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### **Current research**

Chronic fatigue syndrome (CFS) is debilitating condition consisting of fatigue lasting longer than six months that is not relieved by rest with additional physical symptoms such as unrefreshing sleep, myalgia, poor memory, poor concentration, post-exertional exhaustion, sore throat, tender lymph nodes and headaches. (Yancey) According to the Institute of Medicine's 2015 Guide for Physicians, up to 2.5 million Americans are thought to have CFS.

The average age of onset for CFS is 33 years old. A quarter of those effected will be bed ridden or house bound at some point in the course of their illness. (IOM) CFS is a clinical diagnosis with an unclear etiology and maybe caused by imbalances in the immune / adrenal systems, exposure to viruses such as Epstein-Barr, genetics, chronic stress or trauma. Elevated cortisol levels, delayed dim light melatonin onset and circadian rhythms are thought to be contributing factors in CFS. (Yancey) Low omega-3 and total omega-3/omega-6 ratios as well as serum zinc are often observed in CFS. (Maes)

CFS effects women significantly more than men. (Faro) Men with CFS also experience less symptoms such as dizziness, myalgia, sexual dysfunction, Raynaud's, facial swelling, morning stiffness and muscle spasms. (Faro) There is evidence linking dysbiosis in the gut to CFS and major depression. (Kubera) Gram-negative enterobacteria cause increased gastrointestinal permeability and release endotoxins called lipopolysaccharides which irritate and can pass the lumen of the intestine. This in turn sets off proinflammatory cytokines from the immune system to spike causing fatigue, depression and other CFS symptoms. (Kubera)

Best treatment for CFS remains unclear. Research has shown graded exercise therapy and cognitive behavioral therapy to be the most effective. (IOM) Antidepressants and corticosteroids as therapy are yet to proven effective although widely prescribed. (Cleare) If antidepressants are given, it is recommended to use tricyclics for the added benefit of improving myalgia and pain. (Cleare)

Chinese medicine is uniquely well suited for the treatment of CFS having means to strengthen the body. One systematic review of 23 RCT's consisting of 1776 patients found Chinese medicine (acupuncture, herbs, moxibustion, qigong) was helpful in alleviating CFS. (Wang) However, many of the RCT's used required better design methods which should be implemented and then the systematic review repeated. (Wang) In my clinical experience, CFS symptoms are often greatly improved within 3 months of traditional Chinese medical treatment.

### **Chinese medical theory**

Prenatal and postnatal sources of energy (qi) are affected in patients with CFS. Blood deficiency, qi deficiency, yin deficiency, damp heat in qi level, shao yang syndrome and phlegm damp are several causes of CFS from a Chinese medical point of view. (Maclean) It's easy to understand if the quantity or quality of blood and energy is low, fatigue will set in. Post-natal qi largely comes from the spleen (a digestive organ in Chinese medicine) transforming food and drink into energy and blood. (Maciocia) The lungs generate the defensive qi, or immune system energy. Wei qi depletion is frequently an issue in CFS. The lungs effects on energy, immunity

and mood contribute to the fatigue, immune weakness, depression and soft speaking voice in CFS.

Jing is the most concentrated form of energy in the body, is created prenatally and in limited supply. It governs growth, reproduction, development, aging and constitutional strength. (Maciocia) Pathogens, chronic stress, drug use, previous or concurrent illness, insomnia and the sequela of allopathic cancer treatment can plunder jing leading to CFS. Yin and jing deficiency represent a deeper exhaustion of the body's most concentrated essence / substances. (Maciocia) Think of a candle struggling to stay lit because it has burned through most of its wax.

In Chinese medical theory it's also possible to feel tired even if there is enough energy in the body. This occurs when the qi is sequestered, blocked and rendered unusable. (Maciocia) Conceptualize it like having plenty of money that is inaccessible because its locked in an investment and not liquid. Most commonly this phenomenon occurs when dampness, phlegm and damp-heat obstruct the flow of qi. In my clinical experience, dampness and such can worsen CFS, isn't the primary cause and is almost always concurrent with exhaustion of qi, blood, yin or jing.

