreted into the blood by endocrine glands under the control of the brain and the central nervous system. And this influence is bi-directional,' says Dr Smith.

'Science has shown that we are our immune system in a very important sense. While the loss of a leg won't change fundamental human nature, even small changes to the immune system will affect an individual's personality - our way of thinking about and approaching life - quite dramatically. In other words, our thoughts exert a significant influence over our physiological health just as our health influences our thinking processes.

'We all know this intuitively and there is now evidence of how this two way process occurs in a number of chronic disease pattern including eczema, asthma, alopecia, irritable bowel syndrome, headaches and migraines and high blood pressure as well as some cancers. Indeed, it's no surprise that the immune system is now increasingly under scrutiny by researchers into CFS/ME.'

A further development is the increasing interest in psychology and immunology among researchers specialising in neurological disorders, with growing evidence that there is no clear distinction between disorders regarded as physiological (neurological) and those seen as psychological.

'To me, this was the crucial conclusion to be drawn from the Edwards study showing that viral residue in muscle tissue did not have an impact on muscle strength. This finding meant that the chronic fatigue experienced by people with CFS/ME must be rooted in an abnormality of the central nervous system (the brain and the spinal cord) with the rest of the body functioning normally.'

When researchers at Bristol University reported that chronic fatigue was a near universal symptom of multiple sclerosis, Dr Smith took a group of his own CFS/ME patients to visit the department. 'To me, the finding seemed to be important in understanding CFS/ME better. And so it proved. It was useful to learn directly from these researchers that the way in which fatigue occurred and progressed during physical activity in people with MS was exactly the same in my CFS/ME patients,' he says.

The third strand of this complex equation is the impact of behavioural factors, particularly stress, on both brain function and the immune system, in particular the impact of negative stress on health, the subject of much ongoing research at present.⁶

‘We know that people respond to life events such as death, disease, trauma, assault or abuse in very different ways,’ says Dr Smith. ‘Take a bereavement, for instance. Some people respond to a bereavement by engaging in the grief process and then coming out the other side feeling entirely positive about life. Others respond negatively, barely able to live a normal life again or burying their grief deep inside and never mentioning or confronting it,’ says Dr Smith.

While it’s widely accepted that this negative response triggers mental health disorders such as anxiety and depression, it’s less well understood that it is also likely to lead to a deterioration in physical health. ‘On the one hand, people who are stressed are more likely to be run down and unfit - but it’s more than that,’ says Dr Smith. ‘Researchers in the field of psychoneuroimmunology have shown that the key characteristic of negative stress is the feeling of being out of control, that the factors responsible for the stress are insurmountable.’

A classic ‘case study’ to highlight the impact of negative stress compares two experiences of a 200-metre swim in the icy waters of the Arctic Ocean. When taken as an extreme leisure pursuit, the experience will be exhilarating, probably health-promoting. But when someone is forced to swim the same distance, after accidentally falling off a liner, the experience will almost certainly be damaging to health, possibly injuring or even killing the person. ‘These two responses to what is in effect the same experience demonstrates graphically the adverse effect on physiology of negative stress,’ says Dr Smith.

Several studies have come to the same conclusion. A recent report in the Journal of Advanced Nursing showed that patients admitted to hospital with obstructed heart arteries are three times more likely to experience complications in hospital if they feel they are not in control of their condition, for instance.⁷

Together, these different areas of research contribute to an understanding of how CFS/ME develops as well as how it should be treated. The most important factor, says Dr Smith, is the evidence that CFS/ME almost always follows a period of intense negative stress - something borne out by his own experience with patients.

⁶ <https://www.bbc.co.uk/labuk/experiments/stress/> - a link to an online stress test, designed by Professor Peter Kinderman of Liverpool University and made available to the wider wider public via a recent Radio 4 programme, All in the Mind presented by Claudia Hammond. As well as feeding into the research programme, the test is designed to help participants understand what’s behind their response to stress- and how to manage it more positively.

⁷ http://www.eurekalert.org/pub_releases/2012-09/w-pca091312.php

'The vast majority of my patients, probably 99 per cent, have had a significant history of major negative life events prior to their illness, almost always multiple, highly destructive and persistent. I haven't seen anybody who has been under negative stress for just a week or a month getting CFS/ME; the pressure is usually six months, one year or sometimes lifelong,' he says.

This period of stress may involve emotional or psychological trauma leading to chronic anxiety or depression. More common is physiological stress: people may have been severely run-down or not sleeping well and waking un-refreshed. They may have undergone a series of operations or even been significantly exposed to toxins. Perhaps the largest group recalls being unusually susceptible to colds, sore throats and flu. Sufferers say that the viral illness is sufficiently severe and prolonged to require them to take to their beds for several weeks rather than the normal week or ten days, though it's only when these symptoms continue for six months or more that the person can be diagnosed as suffering from CFS/ME. 'But it's the stress that is the consequence of the viral infection that is responsible for the disorder rather than the virus itself,' he says.

Dr Smith is convinced that what makes this experience of stress a negative one is the controlling personality traits that have been shown to be common in people with the disorder 'Being obsessively perfectionist and picky about details can be a strength that brings out peak performance. But it's also known to raise the risk of developing CFS/ME, particularly following an infectious illness that itself occurs at a stressful time,' he says.

