

# CHRONIC FATIGUE and Related Diseases

Chronic Fatigue Syndrome is a disease of unknown origin. Symptoms can vary from person to person but the main features are an almost deathly tiredness with acute muscle pain and often-intense allergic reactions to common environmental pollutants. It is often difficult to decide whether a particular symptom is part of the syndrome or as a result of the sufferer having CFS. This has led to all sorts of treatments and sufferers being dismissed as depressed and suffering from psychological illness. Most sufferers have had a viral illness associated with the onset of symptoms and that the disease is so debilitating that it affects the mental state of the sufferer as one would expect.

Numerous viruses have been proposed and rejected as likely causes. It is most likely that a combination of physical stresses and viral infection leads to an allergic type response. A raft of vitamin, amino acid and mineral deficiencies can explain most common symptoms. Whether these are caused by the disease or arise, as a consequence of having the disease is a moot point however correcting these deficiencies can dramatically improve your quality of life.

## **Essential Fatty Acids**

Linoleic and alpha-linolenic acid are the two fatty acids that the human body cannot synthesize. They make up a large proportion of cell membranes throughout the body and also are the first messengers to activate the immune system. They are instrumental in allowing nutrients from food to pass through the walls of the gastrointestinal tract. If the cells lining the wall of the gastrointestinal tract are deficient in these fatty acids then poor absorption of nutrients occurs. In wasting in AIDS patients little or no nutrients are absorbed as a result of a deficiency in these fatty acids in the cells lining the gut wall. This deficiency is caused directly by the HIV virus affecting these cells. Peak pioneered a treatment for AIDS patients that involved rubbing these essential fatty acids into the skin of the abdomen to correct this deficiency with good results. This type of deficiency has been shown in other chronic viral diseases. With CFS sufferers we have had good results as well. This is not a cure all but can dramatically improve your quality of life. The easiest way to do this is to rub approximately a teaspoon of flaxseed oil into the abdomen morning and night for 2 weeks. After this time it can be taken orally. Having attempted to restore the gastrointestinal tract you should be able to absorb other critical nutrients.

## **Folic Acid**

As with most things associated with CFS research results are often confusing and contradictory. Fatigue and depression are symptoms of both folate deficiency and CFS. A short duration study (1) showed no benefit however a longer study with high dose folate(2) showed good results. If considering Folate supplementation 10,000mcg daily for around 3 months is the appropriate treatments.

## **Vitamin B12**

A number of studies have shown that CFS and fibromyalgia sufferers have reduced Vitamin B12 in their bodies. As with Folic acid, Vitamin B12 deficiency is associated with tiredness and depression. Again there are contradictory results between low dose short duration trials and high dose longer trials. One of the best studies (3) showed that doses of B12 subcutaneously of 2500-5000mcg every 2-3 days for a 2 to 3 week period produced around 80% improvement in energy and stamina. A number of studies have indicated that Vit. B12 has an analgesic effect when taken orally (4). This effect is dose dependant, the higher the dose the lower the pain. An explanation for this effect is contained in (5) and this suggests that the effect is as result of changing the shape of blood cells that enhance oxygen-carrying capacity.

## **Other B Group Vitamins**

NADH (nicotinamide adenine dinucleotide)(the reduced form of Niacin) has been shown to significantly reduced CFS symptoms(10mg daily)(6).

Vitamins B1, B2 and B6 have also been shown to be deficient in CFS and some supplementation could be helpful

## **Vitamin C**

Again as with other Vitamins a deficiency of Vitamin c has similar symptoms to CFS. Large doses of Vitamin C have been shown to reduce pain in CFS. Around 1 gram 3 times per day. A number of studies (8,9,10,11) have shown that Vitamin C has beneficial immune enhancement properties.

## **Magnesium Deficiency.**

Magnesium deficiency and CFS have many common features. References 12 and 13 have shown reduced Magnesium levels in erythrocytes of CFS sufferers. Two studies have shown magnesium deficiency in around 40% of patients presenting with CFS.(14) Around 50% of CFS sufferers with Magnesium deficiency showed improvement.

## **Sodium Intake.**

Low Sodium has been shown to have produce symptoms similar to CFS. In a number of studies (15) a majority of CFS patients have been shown to be suffering from low Sodium. It is worth being tested for low Sodium or trying to increase your consumption of high Sodium foods.

## **Zinc.**

Mild Zinc deficiency has been shown in around 30% of CFS sufferers. Zinc deficiency has been reported in around 50% of CFS sufferers with high chemical sensitivity. Trial data on CFS and Zinc supplementation is limited however Zinc supplementation on normal volunteers usually results in increased energy and muscle strength so it is definitely worth trying.

## **Amino Acid Supplementation**

L-Tryptophan has been shown to be deficient in around 80% of CFS sufferers. Supplementation studies in CFS sufferers are limited but there is some evidence that supplementation may help with pain and depression(16).

Low L-Carnatine levels have been shown to exacerbate CFS symptoms(17). It is thought that around 30% of CFS sufferers will respond very well to carnatine supplementation (At least 1gram three times per day)

## **Other Nutrients**

Co-Enzyme Q10.

A trial with CFS sufferers showed that supplementation with 100mg of CoQ10 for a three month period produced significant improvements in symptoms and the ability to exercise(18).

Recommendations

The following recommendations are based on Peak's assessment of the scientific evidence and our own trials. Due to the variability in symptoms and response you may obtain better individual results in a different order.

1. Essential fatty acid and or fish oil\* supplementation should be the first nutritional supplement.
2. Balanced Diet of fresh fruit and vegetables with a minimum or no saturated fats. Lots of purple fruits and vegetables. (Red Grapes, Blueberries, dark plums and purple cabbage)
3. Co- Enzyme Q10 supplementation appears to offer good potential
4. Zinc and magnesium supplementation
5. B group vitamins and Vitamin C

References available on website [www.peaknaturalproducts.com](http://www.peaknaturalproducts.com)

\*If able to be tolerated 20grams a day of fish oil is highly likely to dramatically reduce CFS symptoms. Start with one tablet twice per day and gradually build up to 7 with each meal.