case reports
THE CARE GUIDELINES

CASE REPORT

To encourage other practitioners to consider submitting a case report for the E – News, we have restructured the format in line with recommendations from July 2014 and have left in the key guides – should you be interested just e mail info@nutri-linkltd.co. We will send you the word doc.

Case reports are professional narratives that outline the diagnosis, treatment, and outcomes of the medical problems of one or more patients. Information from case reports can be shared for medical, scientific, or educational purposes. They provide a framework for early signals of effectiveness towards adverse events, and cost. Case reports and the systematically collected data from which they are written also provide feedback on clinical practice guidelines.

Case Report of a CFS Patient who Experienced Remarkable Resilience thanks to NT.

Abstract. *Summarise the following information if relevant: (1) Rationale for this case report, (2) Presenting concerns (e.g. chief complaints or symptoms, diagnoses), (3) Interventions (e.g. diagnostic, preventive, prognostic, therapeutic exchange), (3) Outcomes, and (4) Main lesson(s) from this case report.*

This case explores a nutritional focused approach to the resolution of a cluster of symptoms, that when summarised are called Chronic Fatigue Syndrome. It should be explained that there are a number of different names for what is an illness of uncertain cause affecting many thousands of people. Currently it is estimated that some 250,000 people in Britain are affected by this illness.

- Myalgic Encephalopathy or "ME" (a term which The ME Association feels is more appropriate than the original, Myalgic Encephalomyelitis)
- Chronic Fatigue Syndrome or "CFS"
- Post-Viral Fatigue Syndrome or "PVFS"
- Chronic Fatigue Immune Dysfunction Syndrome or "CFIDS"

All types of people at all ages are affected. Severe and debilitating fatigue, painful muscles (sometimes distinctive enough to be labelled as fibromyalgia) and joints, disordered sleep, gastric disturbances, poor memory and concentration are commonplace. In many cases, onset is linked to a viral infection. Other triggers may include an operation or an accident, although some people experience a slow, insidious onset.

Chief complaints of this individual included, unrelenting fatigue, poor tolerance of stress, persistent insomnia, myalgia's, Lymphadenopathy, pharyngitis and mouth ulcers.

Key Words. *Provide 3 to 8 key words that will help potential readers search for and find this case report.*

Chronic Fatigue Syndrome, Fibromyalgia, swollen glands, sore throat, insomnia, mouth ulcers, NO/ONOO cycle, resilience, stress tolerance, gluten.

Introduction. *Briefly summarise the background and context of this case report.*

Two years prior, a 33 year old female, F.R., had been so exhausted with CFS that she had needed to discontinue working in her professional role as an accountant. She also experienced muscle pains (myalgia) that were

always amplified the day(s) after any physical activity. She had become less and less tolerant to stressors and was hugely psychologically resistant to the fact that she could not engage in the work which she loved, but which exacerbated the total burden of stress due to her debilitating illness. She had developed 'insomnia' two years previously, and when we first met she was unable to recall the last time she had unbroken sleep. Two observable signs of loss of immune tolerance were persistent mouth ulcers and swollen glands in her neck and groin.

After experiencing two years of CFS, F.R. now enjoys much restored energy and health and stress tolerance after following a carefully individualised nutritional programme.

Presenting Concerns. *Describe the patient characteristics (e.g. relevant demographics—age, gender, ethnicity, occupation) and their presenting concern(s) with relevant details of related past interventions.*

F.R. is a 33 year old Caucasian woman originally from the north of England, 5' 6" tall (167.6 cm) and weighed 9 stone 8 lbs (58.66 kg). She had been living in London for the past decade, where she qualified as an accountant, after studying for a degree.

F.R. had never suffered with any health problems throughout her life, and had managed to achieve a certain level of success in every endeavour to which she put her mind, be it academic or physical. She owned a small house in Clapham, south west London.

Two years previous to her initial consultation, her health had declined from the moment she had the 'flu'. The contrast in her health she stated, between when she had the full manifestations of CFS & an allied set of symptoms involving key trigger points in the shoulders and hips, referred to as fibromyalgia (FM) compared to when she was well could not be more obvious.