How CFS/ME develops

Dr Smith believes that psychoneuroimmunology provides the clearest explanation of how CFS/ME is both triggered and maintained. 'There is solid evidence, replicated in more than 100 studies, that a blood test carried out on CFS/ME patients will almost always demonstrate an abnormal immune response, a non-specific anti-viral response showing that the immune system is permanently turned on - that it appears to be fighting a virus, with an increase in natural killer cell activity. And this happens whether or not there is a virus present,' explains Dr Smith.

This is quite different from the normal healthy response to a viral infection where the brain switches on the body's 'innate immunity', the immune system's first line of defence against an invading organism - and then turns it off when the virus is destroyed.

'Innate immunity activates white blood cells which trigger a multi-factorial inflammatory cascade that pervades the whole body causing the symptoms of being unwell. Pain receptors are sensitised and the person experiences a range of other symptoms including lethargy, aches, pains, fatigue and an inability to concentrate. These symptoms have got nothing to do with recovery as such. They simply immobilise the sick person, keeping them safe and stopping infections from spreading,' he explains.

In a healthy person, the antibody response remains active only until the body has been able to destroy the virus, a process that normally takes between a week and ten days. At that point, the body detects the fact that the anti-viral response has been successful - and turns off the innate immunity, the symptoms clear up and the person gets better.

'It's this process of turning off the innate immunity that becomes dysfunctional in people with CFS/ME and other illnesses,' explains Dr Smith. 'There's now evidence that long-term negative stressors can cause the immune system to over-react and continue to be switched on for months or even years, long after the stressors, including the virus infection, have cleared up and disappeared,' he says.

This abnormal process explains why people who appear to be recovering from the disorder can be suddenly overwhelmed by what feels like a new viral infection: suffering sore throats, tender glands, aches and pains and feeling hot and cold and sweaty. 'This feels like flu - but it's not. It's the immune system that is chronically aroused switching itself on again, normally because the person has overdone things. That's why the key to recovery is the restoration of the healthy functioning of the immune system.'

This complex interactive model of ill health points to the way forward for a cure, Dr Smith says. 'Treatment of this disorder must be aimed at reducing levels of negative stress while at the same time as regulating the immune system using behavioural strategies backed up by proven pharmacological interventions,' he says.

At the heart of this psychoneuroimmunological approach is the importance of two interacting personalities: that of patient and doctor. 'It's essential that the patient takes responsibility for getting better, principally by learning to understand, and where possible avoid, the negative stressor factors in their lives. At the same time, it is the responsibility of the caring professional to engage the patient's full cooperation in recovery with the aim of reducing the level and length of suffering,' he says.

CFS/ME: the experience

The well known symptoms of CFS/ME include: severe fatigue, muscle pain, sore throat and difficulty getting to sleep, along with brain fog, difficulty in concentration, difficulty in reading or studying as well as depression, anxiety, panic attacks, mood swings and irritability.

Alcohol intolerance, a rarely mentioned symptom, is present in three out of four cases, according to Dr Smith. 'The degree of alcohol intolerance can be remarkable. My experience is that even a single alcoholic drink can cause severe hangover symptoms in someone with CFS/ME. Most of my patients have stopped drinking entirely -and I don't know of any other illness that makes social drinkers stop drinking, indeed it's far more common for disorders such as depression and anxiety to increase alcohol consumption. There can also be increased intolerance to food including wheat and dairy as well as an extreme sensitivity to chemicals including perfume, car emissions and standard drugs and medications, all of which have an effect on the central nervous system,' he says.

Nel: 'There was a gradual deterioration, to the point where for several months my activity declined to days of lying horizontally in front of the television and crying in desperation when it was necessary to leave the house'.

Margaret: 'I couldn't go out in a wheelchair unless it had a head and foot rest'

Richard: 'When he was eight, he failed to fully recover from a severe attack of tonsillitis, suffering for months with sore throat, tummy ache, nausea, dizziness, severe physical exhaustion and nightmares which left him sweating and disorientated - to the point where he could only manage two lessons in school for a couple of days a week.'

John, 24: 'I have suffered from CFS/ME for over ten years - and now believe that I will never recover.'

A key characteristic of CFS/ME, and the one to which Dr Smith believes the greatest attention must be paid, is the widely recognised 'boom-bust' cycle. 'Almost everyone involved in treating this disorder is aware that their patients face this risk, that an attempt to build on signs of recovery by increasing levels of activity will trigger a severe relapse.

'Doctors generally see this cycle as a trigger that causes symptoms to become worse temporarily. I am convinced it perpetuates the illness itself and that every time

someone with CFS/ME overdoes it today, they suffer extra symptoms tomorrow as well as extra days on the end of the illness. So if you have been ill for a year and do too much one day, you will not just suffer fatigue, pain and low mood the next day, you will also put an extra day on the end of your possible recovery time. And the longer you have CFS/ME, the more days you will add on to your illness. And if you keep on behaving in this way, recovery becomes like chasing rainbows: you never get there'.

This warning, he says, needs to be taken seriously because the length of time that symptoms last, rather than simply the symptoms, worsen disruption and disability. 'CFS/ME symptoms that last for under six months are largely seen as a normal 'healthy' response to an infection, an extreme but finite episode of flu, glandular fever or another viral infection. And this explanation still seems to work and the disorder is seen as manageable for up to two years, provided the sufferer has the support of family and friends and the health care professions,' says Dr Smith.

