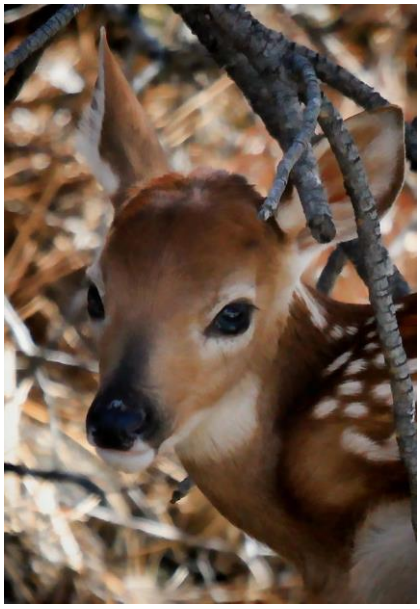
Guildford ME/CFS Support Group
(& West Surrey)

Newsletter

September 2014



Future dates

The following ME meetings are open to all members and carers.

7th October 2014 (Tuesday) 7.30pm White Lyon & Dragon
Perry Hill, Worplesdon, Guildford, GU3 3RE
www.thaipubs.co.uk/location/white-lyon-dragon

Just along from the Worplesdon Place Hotel, The White Lyon and Dragon is a Thai restaurant in Worplesdon that has both a bar/food section and restaurant. Tuesday night is discounted making the quality food very reasonably priced. Of course, you can simply turn up to have a soft-drink or tea.

13th November 2014 (Thursday) 11am The Seahorse
The Street, Shalford, Guildford, GU4 8BU

Warning:
Booking required

Christmas Dinner

3rd December 2014 (Wednesday) 7.30pm The Weyside
Millbrook, Guildford, Surrey, GU1 3XJ
www.theweyside.co.uk
Over the last few years the Weyside was called the Boatman.

We automatically reserve 10 seats for the Christmas Dinner and places are taken on a first come, first served basis. If we receive more than 10 requests we will attempt to book additional seating. Please let Andy know as soon as possible if you intend to come.

If you would like to come to the Christmas Dinner please text message or call Andy, our Treasurer, on Tel If you send a text please clearly state your name.

Important !

There are two possible menu options for the Christmas meal. The everyday menu is available on the day and does not require any pre-ordering. There is also a **Christmas menu which does require pre-ordering**. (included at the rear of this newsletter).

If you wish to pre-order from the Christmas menu this must be done before the 25th November by telling Andy your food choices. The disadvantage of pre-ordering, however, is that if you are unable to attend on the night you will be liable for the cost of the meal ordered.

We look forward to seeing you there. The Christmas Dinner is our most popular event.

Is ME/CFS an autoimmune illness?

Source: www.cfstreatmentguide.com/blog/is-chronic-fatigue-syndrome-an-autoimmune-disease
By Erica Verrillo 8th April 2013

Articles about the autoimmune nature of ME/CFS have been included in previous newsletters (e.g. March 2014 & Winter 2012). However, I believe that you may be interested in additional information from: the recent 'Invest in ME conference'; and insights about PML from a group member, James Roberton.

To set the scene, James has suggested the following article from Erica Verrilo.

Above by Newsletter Editor

For decades, a heated debate has raged over the nature of the illness known variously as chronic fatigue syndrome (CFS) and/or myalgic encephalomyelitis (ME). Historically, the two warring camps have been divided between "it's all in their heads" and "we're still looking." But while both sides have consistently referred to CFS/ME as an "enigma," it turns out the source of the illness may very well have been under everyone's nose the whole time.

In the May 2013 issue of Discover Magazine, an article by Jill Neimark bearing the intriguing title, "Are B-Cells to Blame for Chronic Fatigue Syndrome?," chronicled a remarkable discovery: wiping out the B-cells of patients with CFS/ME can actually cure the illness.

In 2007 Øystein Fluge and Olav Mella, two Norwegian oncologists at Haukeland University Hospital in Bergen, Norway, accidentally discovered that rituximab, a drug employed to treat Hodgkin's lymphoma (as well as autoimmune disorders such as rheumatoid arthritis and Wegener's granulomatosis) cured several of their patients with CFS/ME. The news made instant headlines.

