

## Chronic Fatigue Syndrome and Fibromyalgia

- Jacob A. Teitelbaum, MD

ADHD/ASD

ANTIAGING

CARDIOVASCULAR

CHRONIC FATIGUE

DETOXIFICATION

DIGESTION

IMMUNE HEALTH

METABOLISM

MENS HEALTH

MUSCULOSKELETAL

PODIATRY

NEUROLOGICAL

SEXUAL HEALTH

WOMEN'S HEALTH

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This is a fast paced world. We are all busy; living our full lives, burning the candle at both ends. We all get tired. We all get sick from time to time and maybe even depressed. But the illness called chronic fatigue syndrome is not like the normal ups and downs that we experience in everyday life. People with chronic fatigue syndrome feel overwhelming fatigue, and often pain as well. This is an illness that does not go away with a few good nights' sleep. It drags on and on and doesn't resolve itself. It steals vigor and energy over months, and sometimes even years.

In this issue of *Integrative Interventions*, we will talk about powerful vitamins, minerals, amino acids, and herbs combined in scientifically validated formulas that people with chronic fatigue syndrome or fibromyalgia can use every day. These nutrients can help address some root problems of chronic fatigue syndrome and fibromyalgia by restoring energy and health to sufferers.

### Q. What is chronic fatigue syndrome?

A. Chronic fatigue syndrome (CFS) also known as chronic fatigue and immune dysfunction syndrome (CFIDS), or myalgic encephalomyelitis (ME)<sup>1,2</sup> is a group of symptoms associated with unrelenting and debilitating fatigue.<sup>1,2</sup> The profound weakness of CFS causes a persistent and substantial reduction in activity level. You feel too tired to do normal activities or are easily exhausted for no apparent reason.<sup>1,3</sup>

Beside extreme fatigue, symptoms of CFS include general pain, mental fogginess, flu-like symptoms, and gastrointestinal problems. A list of symptoms includes:<sup>2-4</sup>

- Headache
- Frequent infections, such as sinus or respiratory infections, swollen glands, bladder infection or yeast infections
- Muscle and joint aches
- Inability to concentrate or "brain fog"
- Allergies to foods and medications
- Anxiety and depression
- Decreased sex drive

The number of symptoms and the severity of these symptoms can vary among people.

The symptoms of CFS hang on or reoccur frequently for more than six months.<sup>3</sup>

*Q. Are chronic fatigue syndrome and fibromyalgia considered to be the same illness?*

A. Fibromyalgia syndrome (FMS) is a painful shortening of muscles throughout the body.<sup>5</sup> FMS is basically a sleep disorder characterized by many tender knots in the muscles. These tender knots, called tender or trigger points, are a major cause of the achiness that people with fibromyalgia and CFS feel.<sup>6</sup>

Approximately 80 percent of chronic fatigue syndrome patients have received an overlapping diagnosis of fibromyalgia syndrome. For most people, fibromyalgia and chronic fatigue syndrome are the same illness.<sup>6,7</sup>

*Q. What causes chronic fatigue syndrome?*

A. There are many causes that can trigger CFS. Current research is looking at the roles of neuroendocrine dysfunction, viruses, environmental toxins, genetic predisposition, food sensitivities, yeast overgrowth, faulty digestion, or a combination of these factors.<sup>2</sup>

For many people, CFS is triggered by a bout with a viral illness (like a cold or the flu), or even a stressful event.<sup>2,3</sup> CFS is usually a mix of underlying causes. It is like a domino effect in that each problem can trigger another problem, and so on. For example, fatigue and poor sleep can trigger a weakened immune system, which can, in turn, trigger yeast or bacterial infections.<sup>8</sup>

*Q. Who gets chronic fatigue syndrome?*

A. CFS is more common than you might expect. It strikes people of all ages, racial, ethnic, and socioeconomic groups. Approximately 800,000 people nationwide have CFS and over six million have fibromyalgia at any given time.<sup>9,10</sup>

It is important to stress that CFS is a real illness; it is not “just in your head.” Unfortunately, sufferers of CFS may find that many healthcare practitioners discount the symptoms of this illness or misdiagnose it as another disease. This can lead to additional emotional suffering.