The real problem begins when this anticipated recovery is not forthcoming. 'It's at this point that family, friends and doctor begin to doubt the accuracy of the diagnosis and the support wavers. The family can find it very difficult to understand how someone can be relatively well one day and go shopping and appear to be quite normal and end up in bed the next day. People begin to comment: Isn't it time you were better?' Even your doctor may wonder aloud whether 'you couldn't get better if you really wanted to'.

Further, once entrenched, there is an inevitable build-up of co-morbidity: loss of drive, enthusiasm and confidence along with feelings despair and depression along with loss of fitness and muscle disuse. 'You cannot be fit with CFS/ME. And as the years go by, depression becomes a prominent diagnosis, with a small but observable raised risk of suicide and, as in one recent case, a risk of being killed by a parent in a mercy killing,' says Dr Smith.

Dr Smith's own research shows that prolonged illness is a feature of CFS/ME. A retrospective survey of 1500 patients with acute onset ME-CFS showed that fewer than one in seven (200) recovered within two years. The vast majority took an average of four years to recover, with one in five remaining ill four years later - with many of these wheel chair bound and excluded from daily activities outside the home such as school, college or work.

'Psychiatric symptoms and muscle disuse atrophy acquired during the course of the illness can cause long-term, even permanent damage. For many people, this continues to be worsened by misguided attempts to push themselves at every opportunity, sometimes, perhaps frequently, exacerbated by similar advice from their doctors. The tragedy is that these people could have got better much more quickly if they had been diagnosed early and got the right advice and medication at the right time,' he says.

The Getting Better regime

Naomi's story

In January 2006, Naomi, now 21 and a busy, happy second year English and Drama student, started to have repeated sore throats, felt achey after PE lessons and struggled to climb stairs. A high achiever, she'd been stressed at school but dismissed the symptoms as a sign that she was unfit. 'By May that year, I kept falling asleep while on work experience during half term - and when I went back to school, I knew something was wrong. My whole body hurt and even holding a knife and fork was painful.'

She was referred to a paediatrician in November who diagnosed CFS/ME and referred her for physiotherapy. 'She told me off for having 'pyjama days' and instead said I should get dressed as normal and a 'pacing' regime. I should start by walking to the end of the road and keep increasing the length of the walk every couple of weeks. I never did it. I couldn't see the point of it - it was just very depressing and seemed to suggest that this was going to be my life.'

A few months she was referred to an occupational therapist who informed Naomi that 'there was a limit to the time she could give me if I didn't follow her instructions. She went on maternity leave - and I waited a whole year for her to come back and then telephoned her to ask for another appointment. She just laughed and said there was nothing she could do.'

Naomi got 8 GCSEs and in September 2008, returned to school to try to start the sixth form. 'They insisted I do 3 A levels which was too much. And there was no understanding from friends and teachers of how I was feeling. I quit the school and was spending more and more time in bed, sleeping during the day and lying awake at night, my symptoms getting worse all the time. It was terrifying.'

She was referred to Dr Smith by her GP in April 2010. 'My parents came with me to the first appointment and we all liked him, he explained his scientific theories without talking down to me at all which I appreciated. I had very low expectations of what might come of it - but right from the beginning, I was interested in what he was saying, it felt very different from the other people I'd seen,' she recalls.

A first step was establishing a healthy sleep pattern. Dr Smith prescribed the antidepressant, amitriptyline. 'He explained that I should go to bed at the same time every night and get up at the same time in the morning and stop sleeping during the day. It worked immediately. I started going to bed at 11 and waking at 9am. And once that was established, he put me on Prozac to give me extra energy and end my low mood - which really was essential. Together these

drugs made a huge difference. You can't make any changes if you are feeling tired and miserable.'

Other suggestions were more difficult to follow. "He told me to give up TV and going on my laptop - the only things that would cheer me up and all I did most days. It was very difficult and for months I didn't take any notice at all. It was only when I started to feel better that I realised he might have a point and I eventually started listening very carefully to what he said.'

Within nine months of starting the programme, Naomi's family told they could see an improvement in her health. 'I couldn't see it. I wasn't feeling better, and that's what I wanted.' But the improvement continued. 'The real marker was in September 2011 when I went to a dance class that lasted an hour and a half. I'd decided that I would do the first half hour and watch the rest - but I got through to the very end. And I felt fine. I was ecstatic!'

Naomi believes she has made a 100 per cent recovery and is now thoroughly enjoying her life as a university student. 'Dr Smith's patience, willingness to explain and to treat me as an individual whom he believed could recover - all that helped. He had time for me and I feel I've had a very lucky escape.'

A CFS/ME specialist will normally diagnose the disorder after excluding other disorders including arthritis, MS, thyroid and diabetes. Once the diagnosis is completed, the Getting Better regime should begin. Here is a step-by-step guide to the recovery programme, with the relevant NICE guideline at the start of each step.

1. The first appointment

NICE: makes no specific mention of the content of the first appointment or whether anyone should accompany the patient. The guidelines underline the importance of good communication between healthcare professional and patient and advise that carers and relatives should have the opportunity to be involved in decision-making about the patient's care and treatment unless the patient specifically excludes them.

Getting Better: views the first appointment as a crucial stage in recovery from CFS/ME, offering the clinician an unrepeatable opportunity to engage the patient along with a relative or friend in accepting the Getting Better protocol.