Inspired by their success, Fluge and Mella conducted a pilot study of rituximab on three patients with CFS/ME. The patients were given rituximab in an open-label trial (that is, the patients knew they were receiving the drug). All three patients experienced significant improvement; two of them responded within six weeks and the third had a delayed response, occurring six months after treatment. The positive effects lasted for between 16 and 44 weeks. After relapse, the patients were administered another dose of rituximab, with the same positive results. The investigators hypothesized that B-cells of the immune system might play a significant role in CFS, at least for a subset of patients, and that "CFS may be amenable to therapeutic interventions aimed at modifying B-cell number and function."

The positive results of this, as well as a second open-label trial, led Drs. Fluge and Mella to conduct a larger study with a more rigorous design to test the effects of the drug. In 2009 they initiated a double-blind, placebo-controlled phase trial with 30 CFS/ME patients. As in the earlier open-label studies, the responses to rituximab were significant. Sustained overall improvements were noted in 67% of the patients (as opposed to 13% of the control group). Four of the rituximab patients showed improvement past the study period. The authors concluded that the delayed responses starting from 2–7 months after rituximab treatment, in spite of rapid B-cell depletion, "suggests that CFS is an autoimmune disease and may be consistent with the gradual elimination of autoantibodies preceding clinical responses."

The unprecedented success of these small trials has led to a $2.1 million privately funded initiative spearheaded by the Norwegian nonprofit group, ME and You.

This is all very topical, but is it news? Dr. Paul Cheney, an immunologist, and one of the physicians who treated CFS/ME patients during the Incline Village outbreak, stated nearly thirty years ago that CFS/ME was the result of immune system upregulation. In fact, the prevailing theory during the 1980s and 1990s was that the immune systems of people with CFS simply did not shut off after the initial infection, but remained on "high." This was considered the driving force behind CFS/ME, and, not coincidentally, is the basis for autoimmune disease.

Nonetheless, the idea that CFS/ME was an autoimmune disease languished for decades, even though the on-the-ground evidence has been apparent all along. The waxing and waning symptoms that are typical of CFS/ME are also typical of autoimmune diseases. Frequent comorbidities of CFS/ME with autoimmune diseases - e.g. Sjögren's Syndrome and Hashimoto's disease - were tip-offs that an autoimmune process was involved. And even if researchers didn't care to take symptoms and comorbidity into account, there were dozens of studies documenting immune system abnormalities, particularly increased inflammatory cytokines, as well as a high incidence of markers such as antinuclear antibodies (ANA), and anti-cardiolipin antibodies (ACA), both of which are associated with autoimmunity.

The sad fact is that although the evidence was there, it was ignored. In a recent review of the accumulated evidence for autoimmunity in CFS/ME (in a chapter titled "Chronic Fatigue Syndrome/Myalgic Encephalomyelitis and Parallels with Autoimmune Disorders") Ekua Brenu and associates cite over 180 related articles. Their conclusion? "CFS/ME may have a potential to be described as autoimmune, as this is the only consistent immunological abnormality associated with CFS/ME."

Given the thorough nature of the review, Brenu's conclusion, however cautious, was warranted. And, bearing out Brenu's review, as well as the rituximab studies, in March 2013 a UK study by Bradley et al found an increased number of naïve B-cells in patients with CFS/ME. An increase in naïve B-cells is a hallmark of autoimmune disease. In short, if it walks like a duck, and it quacks like a duck, it's a duck.

Apropos of the rituximab studies, and as an excuse for not noticing the duck-like nature of CFS/ME, Neimark quotes rheumatologist Jonathan Edwards as saying, "T-cells were in fashion for a long time. B-cells were just considered boring." It is hard to imagine that the absence of research on fully half of the immune system could be due to the whims of fashion, but whimsy is only part of the explanation for this exercise in mass denial. The other component is that the major players in our health care system - government agencies, researchers, physicians, insurance companies – have had a vested interest in perpetuating the myth that CFS/ME is an unknown and unknowable entity.

Norwegians, apparently, have less invested in the myth. When the results of Fluge and Mella's rituximab study were made public, the Norwegian Directorate of Health Deputy Director Bjørn Guldvog was prompted to issue a televised apology. "I think that we have not cared for people with ME to a great enough extent," he said. "I think it is correct to say that we have not established proper health care services for these people, and I regret that."

We look forward to hearing something similar from the CDC.