F.R.'s presenting symptoms were 'deep fatigue', intermittently very sore muscles in her legs, back and neck. She also found any stress made her feel more fatigued and led to more muscle pain. She would then develop painful mouth ulcers, which put her off eating, swollen and painful glands in her neck and groin, which made her feel, in her words, "pretty rough" and this included a worsening pharyngitis. With the fatigue, her brain would not & could not function properly. This was her key symptom that stopped her being able to work, more so than the physical fatigue. Her sleep was 'awful'; she could not manage more than 4 hours unbroken sleep and she had been prescribed sleeping pills (Zopiclone) at least every other night, or she used a self-prescribed tincture of valerian and hops.

F.R. had visited her GP two years before and obtained a 'sick note' for work (not for CFS but rather for stress-related fatigue), but after many attempts to return to work and failing to cope with two consecutive days, after many months she was let go by her company. She is a fully qualified accountant and loves her work and has specialised in an area that supports local community including organising funding from local government for housing for those on lower incomes.

F.R. had been referred by a colleague who knew of me, but had no idea that NT could have any impact on her condition. She was familiar with the term 'chronic fatigue', but not CFS and nor fibromyalgia. Her symptom profile closely matched the Centers for Disease Control assessment for CFS and her FM symptoms also matched the pattern too. No lab tests were conducted by me for her main condition, (her GP undertook blood profiles as explained further on) although she did score highly in sections of the NAQ related to adrenal health and blood glucose management. No viral antibody tests were conducted in this instance.

Clinical Findings. *Describe: (1) the medical, family, and psychosocial history including lifestyle and genetic information; (2) pertinent co-morbidities and relevant interventions (e.g., self-care, other therapies); and (3) the physical examination (PE) focused on the pertinent findings including results from testing.*

Medically speaking, F.R. had been in good health for the whole of her life, as indeed were her whole family including her parents (in their 60s), grandparents (in their 80s) and her bothers (in their 30s). There was nothing particular about her genetic background in terms of health that she could identify. All the women in her family tended to be slim, but they were also active.

The only thing that had been a minor trouble was the persistent mouth ulcers. They never seemed to go away and they never really troubled her that much either. They did become worse, however, over the two year period.

From the evidence, F.R. had been in robust good health before the 'flu, two years previously. She had not paid too much attention to her diet and had eaten a standard English diet, which included wheat every day. She tended to eat wholefood, however, rather than processed food as she found this suited her energy for the exercise and sports she previously engaged in. For a year or so before she became unwell, she exercised less than before, at about two to three times a week, but she remained fit.

No physical examination was conducted, however, on what was reported other than her symptoms as previously described, there were no evident signs of illness, restriction of movement, skin disorders and so on.

Timeline. *Create a timeline that includes specific dates and times (table, figure, or graphic).*

In October 2012, F.R. suffered from an influenza, that required bed rest & recovery. This was her first illness that ever meant taking a day off work – aged 31. Utter fatigue, swollen glands, sore throat and poor sleep characterise her experience of the 'flu'. Her mouth ulcers became worse.

A matter of weeks later, in early November 2012, F.R. was still tired and not functioning as before getting the 'flu. Her glands were less swollen, her throat was less sore, but her sleep remained disrupted.

In late November 2012, F.R. needed to take a day off work and met with her GP (for the first time) who gave her a sick note on the basis of 'stress-related fatigue'. F.R. really struggled at work and could not concentrate either. F.R. had not exercised for 9 weeks which is the longest period of time by far that had occurred since early childhood. F.R. has been feeling depressed and stressed and anxious about what is happening to her.

In December 2012, F.R. attends work every day, but it is a real effort. She does her best to hide the fatigue and lack of brain function from colleagues. Early in the month, she undertakes a 20 minute run and then really notices the following day the increased myalgia in her legs and her back and neck. At this stage she had no idea about CFS or FM. The doctor's blood test (haematology & CBC) showed everything was in the normal range, except that F.R. certainly did not feel normal. Her sleep was so disrupted; she was already taking sleeping pills.

After a few weeks off over Christmas 2012, F.R. had hoped for her health to return to normal, but it had not, which led to more stress and anxiety. She was living with her partner in her own house for the best part of a year prior to this, and the relationship was really under strain due to her lack of good health. Not only was she finding it hard at work, she simply did not have the energy to devote to him, their relationship, nor their social

life. The lack of diagnosis was an issue since apparently there was nothing wrong with her. She eventually asked her boyfriend to stay at his place during the week.