'There is no quick fix to getting better and while medication and other therapies play a key role in the regime, recovery is not a matter of sitting back and taking a pill. On the contrary, getting better involves following challenging instructions over several months and perhaps years. It requires self-discipline, patience, perseverance and a thorough commitment to the Getting Better regime,' says Dr Smith.

'The people whom I've been unable to treat successfully have largely been unable to accept this commitment. Sometimes this is because their job or family prevent them from wholeheartedly working with the programme - and I will always try to reach a

compromise to enable such people to do the programme as best they can. But there are cases where embarking on the programme can be a waste of effort on both sides. The doctor should be able to assess the situation at this first appointment. Certainly it's an unrepeatable opportunity to lay down rules and explain what is expected of the patient.'

Dr Smith always insists that at least one other person attends the first appointment. 'I've found that someone else has to be involved in the recovery programme whether a child, parent, husband, wife or sibling. It makes a huge difference if they receive in person the take-home message that the individual with CFS/ME must be supported over months and perhaps years to ensure that he or she sticks with the programme through inevitable obstacles and challenges of day-to-day life. '

The first appointment should always include a full examination, including carrying out appropriate blood tests. 'Never believe anything without a test. It's quite possible that someone might develop thyroid disease, for instance, in the time between the appointment and a positive diagnosis a couple of months earlier,' says Dr Smith.

2. Modified activity

NICE: recommends Graded Exercise Therapy (GET) as one of two therapies (the other is CBT) whose efficacy was at least partly confirmed by the PACE study. ⁸ GET should be provided, 'preferably on a one to one basis with a trained GET therapist'. It involves agreeing 'a level of additional low-intensity exercise that is sustainable for five days, independent of daily fluctuations in symptoms and does not lead to "boom and bust" cycles' - after which the duration should be reviewed and increased, if appropriate, by up to 20 per cent, until an aerobic heart rate is reached.

(GET has been widely criticised. According to the ME Association, GET too often involves 'an inflexible increase in physical activity, worsening the condition of up to 50 per cent of people with ME-CFS.'⁹ Patients complain that the baseline activity often appears to be picked at random by the therapist or doctor who then dictates the pace of what is widely seen as an exercise or mobility management programme. Practitioners, it's claimed, frequently 'misinterpret the "graded" element of these programmes, pushing patients too hard, not sympathising with their concerns nor understanding the varying degree of symptoms experienced by sufferers.

The evidence base for GET is mixed. One study found that just over half of 66 patients improved in terms of functioning after following a carefully tailored programme of gradually increased aerobic exercise.¹⁰ In another study, only one in

⁸ <http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2811%2960096-2/abstract>

⁹ <http://www.meassociation.org.uk/?p=374>

¹⁰ <http://www.ncbi.nlm.nih.gov/pubmed/9180065>

three completed a six-month trial of graded exercise.¹¹ A further trial involving the use of stationary bikes at Duke University Medical Centre found that '74% experienced worsening fatigue and 26 per cent stayed about the same after maximal exercise.¹² 'None improved and the data would suggest that when people with Chronic Fatigue Syndrome are pushed to maximal exertion, they frequently relapse for long periods of time,' according to researchers.)

Getting Better: recommends a Modified Activity Programme requiring patients to avoid entirely the concept of 'trying as hard as you can'. Instead Getting Better introduces the concept of pottering: doing small tasks such as making a cup of tea, or engaging in fragments of longer tasks such as ironing a single item of clothing, in short time slots with the aim of avoiding cumulative fatigue.

'This is quite different from handing a patient a prescription for 30 minutes walking a day with no plan as to what happens for the rest of the time. Rather, the plan might start with 30 minutes walking every day, split up into two and a half minutes every hour for ten hours. Around this, a carefully considered and detailed schedule would be devised, filled with similar-length slots of restorative activities such as gardening, cooking, washing up, going for a walk, listen to the radio or to music, listening to a story tape. These activities need to be interspersed with prescribed periods of rest, with the proviso that too much rest and ANY sleep at all or even lying down during the day is as bad as exercising too much,' he says.

This schedule should continue unchanged until the activity plan can be carried out without causing fatigue on bad as well as good days for at least two weeks - at which point the activity time slots can be slightly extended, with slightly less rest in between. Failure to stick to such a plan raises the risk of the individual "overdrawing" on their reserves of energy with the same cumulative results as persistent overspending on a credit card,' he says.

'There is something Victorian or certainly old-fashioned about recovering from CFS/ME, quite out of step with the image of modern medicine with its instant cures and miracle therapies. Yet the prognosis for people who have been ill for several months or years is poor simply because people find it so difficult to meet the challenge of patiently sticking to a recovery programme that lasts as long as is necessary to get better.

Jane was studying for a PhD when she developed CFS/ME following a virus infection. Starting the Getting Better regime involved 'living my life with a stopwatch for nearly a year. At the beginning I was only allowed to use my computer for ten minutes at a time and could only cycle for two and a half minutes.'

Laura was 37 when she returned from holiday with flu and became so

¹¹ <http://bjp.rcpsych.org/content/172/6/485>

¹² Lapp, C.W. (1997), 'Exercise limits in the Chronic Fatigue Syndrome,' *American Journal of Medicine*, (103) 83-4.

tired she took to her bed. After two months, she was referred to Dr Smith. 'I began with two minutes of activity every hour -gradually increasing to 25 minutes of activity every hour by which time we all agreed I'd cracked it. During that time it was vital to stick to the activity programme to the letter. Anytime I even slightly deviated from it, I relapsed.'