By Erica Verrillo

Notes from the recent Invest in ME conference

A good overview of where the recent 'Invest in ME conference' covers auto-immunity is at the following link: http://phoenixrising.me/archives/25516

However, I've cherry picked the following points which may be of interest. These are lay-person notes and should be treated as such.

1) It was previously thought that the immune system of the body could not access the brain because of the blood-brain-barrier. The brain having its own immune system. Although the brain does have its own immune system the immune system of the body can access the brain. Therefore autoimmune illness can reach the brain causing central nervous system symptoms.
2) Autoimmune illness could in theory attack mitochondria including the trans-locater protein process.
3) If mitochondria are creating energy it's aerobic. If it's the rest of the cell having to make the energy it's anaerobic. Anaerobic is the basic way of creating energy (e.g. it's used by bacteria) which results in a lot of waste products (e.g. lactic acid).

4) The origin of the type of B-cell is random. They are not initially created for particular antigens (something the immune system attacks). Therefore, anyone can get autoimmunity at any time. In fact, most everyone does have a level of auto-immunity.
5) Auto-immunity can be triggered by significant illness (e.g. late glandular fever).
6) An autoimmune B-cell has overcome two self-checks which are meant to prevent auto-immunity.
7) Once a B-cell has connected with something it considers appropriate to attack it will call for reinforcements to look for the same thing.
8) People who think they are still tackling Lyme disease may actually be suffering from auto-immunity that the Lyme disease caused.

Insight from James Roberton about a risk of Rituximab called PML
Directly below, James has provided some insight about PML which is a risk of taking Rituimab. James has also sourced the next article in this newsletter that shows an example of possible future alternatives to Rituximab.

Background information first:

> A known risk of using Rituximab is a condition called PML (Progressive multifocal leukoencephalopathy). PML is a rare but usually fatal viral disease. It is caused by the JC virus which is normally present and kept under control by the immune system. Immunosuppressive drugs (such as Rituximab) prevent the immune system from controlling the virus.

James' insight:

> There have been some case reports of PML in autoimmune patients. However the vast majority of cases are HIV, cancer or transplant patients, all of whom experience more drastic immune suppression.
>
> Using Rituximab in rheumatoid arthritis (RA) patients increases the risk of PML 10 fold from 0.4/100,000 to 4/100,000. So, if I understand correctly this means even RA patients who haven't taken Rituximab have a small risk of getting PML. Presumably they have a degree of immune suppression due to standard medical therapies or just naturally associated with their autoimmune disorder.
>
> **Further reading:**
> www.ncbi.nlm.nih.gov/pubmed/22281228
>
> > **Exert about PML from the link directly above:**
> > Most reported cases of PML occurred in HIV-infected patients (80% of cases), patients with lymphoid malignancies (13%) and transplant recipients taking immunosuppressants (5%). Less often, PML has been described in patients with chronic inflammatory joint diseases associated with autoimmune disorders (lupus, rheumatoid arthritis [RA] and vasculitis) (2%)
>
> www.ncbi.nlm.nih.gov/pubmed/22281228
> www.ncbi.nlm.nih.gov/pubmed/19264918

Autoimmunity could be 'switched off' by retraining the immune system

Source: www.telegraph.co.uk/health/healthnews/11073397/Multiple-sclerosis-could-be-switched-off-by-retraining-immune-system.html
By Sarah Knapton, The Telegraph - Science Correspondent
3rd September 2014

Scientists believe they have discovered a way to ‘switch off’ autoimmune diseases like multiple sclerosis or Type 1 diabetes by retraining the immune system.

Autoimmune diseases are so debilitating because they trick the body into attacking itself.

But a team at Bristol University has shown that the immune system can be taught to stop treating harmless everyday proteins as if they were dangerous invaders.

In Multiple sclerosis (MS) the immune system attacks the myelin sheaths which protect nerve fibres.

The nerves carry messages to and from the brain and if they are disrupted it leads to a host or problems such as loss of mobility, vision impairment and fatigue.

However by synthesising proteins from the sheaths in a lab, and then injecting them into the blood stream at increasing doses, the body begins to learn that they are safe.

This type of therapy has already been used for allergies in a treatment known as ‘allgergic desensitisation’ but it’s only recently that scientists have thought that it could be useful elsewhere.