By mid-February 2013, F.R.'s health had not improved. Every time she expended some energy to do something vaguely physical, she would end up suffering with more pronounced muscle pains (legs & back and neck) the following day or for two days afterwards. At the same time, the other symptoms returned. This had become a predictable pattern.

She visited her GP three times over the next three months but she was not helped and was questioned about her stress at work. Anti-depressants were discussed but not taken. A repeat blood test showed a few minor out of the range markers which included MCH (a little elevated) and WBCs (a little low). Nonetheless, repeated sick notes were provided. F.R. did not seek a second opinion, which she now regrets, but she could not think very clearly and was very stressed by her lack of good health.

In April 2013, she was required to have a conversation with her company bosses and she assured them she was doing her best, but it was well known within the company that she was struggling, even though she was very good at the work she did. She discovered that it took a high energy to be as productive as she had been which she had taken for granted.

In June 2013, her relationship with her boyfriend ended since neither she nor he could sustain it with her health being the way it was. This was heart-breaking for both of them, she told me. It took her months to begin to get over this.

Every minute of every holiday or time off or time from when she got home after work, F.R. would rest or sleep. She ate pretty well, considering how she felt, and also found that home-made juices gave her a boost for 30-60 minutes. She had lost some weight, which was not helped by the regular worsening of her mouth ulcers which made it hurt to eat. In spite of her inactivity, her food intake had also dropped and she was under 9 stone (57kg) at one point, and had also lost lean muscle. She had regained this weight by the time we first met.

In September 2013, she visited me for the first time, after a colleague made the referral. In spite of her general intelligence and education, she had not found the time nor had the energy to fully research her own condition on-line, I discovered, and she had not heard of CFS or fibromyalgia.

A viral antibody test was considered but not chosen when discussed due to her expressed need to get 'instant' help so that she could maintain her ability to continue her employment.

She then commenced the nutritional programme in September 2013. This was too late for her to retain her job, which she lost in January 2014. However, F.R. then made consistent progress and has made a good recovery, albeit not complete, as this case report is written in July 2014.

Diagnostic Focus and Assessment. *Provide an assessment of the (1) diagnostic methods (e.g. PE, laboratory testing, imaging, questionnaires, referral); (2) diagnostic challenges (e.g. financial, patient availability, cultural); (3) diagnostic reasoning including other diagnoses considered, and (4) prognostic characteristics (e.g. staging) where applicable*.

Other than GP run blood profiles, that showed no abnormalities there were no lab tests conducted. CFS is a condition that is determined by meeting the criteria of symptomology, and F.R. met these (see above).

At the outset, the ability to afford any tests and supplements was no problem, but as time passed, F.R. alerted me to the fact that her funds were diminishing, now that she was not working and that she had the costs of a mortgage and running the house and buying food, although as she never went out there were few other costs that she incurred.

Given the details of the onset of the condition, there were no other significant contenders for the 'diagnosis'. Historical viral infection, with EBV or other, were assumed but not tested for, as part of the cause of the 'flu in October 2012. Imbalanced cortisol levels were considered and supported by the symptoms on the questionnaires, but this was not tested.

The progress made by F.R. was consistent after the first few months, which is not always the case by any means when addressing CFS. With regret this was not swift enough to hold onto her existing job. In time, however, the consistency of the reduced fatigue / improved energy was a source of confidence for her that made a big difference when choosing to re-enter employment in the summer of 2014, in which she was successful.

Therapeutic Focus and Assessment. *Describe: (1) the type(s) of intervention (e.g. preventive, pharmacologic, surgical, lifestyle, self-care) and (2) the administration and intensity of the intervention (e.g. dosage, strength, duration, frequency).*

September 2013
With a careful inspection of her diet and symptoms, and the awareness that mouth ulcers could be a sign of gluten intolerance, a GF diet was recommended for a trial elimination. The alternatives effectively meant that F.R. had an expanded diet and not a restricted one. However, this was very secondary to the focus on her CFS and FM which was targeted with the use of specific supplements (Programme One). In addition to upgrading the nutritional quality of every meal where possible, and the exclusion of gluten with the provision of alternatives, F.R. was recommended these supplements.