Anna had CFS/ME for ten years - and during that time was 'very up and down, it seemed that about every six weeks I would get glandular fever symptoms which would clear up after one or two day's rest.

Nel recovered only when she 'gave up almost every thrilling aspect of my life'.

Cherry, 58, 'at first tried to carry on as normal until I realised I had to stop completely before I would start to get better'.

Anne finally started to recover after 'committing myself to Dr Smith's programme, and finding it very frustrating, limiting everything I did'

The Getting Better regime is unique in requiring patients to ration visual and intellectual as well as physical activity. 'The GET plan focuses on physical activity and does not mention TV or playing computer games, failing to realise that watching TV or going on the Internet during periods of 'rest' is entirely counterproductive,' says Dr Smith.

The visual cortex takes in up to 1000 times more information than other pathways and similarly processes this information much faster than other senses. So intellectual effort involving the visual cortex is at least as exhausting as physical activity. This doesn't mean patients cannot look at things - but they should to ration the kind of visual activity that involves the brain's visual cortex.

'I see a lot of people who have been interspersing gradually extended physical activity with watching TV or playing computer games. One teenage girl would lie in bed texting to her friend under the blankets. It's what people do when they are resting these days but it's anathema to recovery from CFS/ME,' says Dr Smith.

Indeed, he recommends locking up the TV, computer and games machine for at least for the first two months of the programme. 'I also suggest that it's wise to restrict activities that require visual input along with close concentration such as embroidery, jigsaws or detailed painting at least until the programme is established. Reading should also be restricted to no more than ten minutes every hour, preferably just in the morning, and it should always be something light, stopping as soon as concentration becomes a problem. It may sound tough - but in the long run it supports recovery.'

At first I was told I must not watch TV, read, (which is something I love) no crosswords or word games, (something else I enjoyed) no

Scrabble or card games, (I played Bridge twice a week); all this had to stop. I should not go to the cinema or the theatre, and give up the computer lessons that I had just started; in fact anything that worked the brain. Yes I have had a few setbacks by overdoing it a little, or doing a crossword when I should not, but I soon realise why I feel a little pain or flu-like feelings, because I have not kept to the routine, and I should not have done the crossword. I am trying to prove to myself that I can, but my brain tells me I am not ready, and then I get annoyed at myself, because I should listen to Dr Smith, and not think I am up to it. But like everything else in life - you learn. - Gillian.

Once a baseline of activity is achieved without becoming tired even on a bad day, the amount of activity increases slowly.

***'I had ME for ten years before I started treatment with Dr Smith. I began by walking 20 paces from the front door, gradually building to a five minute walk which eventually became a 20 minute walk. By then, I was able to take a bath every day and began spending less time in bed during the day, a little longer chatting to friends, a bit more reading, a bit more music - and soon a year had passed.'* - Susan, 43.**

The touchstone for successful modified activity is that the person wakes refreshed every day. 'Waking up and still feeling tired is a sign that there's too much activity,' says Dr Smith. 'The extent of safe activity is very individual - and needs to be approached with sensitivity by the practitioner and eventually by the patient learning to recognise their limits. But it needs to continue for between 18 months and three years even when life events including births, marriages and deaths get in the way.'

When patients quibble about sticking to regime, Dr Smith is normally willing to compromise. 'I would never insist that a teenage boy locks away his computer. If I did that, he'd never come back.' But as far as possible, he insists that a programme of modified activity can only work within strict parameters that must be fully understood by both the practitioner and the patient. 'That is why it's so important for relatives to be on board to hear what's said and keep the patient committed,' he says.

3. Medication

NICE: recommends managing symptoms of CFS/ME with medication 'as in usual clinical practice', with the possibility of starting at a lower dose than usual if there is concern about adverse or side effects. As far as fatigue symptoms as well as insomnia, hypersomnia, sleep reversal, altered sleep-wake cycle and non-refreshing

sleep, the guidelines recommend that patients be given sleep hygiene advice, introducing changes to sleep patterns gradually and using unspecified pharmaceutical interventions where needed.

Getting Better: recommends two types of medication as essential components of the regime: amitriptyline, the tricyclic antidepressant and Prozac, the selective serotonin reuptake inhibitor. Both are antidepressants though neither are used as such - and they both have a very clearly defined and separate role in the therapy.

i. *Amitriptyline* is recommended once the Modified Activity Programme is in place at the beginning of the therapeutic regime and is used to enhance refreshing sleep, support the regulation the immune system by normalising and calming the dysfunctional immune response that has helped to cause the disorder - as well as act as a painkiller effective for headaches and muscle aches that are common in CFS/ME. It may also soothe irritable bowel syndrome and diarrhoea as well modify the symptoms of cold and flu.

It should be taken alongside the provision of detailed guidance on how CFS/ME exacerbates fatigue symptoms, disturbing sleep patterns and causing non-refreshing sleep and the implementation of strict sleep hygiene rules: going to bed at the same time, say 10 pm, every day after winding down for the previous four hours; getting up at the same time, say around 7am while avoiding lying down or sleeping during the day. 'Prolonged periods of rest during the day can perpetuate symptoms and sleeping during the day is extremely bad, disrupting the circadian rhythm and preventing the onset of refreshing sleep at night,' says Dr Smith.