### **Treatment plans**

The recommended course of treatment for CFS with Chinese medicine consists of 3 months of weekly acupuncture sessions, daily intake of herbal supplements, diet modifications, moderate exercise, a regular sleep schedule and stress management. *The PROMIS Short Form v.1.0*

*Fatigue – 4a.* to evaluate the patients fatigue and the *NIH Toolbox FF v2.0 Sadness 18+* to assesses depression to be administered every 2 weeks to track progress.

Treatment of CFS using Chinese medicine depends on the root cause according to traditional Chinese medical (TCM) diagnosis. Qi tonic herbs that boost immunity, strengthen the spleen, transform dampness / phlegm and increase energy are a staple. Ren shen, bai zhu, dang shen and astragalus are valuable. Immune boosting medical mushrooms protect against infections that further drain resources and help the body to fight any underlying viruses or pathogens that could be causing the CFS. Reishi, cordyceps, maitake, agaricus and chaga are good examples. Qi regulators can be added if there is lots of stagnation. Chen pi, zhi ke and mu xiang are typical choices. Blood and yin tonics are important such as he shou wu, shu di huang, dang gui, bai shao, mai men tang, bai he and gui ban.

To push out latent pathogens the formula Xiao Chai Hu Tang is very helpful and gentle. It has the added benefit of cleaning the liver and reducing toxic heat which should clear damp heat and lower inflammation. Most patients with CFS cannot tolerate strong heat / pathogen clearing formulas. They must be used after their system has been strengthened some with tonic acupuncture and herbs. Further, herbs to protect the digestive system must be used in addition with strong heat clearing formulas. Huan Lian Jie Du Tang formula or herbs like qing hao are good and emblematic.

Herbal treatment is divided into daytime and nighttime categories. Daytime herbs focus on building and circulating qi. Nighttime herbs work to smooth the flow of qi, build yin, nourish blood, guide the yang back to the root and clear heat from the heart. The right combination of night herbs should greatly improve the quality of sleep assisting the patient in restoring

themselves. Patients are encouraged to follow a strict sleeping schedule being asleep by 11 pm at the latest and to sleep for a minimum of 8 hours. Deep and restful sleep is vital to aid in recovery.

Removal of inflammatory foods such as sugar, soda, simple starches, alcohol, coffee, spicy foods, white flour, chemical sweeteners, nightshades, greasy fried foods and heavily processed foods. Adding small quantities of fermented foods or kefir daily to restore healthy gut flora. Because the spleen is often weakened, slow cooked soups with some animal protein (plus bone) and a variety of vegetables are helpful.

Acupuncture points that build health, qi and essence are emphasized. Stomach 36 strengthens digestion, helps the patient make more qi and blood from the food they eat, reduces anxiety, assists in feeling more grounded and helps clear underlying digestive imbalance. (Deadman) Kidney 3, the yuan source point of the kidneys, helps strengthen essence, restore adrenals and reduce cortisol levels. It is also the shu stream point of the vessel and thus helps to resolve heaviness and pain in the joints. (Deadman) Lung 7 used as the master point of the ren meridian along with Ren 17 (influential point of qi), 12 (one of the master points of digestion), and 4 (strengthens qi, blood, yin and yang). That combination builds qi, bolsters immunity, strengthens the immune system and nourishes qi, blood, yin and yang. Large intestine 11 helps clear damp or toxic heat reducing inflammation. (Deadman) Du 20 raises the clear yang improving mental clarity, energy level and mood. Yin-tang and ear shen men calm stress, anxiety and restlessness. Further they improve the quality of sleep. Stomach 40 and Spleen 9 if there a lot of damp or phlegm to resolve. Stomach 40 has the added benefit of reducing stress. San Jiao 5 can be used to expel the pathogen. San Jiao 6 can be used to circulate source qi to all the internal

organs and break up stagnation. Liver 14 can clear heat. (Deadman) After 4-6 weeks activating the DU and Yang Qiao vessels to provide more yang energy can be helpful.