*Q. How long does chronic fatigue syndrome last?*

A. The illness varies greatly in its duration. Some people recover after a year or two. More often, those who recover are more likely to do so three to five years after onset. Yet for some people, the illness seems to simply persist. There are rare cases of spontaneous

improvement after five years without undergoing any treatment. However, this is very unusual.<sup>2</sup>

*Q. What are the complications of chronic fatigue syndrome?*

A. The patterns of CFS vary from individual to individual. However, many common patterns of symptoms are seen in CFS sufferers. These symptoms and problems interact and create new symptoms and problems. For example, infections and disrupted sleep can lead to digestive, hormone, and immune problems.<sup>11</sup>

### ***Infections***

The most notorious pattern seen in CFS states is the one in which a person suddenly comes down with a flu-like illness that doesn't go away. These viral or bacterial infections can suppress the body's master gland, the hypothalamus. Since the hypothalamus controls the other glands, including the adrenals, ovaries, testes, and thyroid, suppression of this gland will lead to a subtle but debilitating decrease in the functioning of all glands and their hormones.

Suppressed hypothalamic function from chronic infections can then trigger sleep dysfunction.<sup>12</sup>

### ***Disrupted Sleep***

The suppression of the hypothalamus gland can lead to poor sleep because the body confuses its day/night cycles. Because of this, people with CFS have trouble staying in the deep, restorative stages of sleep that “recharge their batteries.”<sup>13</sup>

Poor sleep can cause immune suppression, which may lead to secondary bowel infections. The bowel infections seen in people with CFS can cause decreased absorption of nutrients, which can lead to chronic vitamin and mineral deficiencies.<sup>13</sup>

*Q. Is there a cure for chronic fatigue syndrome?*

A. Treating chronic fatigue syndrome presents a significant challenge to people with CFS and their healthcare practitioners. Recently, a published placebo-controlled study (of which I was the lead investigator) showed that when using an integrated treatment approach, over 85 percent of CFS and fibromyalgia patients can improve – often dramatically. The full text of this study can be seen at ‘[www.endfatigue.com](http://www.endfatigue.com)’. An editorial in the April 2002 issue of the *Journal of the American Academy of Pain Management* noted that this treatment, which I developed, is now a highly effective and excellent part of the standard of practice for treatment of

fibromyalgia. Since this treatment addresses many different problems associated with CFS/FMS, it needs to be individualized to each patient.<sup>15</sup>

### **Medical Treatments**

Medications that provide symptom relief are frequently the first line of treatment chosen by healthcare practitioners for the person with CFS. These include medications for pain, sleep disturbances, digestive problems such as nausea, depression and anxiety, and flu-like symptoms.<sup>16</sup>

However, medications have not been universally successful because they tend to put a bandage on symptoms instead of addressing the root problems. Because of this, medications may need to be supplemented by the other supportive therapies that can address the root problems.

### **Supportive Treatments**

People with CFS/FMS may be depressed, given the catastrophic lifestyle disruption this disease may cause. They may also feel guilt and frustration because their symptoms were not taken seriously for such a long time. Fear can be a factor as employment and family relationships may be jeopardized by this illness.

Therapies that help people to relax and improve coping skills may be helpful and include counseling for emotional and mental health, cognitive behavioral therapy, sleep management therapy, and massage.<sup>16</sup>

### **Lifestyle Treatments**

Altered digestion, food intolerances, decreased energy, fatigue, cognitive problems, and sleeplessness create the need for changes in daily living routines. These can include: alterations in diet, exercise modifications, alterations in activities of daily living according to one's energy level, and sleep/rest management. All may require the assistance of professional clinicians, such as a nutrition specialist, physical and/or occupational therapists, mental health professionals, and sleep therapists.<sup>16</sup>

### **Other Treatments**

Many persons find complementary therapies such as acupuncture, tai chi, special diets, and herbal supplements to be helpful. Since treatments for CFS/FMS work best when tailored to the individual's needs, it is beneficial to work with an experienced healthcare practitioner to coordinate these interventions.<sup>16</sup>

*Q. What steps do I need to take to get well?*

A. Since the causes and symptoms of chronic fatigue syndrome and fibromyalgia are complex, the interventions to improve health and energy are somewhat involved. The multi-tiered regimen to get on the road to recovery is outlined below.