Low doses of this long-established, non-addictive sedative aids refreshing sleep normally without excessive drowsiness and can safely be used for adults and children over several months or even years. Taking just 10 mg, the smallest possible dose, one hour before bedtime - importantly at exactly the same time every evening - should ensure a good night's sleep. It can be safely increased by 10 mg (up to a maximum of 150 mg) at weekly intervals. 'It can make you groggy in the morning - but that usually only lasts for half an hour or so - and will have worn off by the time you've had a cup of tea,' says Dr Smith.

Alternative tricyclics include doxepin and trimipramine, Dr Smith recommends make a 30mg dose in total of three different kinds of tricyclic antidepressant that all provide slightly different sedative qualities - and is therefore more effective than simply using one type of tricyclic on its own. Melatonin, another alternative, has recently been licensed for prescription on the NHS.

ii. *Prozac* should be considered for almost every patient, once there is a well established a pattern of refreshing sleep alongside a modified activity programme that protects against the risk of a boom and bust cycle. At that point, there is almost always a need to raise energy levels and the ideal method is by taking an SSRI, according to Dr Smith.

'Prozac is probably unparalleled in its ability to lift mood, produce an overall feeling of well and reducing fatigue even in people who are not clinically depressed,' says Dr

Smith. 'As such, this drug makes a significant contribution to the Getting Better Regime and is taken by patients along with a tricyclic that promotes sedation and improved sleep pattern.'

Indeed from his experience, he says, it's often difficult to recover from long-standing CFS/ME that has continued for more than three years - 'and after four years, it's probably impossible without taking Prozac,' he says. 'Once the brain has been starved of adrenalin and noradrenalin for this length of time, the receptors in the brain simply stop working. Taking a drug that raises serotonin levels and thereby feeds the adrenalin and noradrenalin receptors is the most efficient - and sometimes the only - way to kick-start the process and raise energy levels,' he says.

However, there are a number of safety issues that have to be addressed by the clinician and fully understood by the patient before this combination can be embarked on safely.

a. There is a potential drug interaction between tricyclics and SSRIs as both drugs are metabolised through the liver via the same pathway, competing with each other - with the risk that toxic levels of amitriptyline being released into the bloodstream, potentially causing cardiovascular problems.

This can be safely and simply avoided with a little care - 'well worth taking, bearing in mind the huge potential benefit for patients,' says Dr Smith. The starting dose of both drugs should be at the lowest possible: 25mg of amitriptyline, taken at night - along with 1ml of Prozac syrup which is equivalent to 4 mg of the tablet form, which is about a fifth of the lowest dose of Prozac.

'It's essential to do a blood test within a month of starting the Prozac syrup to measure the tricyclic and its active metabolite. This should be repeated five or six times over a period of months as the Prozac syrup is gradually increased, one ml at a time to reach 5 ml, equivalent to a 20 mg capsule,' says Dr Smith.

It's a specialised test, costing up to £50 for each test and it can only be done in a couple of centres in the UK - and can therefore cost up to £300 in blood tests alone just to get the patient onto a 20 mg dose of Prozac and 75 mg of amitriptyline.

Once this combination is shown in a test to be stable and safe, it should remain stable and safe and can continue to be taken even for several years - though weight loss and persistent dehydration will affect amitriptyline levels.

It's well worth doing even though the tests are unlikely to identify a problem, according to Dr Smith. 'I have carried out blood testing on several hundred people over several years and have never come across a reaction, it's clearly a problem only when high levels of the two drugs are taken.'

b. It's essential to ensure that the patient is fully committed to the Modified Activity programme before he or she starts on Prozac. 'It's essential that the person understands the importance of avoiding excessive mental or physical activity when they start taking Prozac. Bear in mind that the drug produces this wonderful feeling of well-being and high energy. The measure must be not how the patient feels but whether or not he or she enjoys fully refreshing sleep at night. No drug is going to

work if the patient is actively making their condition worse. Taking Prozac while going through a process of boom and bust can cause a severe deterioration in CFS/ME and this should be avoided at all costs - even stopping taking the drug if the person cannot stick to the Getting Better regime.

c. As with all medication, the response will vary according to the individual and patients should be monitored for side effects.

4. *Cognitive behavioural therapy*

NICE: recommends unspecified CBT as one of two main treatments for CFS/ME. CBT should be tailored to the patient's individual needs and symptoms and their current level of activity and offered on a one to one basis. NICE guidance has a long list of what can be gained from CBT including: challenging thoughts and expectations that may affect symptom improvement and outcomes; developing awareness of fatigue-related thoughts, expectations or beliefs; and identifying perpetuating factors that may maintain or exacerbate CFS/ME symptoms to increase the person's sense of control over symptoms.

Getting Better recommends that CBT should be tailored to the patient's individual needs and symptoms and offered on a one to one basis. The regime recognises that an important predisposing factor to CFS/ME is 'an unremitting set of negative stressor factors and internalised negative anxieties'. It recognises that a number of relatively brief therapies, notably cognitive behavioural therapy, have been shown to help people become aware of these anxieties and provide techniques to avoid or manage them.