Researchers at the University of Bristol, said the ‘important breakthrough’ could improve the lives of millions of people who are suffering from a range of diseases.

First author Dr Bronwen Burton said: “The immune system works by recognising antigens which could cause infection.

“In allergies the immune system mounts a response to something like pollen or nuts because it wrongly believes they will harm the body.

“But in autoimmune diseases the immune systems sees little protein fragments in your own tissue as foreign invaders and starts attacking them.

“What we have found is that by synthesising those proteins in a soluble form we can desensitise the immune system by giving an escalating dose.”

The team hope that the breakthrough could lead to the development of immunotherapies for individual conditions, based on the protein or antigen that the body is responding too.

As well as MS, conditions which could be ‘switched off’ include Type 1 diabetes, Graves' disease and systemic lupus erythematosus.

MS alone affects around 100,000 people in the UK and 2.5 million people worldwide.

Professor David Wraith, of the university's School of Cellular and Molecular Medicine, said the research opened up ‘exciting new opportunities.’

"These findings have important implications for the many patients suffering from autoimmune conditions that are currently difficult to treat,” he added.

The goal is to reinstate ‘self-tolerance’, where an individual's immune system ignores its own tissues while remaining fully armed to protect against infection.

Currently autoimmune diseases are treated with drugs which suppress the immune system but they are associated with side effects such as infections, development of tumours and disruption of natural regulatory mechanisms.

The treatment is currently undergoing clinical development through biotechnology company Apitope, a spin-out from the University of Bristol, where it is being trialled in humans.

The breakthrough was welcomed by charities who said it offerd a ‘low risk’ alternative to current treatments.

“This is a really interesting and encouraging study, and adds to our understanding of how scientists might be able to alter the way the immune system responds in people with MS,” said Nick Rijke, Executive Director of Policy & Research at the MS Society

The research was published in the journal Nature Communications.

Where Fibromyalgia and ME/CFS part ways (and where they don’t)

Source: www.cortjohnson.org/blog/2014/08/08/fibromyalgia-chronic-fatigue-syndrome-part-ways
By Cort Johnson 8th August 2014

ME/CFS and Fibromyalgia are sister illnesses. The most famous distinction being pain as a predominant symptom in Fibromyalgia. Although somewhat bio-technical, I thought this article was interesting as a more in-depth comparison.

Above paragraph by Newsletter Editor

Lately we’ve seen what appears to be a great deal of similarity in muscle issues in Chronic Fatigue Syndrome and Fibromyalgia. We know that Dr. Bateman and others believe ME/CFS and Fibromyalgia occur on a fatigue-pain continuum – that they are similar disorders that differ in the amount of fatigue and pain present. They both predominantly affect women, and similar medications are used in both.

Both Dr. Natelson and the Lights, however, have found differences in ME/CFS + FM vs ME/CFS patients alone, and Natelson argues that they’re quite different disorders. Now a recent study demonstrates an important way that this is so.

Reduced levels of BDNF – described as a nerve repair agent – were recently found in Chronic Fatigue Syndrome and multiple sclerosis. The levels found – less 25% of normal – were stunningly low, and this suggested that neuron functioning was taking a real hit in both these disorders. ((*An overview of the BDNF study is included as the next article in this newsletter*)).

Given the nerve damage found in MS, that result was expected for MS – but not in ME/CFS. A recent Fibromyalgia BDNF study seems to portray a very different disorder. It examined BDNF and a marker of central sensitisation (S100B) in the blood of fifty-six FM patients and then determined if this correlated with pain pressure thresholds (the threshold at which pressure starts producing pain).

The lower the pain threshold, the more pain a person is in. The study did not involve healthy controls and thus did not, strictly speaking, determine if BDNF levels were higher or lower than normal in FM.

Microglia activation and central sensitisation
Before we get to the findings, let's look at S100B. S100B is such an intriguing factor that it's surprising it hasn't been studied before in FM or in any other pain disorders. S100B up-regulates two key cytokines, IL-1b and TNF-a, both of which may be involved in FM and ME/CFS. It also activates the nuclear transcription factor which Maes proposes underlies the inflammatory milieu in ME/CFS and depression. It is also considered a surrogate for microglial activation.

Study findings
This study found that increased BDNF and S100B levels were associated with increased pain sensitivity in FM. Other studies have found increased BDNF levels in FM as well. These FM findings contrast sharply with the decreased BDNF levels found in ME/CFS. With regards to BDNF, ME/CFS looks more like multiple sclerosis than it does Fibromyalgia.