Programme One Supplement Name & Brand	Dose
Fibronol (ARG)	2 caps 30 mins before breakfast & before lunch
NAC Enhanced Antiox Formula (ARG)	1 mid morning, 1 mid afternoon on empty stomach
Stabilium (ARG)	4 soft gels with breakfast
Bio-Ae-Mulsion (BRC)	3-5 drops directly into mouth on ulcers

Follow-up and Outcomes. *Please describe the clinical course of this case including all follow-up visits as well as (1) intervention modification, interruption, or discontinuation, and the reasons; (2) adherence to the intervention and how this was assessed; and (3) adverse effects or unanticipated events. Please describe (1) patient-reported outcomes, (2) clinician-assessed and -reported outcomes, and (3) important positive and negative test results.*

By October 2013, a year on from the start of her ill health, F.R. reported that she definitely felt an improvement in her energy and brain function. She was, however, very far away from the high-functioning individual of pre-October 2012.

She had avoided gluten when at home but when at a friend's or when her mother prepared her food (her mother lived in the north of England but came to stay regularly to help her daughter) she was not sure, and it is likely that she did ingest gluten about once a week. She did not fully understand the need to be GF the whole time and this was emphasised at the first follow up appointment.

At that first follow up appointment, there was no major change in any of her symptoms, nor the mouth ulcers really, except that her energy was definitely not as poor as it had been and her brain fog was not quite so dense as it had been. Still, it was a start for F.R.

She had taken the supplements almost 100% as recommended. She really did not want to take them, did not like taking supplements but did so since she believed there was no point in seeking a professional's help and then not following it – and she was desperate, she said.

The supplement programme was amended at the first follow up October 2013, to the following:

Programme Two Supplement Name & Brand	Dose
FibroBoost (ARG)	2 caps 30 mins before breakfast & before lunch
CoQ Gamma E (ARG)	1 with breakfast & dinner
Stabilium (ARG)	4 softgels with breakfast
Bio-Ae-Mulsion (BRC)	3-5 drops directly into mouth on ulcers

The NAC Enhanced Antiox Formula (ARG) was replaced with one of the Marty Pall PhD –recommended supplements, CoQ Gamma E (ARG) which provides fat soluble antioxidants as part of the inhibition of the NO / ONOO vicious cycle. The Fibronol (ARG) which provides magnesium and malic acid along with the extract of Ecklonia Cava is more designed for FM, but I have found in clinical experience that the rotation with FibroBoost (ARG) which is solely E. Cava extract, often produces the best results for both CFS & FM.

In December 2013 we met for the second follow up. F.R. reported a steady improvement in her energy and brain function, but she estimated that she was only 15-20 % better, and not sufficiently improved ultimately for her to retain her job, as it turns out.

She remained gluten free and ate well, as before. It was for this reason that she could not understand how NT could help her, since she ate what she believed was a very sound diet, which it was. I explained the potential benefits of therapeutic and targeted nutritional therapy and supplements that focused on the specific biochemical imbalances that led to the way she felt. Since she had experienced noticeable benefit, and she had no other options, she continued.

To support her nervous system in a more specific way, an active, low dose B vitamin was included in her programme, and the vitamin A for her mouth ulcers was stopped for this next period of time. The NAC Enhanced Antiox Formula (ARG) was re-introduced in the place of the CoQ Gamma E (ARG). The benefits of the rotation of the antioxidants, as opposed to necessarily taking ALL of them, that have been proposed by Marty Pall PhD is something that clinical experience informs me about.

Programme Three Supplement Name & Brand	Dose
FibroBoost (ARG)	2 caps 30 mins before breakfast & before lunch
NAC Enhanced Antiox Formula (ARG)	1 mid morning & mid afternoon, on an empty stomach
Stabilium (ARG)	4 softgels with breakfast
Bio-3B-G (BRC)	4 tabs with each meal

At the end of January 2014 we met for the third follow up and our fourth meeting in all. F.R. told me that she had lost her job, about which she was not surprised. She recognised that she could not go on, and that the anticipation stress of this possibility was worse than the actuality. She could now dedicate herself to getting better. In spite of this news and experience, F.R. reported that her fatigue was still lessening, her brain function was still improving and the multiple other manifestations were all generally less than they had been. She realised that she was dependent on sleeping pills of one kind or another but whenever she tried to sleep without them, it was not successful. Now that she did not have to get up to go to work, however, she was more prepared to give this a go.