It says CBT should also be offered to people who have developed depression as a result of suffering from CFS/ME - as frequently occurs with other long-standing problems including cancer, heart disease, diabetes and arthritis. Research into the impact of CBT on people with CFS/ME shows that the greatest benefit from CBT is experienced by 'tertiary referrals' - people who have been referred for the therapy by a hospital specialist - and are therefore likely to have had the disorder for at least four years. 'It's important for the referring doctor to make it crystal clear in such a case that the depression is the result of or an association with CFS/ME and not the cause,' says Dr Smith.

Children with CFS/ME

CFS/ME is bad for everyone but it can be particularly destructive for the estimated one in 100 children of secondary school age who suffer from CFS/ME, according to a recent survey published in the medical journal BMJ Open. This study estimates that around 33,000 11 to 16 year olds suffer from CFS/ME rather than the previous lower figure of 25,000.¹³ Absence from school even for one day can be detrimental to pupil's prospects. Children with CFS/ME are at significant risk of missing out on

¹³ Crawley EM et al, BMJ Open: <http://bmjopen.bmj.com/content/1/2/e000252.full>

full-time education for several years.

While the success rate overall is higher with children than with adults,¹⁴ there are particular and significant problems (see below) in treating children with CFS/ME. Further, the needs of a child with CFS/ME mean that a health practitioner, preferably the child's doctor, should be involved in planning and, where necessary, negotiating with the child, the parents and the school to improve the prospects of the child's education.

i. *Changing behaviour*

Amber was five when she was diagnosed with CFS/ME, suffering for more than a year from classic symptoms including fatigue, headaches, muscle aches and pain as well as profound sleep disturbance and waking unrefreshed. Bright and keen to do well at school, she'd rush to do her homework and even do extra. She worried about having the right books for school, was fastidious, keen that everything was correct. She was friendly and outgoing but worried about her friends becoming ill (her mother and grandmother were both acknowledged 'worriers'.) She developed an abnormal response to amitriptyline and a sedating anti-histamine gave her diarrhoea. Now six, she has the full support of family and friends who understand the importance of the Getting Well regime - but Amber herself is on the go all the time, playing with friends and attending school - until her energy runs out and she collapses in a heap, becomes irritable, depressed, sleeping poorly and crying a lot. 'The youngest patient I've ever had, she illustrates in a most graphic way the problems of treating children,' says Dr Smith. 'You can't force her to behave in a way that would allow her symptoms to settle. She struggles to do everything and constantly fails through no fault of her own.'

In children, the stressor factors are nearly always multiple and include a combination of academic stress as well as the normal pressures of being adolescent, being in a peer group and being at a particular school. Physical or sexual abuse can also be a trigger and children should always be interviewed in the presence of a nurse but without the parents being present at least once.

Those most at risk of CFS/ME are girls age 13 to 15, according to Dr Smith. 'In my experience, this is partly because of the physiological changes that occur at this time - but also because of the bickering and backstabbing that can become a normal part of female adolescent experience. The pressure on a child can be literally poisonous when such pressures are background to other stressor factors such as bullying at school or home, being physically, mentally or sexually abused or a tendency to perfectionism in school work, perhaps encouraged by the covert, or even overt expectations of an academic school or ambitious parents.'

¹⁴ *Archives of Disease in Childhood*, 93, 419-421. Patel, M.X., Smith, D.G., Chalder, T., & Wessely, S. (2003)

John, 17 developed CFS/ME while studying for ten GCSEs at a local grammar school. Following the diagnosis, he reduced the number of subjects to six - and gained six As. 'I thought this was excellent and was appalled when John was told off publicly by the headmaster because they considered him to be an A* student and he was told he should have got A*s.

Children can be more responsive to CBT and advice generally- and therefore able to get rid of or solve the negative stressor factors that trigger the disorder in both adults and children. 'Over a period of time most children will come to recognise that their own behaviour can create extra and unnecessary stress, that being overly fastidious or expecting their academic work to be 110 per cent correct can be unhelpful or unhealthy if it has developed into an obsession,' says Dr Smith. 'With individualised care, other negative factors such as bullying at school and peer or family pressures, can normally be identified and removed.'

For those children who are responsive to persuasion or outright bribery, it's worth offering rewards for not watching television, going to bed a little bit earlier, stopping lengthy texting to friends - and above all cutting down or even stopping Playstation, X-box and Game boy, 'These games involve noise, music, fast moving visual images and bilateral hand dexterity and drain energy at least four times more quickly than if just one of these factors was involved,' says Dr Smith. Instead he suggests offering children games with less intellectual content such as painting sets, model aeroplane construction kits as well as Subbuteo and Lego.

He accepts that such initiatives may not be successful. 'Many children will put up a fight and parents who try to introduce such changes risk creating resentment in the child. It's important to give careful thought to how best to avoid this clash, if necessary by compromising, even when this slows down recovery. As a doctor, my priority is to keep the patient coming back to see me and having the possibility of recovery.'

ii. Education

Missing out on school and education over several months or years is a major adverse consequence of CFS/ME that can have a long-term impact on future life. Getting schoolwork right should be seen as at least partly the responsibility of the child's doctor - not least as this depends on the child's morbidity.

The child's doctor can help to smooth these potential problems provided her or she is prepared to be actively involved in detailed negotiations on issues such as attending school and the amount of coursework and homework that should be tackled in an ongoing process as the child recovers (or deteriorates).