High levels of excitation vs low levels of nerve repair?
While high levels of BDNF in FM look like they're enhancing the activity of excitatory pain pathways in FM, low levels of BDNF in ME/CFS look like they may be impeding neuron repair and slowing down nerve transmission. Could FM be a disorder of brain excitation while ME/CFS is a disorder of brain loss and slowed functioning? Could it be that simple?

A quick look at the research findings in ME/CFS and Fibromyalgia indicate more overlaps than dissimilarities. Both are characterized by sympathetic nervous system activation, reduced aerobic capacity, increased lactate levels (in one place or another), reduced brain blood flow, decreased cortisol, and decreased grey matter in the brainstem.

Similarities between the ME/CFS and Fibromyalgia

Both ME/CFS & Fibromyalgia have:

Reduced heart rate variability – sympathetic nervous system activation

Reduced aerobic capacity

Homocysteine increased in spinal fluid

Reduced brain blood flow

Neuropeptide Y increased

Reduced salivary awakening response cortisol

IL-6 increased

Decreased grey matter – brainstem

COMT Polymorphism in ME/CFS and implicated in Fibromyalgia.

Increased lactate in ME/CFS brain. Increased lactate in Fibromyalgia muscles and problems with lactate metabolism.

Differences between the ME/CFS and Fibromyalgia

Substance P increased in Fibromyalgia but reduced in ME/CFS

BDNF increased in Fibromyalgia but reduced in ME/CFS

IL-8 increased in Fibromyalgia but decreased ME/CFS

Leptin reduced in Fibromyalgia but increased in ME/CFS

Central Sensitisation – the Key?
It's intriguing that the two major differences between the two disorders, increased substance P and BDNF in Fibromyalgia, are associated with central nervous system activation. Given the high amount of pain and problems with stimulus overload, we've assumed ME/CFS is also a central sensitisation disorder. Yet two markers associated with central sensitisation that are elevated in Fibromyalgia, BDNF and substance P, are not elevated – or are actually lowered – in ME/CFS.

The excitatory neurotransmitter glutamate is also clearly increased in some parts of Fibromyalgia patients' brains, but a CDC gene expression study suggested decreased glutamate uptake may be present in ME/CFS.

At the Stanford Symposium Dr. Zinn described an ME/CFS brain characterised by substantial 'slowing'. It was a brain that seemed to be more asleep than awake. On the other hand, Jason has proposed that limbic kindling produces a kind of 'seizure activity' in parts of the brain in ME/CFS, and high levels of neuropeptide Y and reduced heart rate variability indicate the sympathetic nervous system is activated in both disorders. Klonopin (clonazepam), a nervous system inhibitor, is used in treating both disorders. In the end it may be that, like the immune system in ME/CFS, parts of the brain are over - and under- activated in both disorders.

Conclusion
Increased levels of BDNF and S100B levels are associated with increased pain sensitivity in Fibromyalgia. They join a variety of other markers of central sensitization markers found in FM. Differing levels of BDNF and substance P in Chronic Fatigue Syndrome and Fibromyalgia suggest that the two disorders differ in important ways. However, the two disorders share many more commonalities than differences. The central nervous system could be, however, where the two disorders diverge. Pain is common in ME/CFS, but it appears that the pain is, at least in part, being produced in different ways than it is in Fibromyalgia.

Brain derived neurotrophic factor (BDNF) is decreased in ME/CFS and Multiple Sclerosis

Source: http://omicsonline.org/neurology-neurophysiology-abstract.php?abstract_id=25722
Article discovery: Will Marsden (Group member)

The following is an abstract from a research study. The full study can be found on the page that the link, directly above, will take you to.

Objective:
This study examined the levels of a major regulator of neuronal survival, brain derived neurotrophic factor (BDNF) in two populations: individuals with multiple sclerosis and chronic fatigue syndrome. BDNF is a protein involved in the maintenance and maturation of both peripheral and central neurons.

In patients with multiple sclerosis, BDNF expression is often decreased and believed to reflect ineffective repair mechanisms. As a preliminary exploration, we examined the production of BDNF on the part of peripheral blood mononuclear cells in three groups: patients with Chronic Fatigue Syndrome (CFS [n=15]), patients with multiple sclerosis (n=57), and a set of putatively healthy controls (n=37).