Her muscle pains were not so marked, and she wondered if this was due to her not doing anything physical.

The supplement programme was again rotated for both the FibroBoost (ARG) and the NAC Enhanced Antiox Formula (ARG), and the Bio-3B-G (BRC) dose was reduced slightly.

Programme Four Supplement Name & Brand	Dose
FibroNol (ARG)	2 caps 30 mins before breakfast & before lunch
CoQ Gamma E (ARG)	1 with breakfast & dinner
Stabilium (ARG)	4 soft gels with breakfast
Bio-3B-G (BRC)	3 tabs with each meal

At the beginning of March 2014 we met for the fifth time. F.R. had some very sad news to tell me at this time, which brought her to tears throughout the appointment. Her godfather, with whom she was very close all of her life, had died suddenly, and she had stayed for a week with his wife and their two children who were adults about 5 years younger than herself to give them support, even though she was not fully well. She had found this remarkably hard psychologically and fully expected to be struck down with deep fatigue and muscle pains as a result when she returned home, but this had not happened. Even after the funeral and lots more tears, she had not crashed. Nor had her glands become swollen, and nor had she suffered the painful sore throat. She had anticipated these things happening but they had not. She was she stated, very aware of how powerful the supplements were and asked to read more about them.

As a result of the grief, the programme was changed to include Stamina Caps (BRC) (which provides vitamin B1 and B5 and CoQ10 and l-carnitine) which I have found in clinical practice to support stress resilience and nervous system functioning. Emerging scientific evidence also highlights the need for thiamine as being important for supporting a healthy blood brain barrier, which may be compromised in people experiencing emotional distress (amongst other things). In this instance, the other supplements remained the same, as much for practical reasons as anything else due to the stresses that F.R. had endured.

Programme Five Supplement Name & Brand	Dose
FibroNol (ARG)	2 caps 30 mins before breakfast & before lunch
CoQ Gamma E (ARG)	1 with breakfast & dinner
Stabilium (ARG)	4 soft gels with breakfast
Stamina Caps (BRC)	2 with each meal and 2 mid afternoon

In mid April 2014 we met for the sixth time. F.R. reported some more upsetting news. Her ex-boyfriend had started to see someone else and her best friend (a school-friend who also lived in London) lost her mother to cancer. F.R. also supported her friend through this time and attended the funeral. She was also driving herself to find a job. F.R. was still reliant on the sleeping pills, but her sleep had not deteriorated as she thought it would. She wept again during the appointment, and through the tears she acknowledged that she would have fallen apart had it not been for benefits attributed to the nutritional supplements. Her best friend was very aware of what she had gone through and they had spoken from time to time about her health and the supplements in particular, and her friend had pointed out that F.R. had managed to tolerate the stresses extremely well, considering that the effort required to go and buy food a few months before had been too much to handle.

F.R. had begun the process of putting her C.V. together and putting feelers out in the market in which she worked to determine if there were any vacancies.

The supplements were similar, with FibroBoost (ARG) being re-introduced but the CoQ Gamma E (ARG) being kept and the Bio-3B-G (BRC) was added in between meals, with the Stamina Caps (BRC) being taken at the same time.

Programme Six Supplement Name & Brand	Dose
FibroBoost (ARG)	2 caps 30 mins before breakfast & before lunch
CoQ Gamma E (ARG)	1 with breakfast & dinner
Stabilium (ARG)	4 soft gels with breakfast
Stamina Caps (BRC)	2 with each meal
Bio-3B-G (BRC)	3 mid morning, and mid afternoon

We met in early July 2014 for the seventh time. F.R. had attended interviews and been offered two different jobs. In the declaration of this, she realised just how far she had come from the woman who could not leave the house on some days and wandered around in a fog like a zombie. Her energy levels were 80% of what they had been; she had much less muscle pain. She had somehow overcome the tragedies and upsets that had befallen her and was also able to go for daily walks and maintain a much more positive outlook. She really could not understand how this had happened from a psychological perspective, and yet again marvelled at the efficacy of the supplements, to which she attributed her recovery.