'It is quite clear to me that children with these problems require a lot of background support from their doctor. Fellow pupils and members of staff at schools are not always particularly sympathetic or understanding, so the patients need to be

frequently followed up. I find that I write a lot more letters to schools and to support agencies than I do with adults, ' he says.

Dr Smith recommends that children with ME-CFS should attend wherever possible, even if it is just to maintain ties and involve no more than a brief visit during break or lunch times or perhaps for a non-academic class. 'It is extremely important that social bonding and ties are maintained and that child is able to maintain friendships. The worst scenario is a children with ME-CFS who don't go to school and spend their days at home alone and unsupervised, texting or emailing, almost literally frying their brains to bits' he says. .

Where necessary, he recommends that children should cut down on course work, perhaps stopping whole subjects and focusing on core subjects during the period of recovery - or perhaps just English and Maths and a single 'enjoyable' subject such as art or woodwork. He also advises that as much learning is carried out using audio tapes or CDs (widely available for GCSE coursework) and that children should be encouraged to record hour long lessons and then study it in 15 minute chunks at home.

It is extremely important that social bonding and ties are maintained and that we don't lose friends. They should be encouraged to visit each other and talk Parents (and doctors) should also recognise that children with CFS/ME will be just as hostile to the idea of restricting educational work: homework, preparing for exams, even attending school as they are to interference in leisure pursuits.

'The same principle applies as with adults: do a little bit, stop, do a little bit more, rest, always mixing intellectual activities with physical pottering. So homework, reading and studying should be done for no more than fifteen minutes per hour, at least at the beginning of the process - and possibly even less, depending upon the difficulty and the intellectual content of the reading,' says Dr Smith.

iii. **Medication**

A further limitation of treatment is that the drug regime for children has to be more conservative than for adults. Amitriptyline is licensed for use in children and can be safely prescribed for under-16s. Melatonin is also widely considered safe and effective for children though it is not available on the NHS. Other tricyclics and SSRIs are more problematical: they can be prescribed for under-16s but only on a named patient basis, something the child, his or her parents and the doctor must decide on together.

'This is a difficult decision not least because there is no data on the long-term effects of such medications on the central nervous system. However, I would recommend that a combination of medication should be considered in cases where a child has suffered from the disorder for several years and has clearly not responded to the recommended therapies of GET and CBT,' says Dr Smith.

Prognosis

An essential factor in the success of the Getting Better Regime is that patients understand the protocol and especially the importance of sticking closely to the modified activity programme and be prepared to continue taking the combination drug therapy for several years - reducing the dose but probably not stopping it entirely.

It's important to identify and as far as possible avoid the original stressor factors. Unplanned negative events that can potentially provoke a relapse include having a cold or flu, having to undergo a general anaesthetic or breaking a limb. 'In these circumstances, the patient will be fine provided they take sufficient rest and don't push it. Just lock the front door, take the phone off the hook, take an analgesic, go to bed and stay there and wait until whatever it is has gone away,' says Dr Smith.

Getting better from CFS/ME rarely means that you return to some absolute point of recovery. It's usually a case of reaching a level of functioning that the person is happy with - something that is probably nearly as good as it was before they became unwell. 'What's most important is that you are following the programme, enjoying physical and mental activity - and able to watch TV, play with the computer, go back to work, school or university - and do whatever it is that makes you feel you have recovered,' says Dr Smith.

'The one marker that will guarantee recovery is that whatever you do doesn't make you suffer the next day, that however tired you are, you sleep well and wake refreshed. If you keep to that rule, you are heading in the right direction. If you don't, there is a risk of long-term problems, particularly for those taking the combination therapy.'

Rose, 45, had been ill for seven years when she first began treatment with Dr Smith. It took several years to begin a process of recovery. Shortly after this started, she bought a new kitchen. It was delivered - and when her husband's back 'went' unexpectedly, she decided to do the work of installing the kitchen herself, thereby failing to stick to her programme which required her to do a little bit more day by day. 'She ignored a series of danger signs including the returning sleep disturbance, the unrefreshed feeling in the morning, aches and pains and the slowly increasing sore throat. She then produced an acute flu-like reaction and found herself being bed-bound. After a couple of weeks she came back to see me and told me that I had to help her. I pointed out to her that there was nothing I could do. I couldn't increase the already maximum doses of drugs and there is no other treatment that I know of. She could only sit back and rest and wait and see what happened. That was five years ago and I know, for a fact, that she is still chair-bound,' says Dr Smith.

When possible, take a return to full-time work slowly, if possible - and with the agreement of a sympathetic employer - over several months, even two years. 'People need extended support from their doctor when recovering from CFS/ME. Letters from the doctor should explain why the return to work is not immediate - and why the person may experience a set back as a result of a minor illness or health event. Above all, the person should watch out for signs of deterioration, notably waking up unrefreshed from sleep.

'Remember CFS/ME never comes back by itself, it does not have a life of its own - it is totally and absolutely predictable. If you do not expose yourself to what made you ill in the first place, it will never come back. Of course you can't change yourself. But you can become more aware of what is bad for you and stop doing it. I have been told by more than one patient that the best advice I have given them was to learn to say 'No' - and then think about, and if it seems right, give a qualified 'Yes'. Life after CFS/ME isn't necessarily less fulfilling - but it will almost certainly be different,' Dr Smith says.