

ETERNAL HEALTH

CONDITION OF THE WEEK

Chronic Fatigue Syndrome - where are we in 2011?

There are two givens when we it comes to unraveling the complexities of chronic fatigue syndrome; firstly it's a harrowing and debilitating disorder, secondly it should probably be renamed chronic fatigue syndromes, as unquestionably this condition encompasses a whole spectrum of biochemical malfunctions, which research is still struggling to get its head around. What's difficult about discussing the findings of recent research is that so many are suffering, while hoping for some form of respite and redemption, if not a cure, and I certainly don't want to get anyone's hopes up, with the current state of play so far from the end game. Here's some of what we know:

- An Australian review has identified unresolved, persistent inflammation or an over-activity of the immune system, as the promoter of brain dysfunction, typical of chronic fatigue syndrome. While inflammation is often a response to some form of infection, the authors of this review indicate that finding a bug to blame has not yielded any positive outcomes. What is clear is that chronic fatigue sufferers have a weakened immune system with diminished activity of specific cells called NK (natural killer) cells that eliminate invading organisms. Therefore using substances that boost NK cell activity might be helpful, as might any remedy that reduces inflammation. The authors caution that, as inflammation might be the body's response to infection, dealing with infection before inflammation is suppressed, would be necessary.
- Work carried out by Belgian scientists suggests that once inflammation has been triggered by some form of infection, this then combines with a dysfunctional and weakened immune system together with a gut that has insufficient beneficial bacteria and has become leaky, allowing all sorts of harmful substances into the body. This toxic cocktail then fuels free radical stress which damages the mitochondria, the batteries of the cells where energy is made, with fatigue and exhaustion being the end result. Their work has shown that evidence of DNA damage is more marked in those who suffer from chronic fatigue syndrome.
- Experiments on animals suggest that taking a team of nutrients that boost glutathione, one of the principal antioxidants in the body, including N-acetylcysteine and selenium helps to alleviate fatigue, but this has yet to be translated into work with humans. The same scientists suggest that homing in on all these precipitating events that lead to fatigue might provide some breakthroughs and that boosting the immune system, putting beneficial bacteria back into the gut, while repairing its damaged lining and taking a host of nutrients to improve mitochondrial function might lead to some

lessening of fatigue. While they are very positive about the benefits achieved by their patients with this approach, replication by other research scientists would lend much needed heft to their claims.

- There is some evidence that the mineral magnesium and a substance called NADH, made by the cell to facilitate energy production, when used as supplements, go some way to alleviating fatigue.
- Cortisol is a hormone, which reduces inflammation and as indicated above, this would be beneficial. Research shows that chronic fatigue is sometimes but not always characterized by inadequate production of cortisol.
- Chronic fatigue sufferers often have low blood pressures and experience what is known as 'postural drop,' meaning that their blood pressures go down when they stand up, which makes them feel light headed. MRI scans performed by a research team in Adelaide have found significant anatomical changes in the midbrain area with a reduction in what is known as white matter. Their work indicates that an insult to the midbrain happens when fatigue commences and that this disrupts brain homeostasis, which resets the autonomic nervous system, which in turn affects blood pressure regulation.

What is evident is that research still has some way to go before we shed some light on the dark, tortured soul that is chronic fatigue syndrome.