The mouth ulcers had reverted to the low grade state they had always been, which disappointed me, as I had wondered if the GF diet may have been the resolution for those. It is possible, however, that F.R. had not avoided gluten 100%, as I have discovered myself, it is very challenging to do so and there is a question raised about non-labelled gluten proteins being within apparently non-gluten-containing packaged foods. However, overall, this was a minor thing. She had eaten a more varied diet as a result of being GF. There may also be some benefit to add zinc into her supplement programme, as this has a number of anecdotal reports on its effectiveness in improving these delicate mucosal tissues.

F.R. was content to continue with the supplements forever, but as with every patient, the intention is to take as few as is needed to help the patient achieve their desired outcome. The fact that she was going to start a job any day also meant that there was no dramatic change in the supplements.

On a separate note, F.R. had been experimenting with NOT taking any sleep aids, and her sleep was still not stretching beyond 4 hours at any one time, although she did fall back to sleep again.

The seventh supplement programme looked like this, with no continuation of the Co Q Gamma E (ARG) nor the NAC Formula (ARG) but with the addition of the active B vitamins at bedtime to support sustained blood glucose levels during the night.

Programme Seven Supplement Name & Brand	Dose
FibroBoost (ARG)	2 caps 30 mins before breakfast & before lunch
Stabilium (ARG)	4 soft gels with breakfast
Stamina Caps (BRC)	2 with each meal
Bio-3B-G (BRC)	3 mid morning, & mid afternoon & 3 at bedtime

Within a week, F.R. called me to tell me delightedly, that she had slept seven and a half hours straight through! She had also started her first day at work, and again was amazed at how her body had adapted to the stress of the changes. She was tired, yes, but not in the deep fatigue way and not accompanied by the muscle pains, swollen glands and sore throat.

We have arranged to meet in early September 2014 to discuss her ongoing needs.

Supplement Information

FibroBoost (ARG)
A clinically trialled natural sea-vegetable derived antioxidant that is 40% fat soluble and remains active in the body for 12 hours, some 24 times longer than most water soluble antioxidants. It has been studied and found to improve fibromyalgic pains and improve sleep and energy.

FibroNol (ARG)
Very similar to FibroBoost but with the addition of magnesium and malic acid, designed more specifically for those with fibromyalgia related pains.

Stabilium (ARG)
Contains a high concentration of small peptides similar to pituitary and hypothalamic stimulating peptides which act as hormone precursors to neurotransmitters such as GABA, encephalins and endorphins which support the nervous system and help to adapt to stressful conditions. It has been used clinically to support 'resilience in stressful situations', and is fine to take alongside anti-depressants.

NAC Enhanced Antiox Formula (ARG)
Contains NAC with TMG, RNA and Lipoic Acid. This is part of Prof. Marty Pall's CFS antioxidant protocol.

Co Q Gamma E (ARG)
This is one of the products in the Marty Pall PhD Chronic Fatigue / Fibromyalgia protocol. It provides all the fat soluble antioxidants including CoQ10, all 8 members of the Vit E family (4 x tocotrienols, 4 x tocopherols) with emphasis on the gamma tocopherol, lycopene, lutein, and alpha lipoic acid, Vitamin A & fat-soluble Vit C.

Stamina Caps (BRC)
This formula provides thiamine, pantothenic acid, L-Carnitine, octacosanol, coenzyme Q10 & OOrganik-15™, which may serve to aid in energy production and to increase stamina. In my clinical experience this formula has made a positive contribution to energy and also helped to stabilise appetite too.

Bio-3B-G (BRC) -
This is a low dose B vitamin formula in which the B1, B2 & B6 are in their active forms. It has been very effective in supporting energy in patients and helps to reduce cravings in some patients too. It is a formula that directly supports neurological function.

Bio-Ae-Mulsion (BRC) (higher dose product)
This formula provides 2,000 IU of fully emulsified vitamin A per drop. Vitamin A is vital for the healing of epithelial tissue and the management of mucosal tolerance.