Moxibustion on ren 8 strongly nourishes qi, rescues collapse of energy and harmonizes the intestines. (Deadman) Also is also useful on Du 20, kidney 1 and ren 12. Free short videos providing instructions on how to meditate and do simple qigong are provided. Patients are encouraged to meditate 10 minutes a day and follow the qigong video twice a week. Specifically, silk weavers exercise, the marrow washing set and the tai chi short form are excellent for CFS. Have front office staff send reminders of encouragement to patients throughout the week. Patients are recommended to get a “health buddy” (someone working on the same health issue) so they can encourage, remind, inspire and support one another.

### **Alternative approaches**

Cognitive behavioral therapy (CBT) and graded exercise are the only proven alternative methods of improving CFS. Patients are encouraged to do concurrent psychotherapy with a CBT trained therapist. Moderate exercise options are discussed with the patient and if needed, referral to a personal trainer / physical therapist with relevant specialization are provided.

### **Biomedical considerations**

Recommended lab tests: Complete blood count with differential to rule out anemia and ascertain the state of the immune system. Thyroid panel to make sure the fatigue isn't caused by

a thyroid imbalance. Metabolic panel to make sure the liver and kidneys are functioning properly. Inflammation markers ESR and CRP. Check for EBV. Serum cortisol levels, zinc, vitamin d, melatonin, omega-3 and total omega-3/omega-6 ratios to ascertain if common CFS deficiencies are present. Genova labs comprehensive stool tests to evaluate the gut biome, gut specific inflammatory markers and parasite testing.

### **Community resources**

1. Centers for Disease Control - <https://www.cdc.gov/me-cfs/index.html>
2. Institute of Medicine of National Sciences -  
<http://www.nationalacademies.org/hmd/Reports/2015/ME-CFS.aspx>
3. Mayo Clinic - <https://www.mayoclinic.org/diseases-conditions/chronic-fatigue-syndrome/diagnosis-treatment/drc-20360510>
4. \*National Institute of Health - <https://www.nih.gov/mecfs/mecfs-resources>
5. PubMed -  
<https://www.ncbi.nlm.nih.gov/pubmed/?term=chronic+fatigue+syndrome>
6. \*Solve CFS Non-profit Organization - <https://solvecfs.org/>,  
<https://solvecfs.org/mecfs-weekly-phone-support-group/>  
How to meditate - <https://www.youtube.com/watch?v=B3WV9KqxGcQ>

\*Recommended resource

## **Prognosis**

Studies on prognosis in CFS have focused on people receiving care from specialty clinics. Only 12%-50% of adults showed some gains within 12-39 months and a mere 6% returned to pre-illness levels of wellbeing. (Cleare) Children recover better with 54-94% recovery within 6 years of diagnosis and treatment. (Cleare)

By its nature, CFS results in severe fatigue and thus prognosis from a Chinese medical perspective is similar despite intensity. Although there is some quality scientific research showing Chinese medicine's benefit in treating CFS, overall there are a lack of well-designed studies. Thus, more study is warranted and encouraged. In 15 years of clinical experience, with well over 100 CFS cases seen, many successes have been achieved. Approximately 70% of my patients experienced significant improvement of symptoms with weekly acupuncture treatments, Chinese herbs, diet modifications, moderate exercise and coaching for handling stress. Approximately 20% received mild to moderate gains and 10% little to no improvement. In cases with an underwhelming response to 3 months of treatment, there were often underlying health conditions. Lyme disease, rare autoimmune conditions and the side effects of pharmaceuticals for example. Overall, Chinese medicine offers a low risk means of seeking care for those suffering with CFS with a large potential upside.

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