### **The Road to Recovery**

#### **Adequate Sleep**

Disordered sleep is the underlying process that drives many of the symptoms of CFS/FMS. The most effective way to eliminate pain in CFS/FMS is to get seven to nine hours of deep sleep each night.<sup>17</sup>

However, getting adequate sleep is easier said than done for CFS sufferers with underlying fibromyalgia symptoms. The muscle knots of fibromyalgia make it uncomfortable to lie in one position for extended time, causing difficulty in returning to deep sleep. Because of this, people with CFS/FMS do not stay in deep stages of sleep to recharge their "batteries." In addition, poor sleep can cause and be caused by the suppression of the hypothalamus gland, which causes the brain to think it is daytime instead of night.<sup>18</sup>

It may be helpful to use herbal products to promote good quality sleep. There are many natural supplements that are marketed as sleep formulas. To get the best results, it is very important that the right ingredients are in the sleep formula you buy. (See chart below)

<b>Herbal Ingredient</b>	<b>Effect on Sleep</b>
<b>Wild Lettuce</b>	<i>Has been found to have sedative effects.</i> <sup>19</sup>
<b>Hops</b>	<i>Acts as a mild sedative and has a sleep inducing effect.</i> <sup>20,21</sup>
<b>Jamaica Dogwood</b>	<i>Has been found to be mildly sedative and is often used for anxiousness.</i> <sup>22</sup>
<b>L-Theanine</b>	<i>Causes significant increases of neurotransmitter concentrations in brain, which promotes muscle relaxation and improves sleep.</i> <sup>23,24</sup>
<b>Valerian</b>	<i>This herb has been clinically studied for its ability to improve sleep quality.</i> <sup>25-33</sup>
<b>Passion Flower</b>	<i>This herb eases nervousness and insomnia.</i> <sup>34,35</sup>

Therefore, it is important to look for an herbal sleep formula that is especially formulated for people with CFS/FMS. The combination of herbs is important as each herb addresses a different aspect of sleeplessness and muscle tension.

### **Daily Nutritional Supplementation for Energy**

Good overall nutrition is important for everyone, of course. However, there are several vitamins, minerals, and amino acids that can have powerful nutritional effects for a person with CFS. The chart below lists the most critical ingredients. You can see that almost all of the vitamins and minerals in a chronic fatigue/fibromyalgia formula should work together synergistically to help improve energy levels and overall health.

#### **Vitamins and Minerals**

**Vitamin E:** Helps to relieve pain in CFS patients. Can also improve night leg cramps, which interferes with sleep.<sup>36</sup>

**Vitamin C:** Enhances immune function by increasing natural killer cells, B and T cells. Can prevent chronic bladder infections by acidifying urine.<sup>37-44</sup>

**Vitamin D:** Regulates immune functions of monocytes and neutrophils.<sup>45-47</sup>

**Magnesium:** Involved with immune support. Working with malic acid, enhances immune function by increasing natural killer cells. Magnesium is also critical for the relief of muscle pain.<sup>48,49</sup>

**Inositol:** Enhances immune function by increasing natural killer cells.<sup>50</sup>

**Malic Acid:** Working with magnesium, improves energy levels by improving cellular functions. Especially important in muscle metabolism.<sup>49</sup>

**Amino Acids:** Glycine, Serine, Taurine, Tyrosine are essential for the production of energy in the body. Also essential for brain function.<sup>51</sup>

**Zinc:** Supports the immune system by enhancing neutrophil activity and supporting healthy antigen-antibody binding.<sup>52,53</sup>

**Selenium:** Supports immune function by enhancing antibody production.<sup>54,55</sup>

**Fructooligosaccharides:** Provides nutrition for good bacteria in the intestinal tract, improving digestion and healthy microflora.<sup>56</sup>

All of the vitamins, minerals, and other nutritional supplements on the list are important to ensure recovery from chronic fatigue syndrome. To ensure that your nutritional supplement regimen contains all of these ingredients, look for a powdered supplement

formulated specifically for CFS/FMS sufferers that can be reconstituted in a beverage of your choice. A powdered drink mix is a pleasant, easy way to ensure that you are taking all of the needed vitamins, minerals, and amino acids that will give you the needed energy to recover from your illness.