Discussion. *Please describe (1) the strengths and limitations of this case report including case management, (2) the literature relevant to this case report (the scientific and clinical context), (3) the rationale for your conclusions (e.g., potential causal links and generalizability), and (4) the main findings of this case report: What are the take-away messages?*

Strengths and limitations of this case report including case management
The regular appointments and the adherence to the nutritional programme meant that the case of F.R. could be tracked in time and matched with her changes / improvements in her health. The lack of test results could have posed a problem, and a viral antibody test and a salivary cortisol test would have been welcome additions to the GP blood tests which had provided little relevant data. A gluten test, such as Cyrex Labs Array 3, may also have served a useful purpose, and would also help to identify the need to avoid gluten in the future. The overall positive outcome of this ongoing case has meant that there has not been a need to engage in testing; the clinical outcome experiment has worked so far.

The literature relevant to this case report
Marty Pall PhD's book "Explaining Unexplained Illnesses" – along with the seminars that he presented in the UK in 2008 and 2010 – serve as the fundamental educative processes by which I acquired some understanding of the biochemical mechanisms that underpin CFS, FM as well as MCS (multiple chemical sensitivity) amongst other conditions.

The rationale for your conclusions
This case profile fits very well into the model of signs and symptoms of CFS & FM, as outlined by the CDC, as identified above. This, combined with the clinical experience with other cases like it, readily led to what was, in this instance, a straightforward conclusion that this was the target for therapeutic intervention.

The main findings of this case report: What are the take-away messages?
As with any case, the thorough case history provides the vital information. There are many faces of fatigue and being tired is one of the most frequent reasons why people see their GP. Anaemia, low cortisol, underactive thyroid, insufficient sleep, emotional stress and pain are other causes of fatigue, but this list is not complete.

In addition to the sound diet that F.R. ate, the focused use of specific antioxidants and supplements which supported the underlying biochemical imbalances that led to the CFS & FM resulted in the favourable outcome

– which is ongoing. The supplements targeted the NO / ONOO cycle as well as the nervous system of this patient.

In addition, it is also likely that the familiarity with the condition of CFS & FM in the practitioner combined with the careful listening and retelling of her case back to her in the first appointment, and then at subsequent appointments, led to an engagement in the 'meaning response' within this patient.

Patient Perspective. The patient should share his or her experience or perspective of the care in a narrative that accompanies the case report whenever appropriate.

F.R.'s views have been expressed within this case report. However, here is a summary of her views of her experience.

"I was desperate for help and I had heard that nutrition could help, although I could not see how, as I ate well before and I did not think that what I had wrong with me was related to the food I was or was not eating. It was explained to me about how chronic fatigue syndrome may occur and persist in the body and how I might be able to prevent that process from happening with the use of supplements. I did not like taking the supplements. I had hoped it would be more simple and that avoiding gluten wold be the answer, which I don't think it is.

After a month on the programme I really did feel the difference and seeing how I had been in a hole for so long, I kept on going with it. Then the next month I felt further improved and so I naturally kept going, because I was desperate to get better, to feel better, to feel like I used to, to get back to work, to get back to having a life. Month after month I did make improvements and I learned more about what was happening in my body, but it was complicated. I just know the supplements were putting out fires in my cells and that I got to feel better.

After everything I went through it was amazing and incredible that I managed to not get ill again, and it was entirely down to the supplements. I now treat them with the utmost respect and value them hugely for what they have done for me. At each appointment I would learn a bit more about the nature of what goes wrong in CFS / FM and now I get that you cannot get to feel better, or at least I may not be able to, on food alone, no matter what I eat.

I can now withstand immense stresses without falling ill, or having sore muscles or throat, and I am now back in work and I can re-start my life. It has been a hard slog but I have got there when I know people who are still house-bound. I value my own health too much for me to stop doing what I am doing."

Informed Consent. *Did the patient give the author of this case report informed consent? Provide if requested.*

The patient is not aware her case history is being used, and all identifiable data has been removed. F.R. are not her real initials.

Case Report Submission Requirements for Authors

1. Competing interests. *Are there any competing interests?*

None Known

2. Ethics Approval. *Did an ethics committee or Institutional Review Board give approval? If yes, please provide if requested.*

This case was not presented to an ethics committee.

3. De-Identification. *Has all patient related data been de-identified?*

All patient data has been re-identified

4. Author. *Name of Author and practice*

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