Methods:
Mononuclear cells were extracted from peripheral blood samples and cultured for 48 hours. Production of BDNF was evaluated from phyto-haemagglutinin (PHA) and phorbol-12-myristate-13-acetate (PMA) stimulated and unstimulated cells. BDNF levels were determined using a commercially available enzyme linked immunoabsorbent assay (sensitivity: 62.5-4,000 pg/mL).

Results:
Both CFS and MS samples displayed nearly identical levels of BDNF, levels that were 25 percent of that displayed by the healthy control sample. For unstimulated cells, the BDNF values were 404.71 pg/ml for the CFS sample, 573.33 pg/ml for the MS sample and 1,114.15 pg/ml for the control sample. For stimulated cells, the BDNF values were 442.55 pg/ml for the CFS sample, 367.33 pg/ml for the stimulated MS sample, and 1432.24 pg/ml for the stimulated control sample.

Conclusion:
The decreased production of BDNF on the part of MS patients is consistent with the literature. However, the decreased production in those with CFS was unexpected and a novel finding. This finding could reflect a reduced ability to maintain neuronal structure and function in those with CFS. Future studies are needed to evaluate for neuronal damage in those with CFS.

NLRP3 inflammasome is activated in Fibromyalgia: the effect of coenzyme Q10

Source: www.ncbi.nlm.nih.gov/pubmed/23886272
Article discovery: Will Marsden (Group member)

The following is an abstract from a research study that would suggest supplementation with Co-Q10 is advisable for Fibromyalgia sufferers. A group member has added at the end that an Omega-3 supplement may also be advisable.

Above paragraph by Newsletter Editor

Aims
Fibromyalgia (FM) is a prevalent chronic pain syndrome characterized by generalized hyperalgesia associated with a wide spectrum of symptoms such as fatigue and joint stiffness. Diagnosis of FM is difficult due to the lack of reliable diagnostic biomarkers, while treatment is largely inadequate. We have investigated the role of coenzyme Q10 (CoQ10) deficiency and mitochondrial dysfunction in inflammasome activation in blood cells from FM patients, and in vitro and in vivo CoQ10 deficiency models.

Results
Mitochondrial dysfunction was accompanied by increased protein expression of interleukin (IL)-1β, NLRP3 (NOD-like receptor family, pyrin domain containing 3) and caspase-1 activation, and an increase of serum levels of proinflammatory cytokines (IL-1β and IL-18). CoQ10 deficiency induced by p-aminobenzoate treatment in blood mononuclear cells and mice showed NLRP3 inflammasome activation with marked algesia. A placebo-controlled trial of CoQ10 in FM patients has shown a reduced NLRP3 inflammasome activation and IL-1β and IL-18 serum levels.

Innovation
These results show an important role for the NLRP3 inflammasome in the pathogenesis of FM, and the capacity of CoQ10 in the control of inflammasome.

Conclusion
These findings provide new insights into the pathogenesis of FM and suggest that NLRP3 inflammasome inhibition represents a new therapeutic intervention for the disease.

Comment from Will Marsden (Guildford ME Group member)
This research has shown one of the major pathways causing pain in Fibromyaglia - the NLRP3 inflammasome activates in response to damage and danger signals (e.g. oxidative stress) and can be blocked with CoQ10 and omega-3. A link to further information about omega-3 is included below:

www.sciencedirect.com/science/article/pii/S1074761313002422

Esther's Xifaxin Story **(The relevance of Small Intestinal Bacterial Overgrowth – SIBO)**

Source: www.cortjohnson.org/blog/2014/06/06/gut-brain-esthers-chronic-fatigue-syndrome-xifaxin-story
By Cort Johnson 6th June 6 2014

> "It's impossible to describe the awe I (and my husband) feel as I am able to do things I haven't been able to do for so many years."

Here we recount Esther's amazing experience with Xifaxin (Rifaxamin), an antibiotic often used to treat small intestinal bacterial overgrowth (SIBO). Esther had been ill for decades with severe Chronic Fatigue Syndrome (ME/CFS) but it wasn't until she treated her gut symptoms (which she'd considered secondary to ME/CFS) before she experienced major improvement. First we look at Esther's history with ME/CFS and then her life-altering (if not completely curative) experiences with Xifaxin – a drug she continues to take today.