### **B Vitamin Complex for Energy**

In addition to the powdered energy drink mix, it is important that you also take a vitamin B-complex supplement specifically formulated for people with CFS/FMS. The B vitamin formula, which should include niacinamide, thiamin, riboflavin, vitamin B6, vitamin B12, pantothenic acid, and choline, is especially important to restore the energy production needs of your body, as well as for mental function. It is also important to make sure that the dosages are high enough for CFS/FM needs.<sup>57,58</sup> The chart below lists the B vitamins that are critical for people suffering from CFS.

<b>B Vitamins</b>	<b>Effect on CFS</b>
<b>Niacinamide</b>	<i>Essential vitamin that is a component of the body's energy furnace, helping to improve fatigue and "brain fog".<sup>59</sup></i>
<b>Thiamine</b>	<i>Essential in the process of energy production. This vitamin also removes lactic acid from muscles, which causes them to be sore in fibromyalgia patients.<sup>59</sup></i>
<b>Vitamin B6</b>	<i>Working along with thiamine, this vitamin is critical in the process of energy production.<sup>59</sup></i>
<b>Pantothenic Acid</b>	<i>This vitamin improves adrenal gland function, which will boost energy levels. It can also aid in weight loss by decreasing appetite.<sup>60</sup></i>
<b>Folic Acid</b>	<i>Aids in strengthening the immune system, and aids in mental clarity and concentration.<sup>61</sup></i>
<b>Vitamin B12</b>	<i>Important for brain function and nerve repair. Aids in relieving fatigue symptoms in CFS patients.<sup>57</sup></i>

Studies have demonstrated that people with CFS/FMS are often deficient in many of the B vitamins, which tend to worsen their symptoms of fatigue and mental "fogginess" and ultimately lead to a weakened immune system.<sup>57,58,61,62</sup>

*Q. How often should I take chronic fatigue syndrome/fibromyalgia formula supplements?*

A. Because good quality sleep is so important to the recovery process, it is very important to take an herbal sleep formula that is specially formulated to help maintain deep restorative sleep in people with CFS/FMS. This should be taken every evening, about 30-60 minutes before bedtime to ensure that you get seven to nine hours of deep sleep each night.

After a good night's rest, a powdered energy drink mix formulated for people with CFS/FMS should be drunk along with a well-balanced breakfast. In addition to the nutritional beverage mix, a vitamin B complex supplement designed specifically for CFS sufferers, containing niacinamide, thiamin, riboflavin, vitamin B6, vitamin B12, pantothenic acid, and choline, should be taken every morning.

The nutritional drink mix and the vitamin B complex supplement will ensure that your body has all the vitamins, minerals, and amino acids to combat your overwhelming fatigue, pain, and "brain fog".

Together, these three interventions – sleep formula, morning energy drink mix, and energy B complex supplement – can make an incredible difference that you should begin to notice within one month of starting this program.

### **Conclusion**

Chronic fatigue syndrome and fibromyalgia are complex physical processes with physical causes. The unrelenting symptoms of fatigue, pain, and mental foggyiness can be overwhelming and frightening. Partnering with a healthcare practitioner specializing in CFS and utilizing different medical treatments, supportive therapies, and lifestyle changes are healthy ways to combat chronic fatigue syndrome. And taking nutritional supplements formulated specifically for people with CMS/FMS that help boost energy or help you get a good night's sleep can give you critical control over the outcome of your illness and set you on the road to recovery.

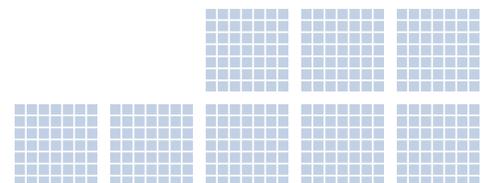
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