> "Twenty-seven years ago I was taking care of three children, ages 8 months, 4 years and 13 years plus my 80-year old Dad who had Alzheimer's disease. Towards the end of my pregnancy, perhaps two months before my third baby was born, in the summer of 1985, my husband and I visited Lake Tahoe for a week. I remember I was very big and had to push myself to get through the vacation."

After the birth of her third child her time with ME/CFS began.

> "My third child was born November 20, 1985, and by the following summer we had new a family joke. I'd so often said I was sick and tired that we began abbreviating it to S&T. At the time I was preparing for my daughter's and my double bat mitzvah. I would wake up in the mornings feeling fine, but by the afternoon I was S&T, only to feel well the next morning. That was until S&T became my full time occupation."

Tests revealed she had a chronic EBV infection. As she worsened she became bedridden, very weak, and extremely cognitively impaired.

> I was one of the lucky ones! My long-term internist asked me if I'd been in Tahoe in the previous year. He said to rest and I'd probably be better in six weeks.

> I wasn't and when I went back, he began testing my EBV titers, discovered I had a chronic EBV infection, told me there was nothing that could be done (no anti-virals at that point) and that I should just go home and rest. So I did. I was completely bedridden for a year. I was unable to even follow a sitcom on TV.
>
> My keenest memory is being so weak that I couldn't turn my head in bed and would only move my eyes if necessary. We used to call this weakness "Raggedy Ann" in those days; it was like a faux paralysis. I remember crawling to the bathroom and then laying on the floor after going until I had the strength to get back to bed.

Besides the fatigue she also experienced weakness, PEM, flu-like aching which was extremely severe as her infection resolved, persistent sore throat (tonsils removed), swollen lymph nodes, sound/light hypersensitivities, allergies, cognitive decline, memory and concentration problems, shrunken brain with lesions, sleep problems, sleep apnea, fibromyalgia, emotional lability, and neurally mediated hypotension. When her EBV titers began to decline after a year, she marginally improved and was able to spend some time downstairs in her recliner with her family. After two years her very slow pace of recovery had left her depressed.

> Somehow, I had unconsciously decided I would be well by the two year mark. When I hit that mark and didn't, I became deeply depressed. It took me some time to figure out that I had set an internal deadline to be well by then, and I was angry that I was still sick after my worst-case deadline.

Her family life, of course, had taken a huge hit. Against her doctor's orders she nursed her child, but contact with him and her other boy was limited as her weakness and cognitive issues made it difficult for her to communicate clearly.

> I didn't see him much and I remember his crawling up the stairs to my bedroom and knocking on my door and hearing the caretaker saying, "Mommy can't take care of you now," as she took him back downstairs. I'm saddened to this day that I really don't remember him as a baby and toddler. Neither of my sons have any memory of me as a well person. My husband and I can hardly remember what I was like when I was well. I got sick only five years into our marriage.

Over time, Esther tested positive for herpesviruses (EBV, HSV-1), and a brain MRI showed lesions and shrinkage. She was diagnosed with orthostatic intolerance (orthostatic hypotension), sleep apnea, and hypothyroidism.

She was on torvastatin, omeprazole, Reglan (for gastric reflux), Altace (Ramapril, for high blood pressure), Ambien, Amlodipine (for high blood pressure), Cymbalta, Levothyroid, and Trazadone (for sleep). Throughout her ME/CFS and before, she'd had gut symptoms — noisy but painless gurgling sounds, and occasional diarrhea and nausea, and was diagnosed with gastric paresis. She used various remedies (anti-reflux, anti-diarrhea, antacids, anti-gas pills) to control her gut issues. They were so minor compared to her other problems and so easily controlled that she felt they were of little consequence. She was very wrong.

Xifaxan (Rifaxamin)
It was not until her GI symptoms became severe (frequent stomach pain, diarrhea, gas and 'rotten egg' burps) in 2011, that she got professional help for them. A colonoscopy was normal and a gastric emptying study revealed delayed emptying of both liquids and solids.

In 2011 under her gastroenterologist's direction she began Xifaxan at 550 mg 3X day for about 10 days to treat Small Intestinal Bowel Overgrowth (SIBO).

Amazing and rapid transformation
Within a week, in what she called “an amazing transformation”, she felt better and had more energy than she’d had in years. We don’t usually connect gut problems with orthostatic intolerance, but for the first time in years she was able to stand without symptoms.

> “What really knocked me and my family for a loop was that I could do more, stand longer, etc. They kept telling me to sit down and they’d do whatever and I said; amazed, I don’t need to sit down now.“

Cognition greatly improved
We don’t usually connect gut problems with the brain or cognitive functioning or depression, either, but her cognitive functioning increased greatly as well. She went off her antidepressants, cut out Xanax and Ambien, halved her dose of Trazodone, and said goodbye to her shrink. Esther’s gut had clearly been affecting her brain.

A different kind of ‘tired’

> “You’d think that having had so much experience being ‘fatigued,’ I’d have no problem telling when I was tired from my new level of activities. Not so! Normal tired is so mild as to be almost undetectable! It is nothing like the ME/CFS exhaustion and malaise and weakness and sick feeling that was my common state for 25 years.
>
> No wonder saying we’re fatigued doesn’t register with well people!” Sleep is Refreshing! “After so many years of sleep problems and the constant use of multiple sleep medications every night, I can go to sleep relatively easily (though not as fast as I’d like some nights) without any sleep medication and wake up refreshed. I do notice that, even without any sleeping pills, it takes me a little while to feel ready for the day. I need some down time then, maybe because I’m a night person.
>
> “I haven’t given up using a half dose of Trazadone before bed yet, because I’m just not willing to rock the boat at this time. On very rare occasion, especially if my bladder is waking me up too much or something is bothering me making it difficult to go back to sleep, I will take a Xanax to go back to sleep. Not getting a good night’s sleep for any reason definitely diminishes my energy; I need to sleep many hours a night to feel my best.”

Living life!
“In May of this year, my husband and I took a 19-day, 4-city trip across the country and although I didn’t do everything I wanted, feeling the need to rest at times, my husband and I were both amazed at how much I could do including visiting with family and friends and even sight-seeing in multiple locations!”

Not well either!
Esther thought Xifaxan might be ‘it,’ but it wasn’t. She still has days where she’s limited to three for four hours of activity. She’s not well, but she is very, very much improved.

> “My experience with Xifaxan has produced such a miraculous improvement, giving me a life again after so long. I hope research will be done to explore the connection between IBS, SIBO, ME/CFS, and Xifaxan to help many others.”

Ongoing use
She went on and off Xifaxan three times, and each time saw her symptoms return within a couple of days. Her gastroparesis which feeds her small intestinal bowel overgrowth (SIBO) appears to require that she take Xifaxan regularly. Two years later she continues to take 600 mg of Xifaxan three times a day. Her insurance is continuing to pay.

In the beginning Esther was told her recovery probably wouldn't last and that people with gastric problems were most likely to benefit. She knows several people who've been helped by Xifaxan who've gotten worse when taken off of it.

(I know of someone who recovered while on Xifaxan who no longer needs to be on it, so maybe there's hope.) Her ME/CFS doctor, Dr. Andreas Kogelnik in Mountain View, CA, is continuing to follow her progress.

Long-term use

The possible development of treatment-resistant strains has made long-term antibiotic use a no-no for most doctors. Rifaximin was judged safe, however, for long term use (>24 months) in hepatic encephalopathy (HE) patients, a group that shares some interesting symptoms (sleep problems – days/nights reversed, cognitive issues) with ME/CFS. (HE is believed caused by high ammonia production from gut bacteria. It induces encephalopathy by altering the blood/brain barrier, decreasing blood flow, or promoting cerebral edema.)

They stated that the risk of development of resistant bacteria appears to be low, but acknowledged that better quality trials are needed to fully assess Rifaximin's long term safety. Rifaximin is a broad-spectrum antibiotic that is believed to have little effect on normal gut bacteria. It was FDA approved for travelers' diarrhea in 2004 and for HE in 2010. One study suggested higher doses (1200 mg/day) were more effective in the treatment of small intestine bacterial overgrowth (SIBO). A recent study suggested that a herbal preparation may be as effective as Rifaxamin in the treatment of SIBO.

Xifaxan 550 mg is very expensive, about $2200 a month out of pocket for a 3X's a day dose. So far the FDA has not approved it for use with IBS and SIBO.