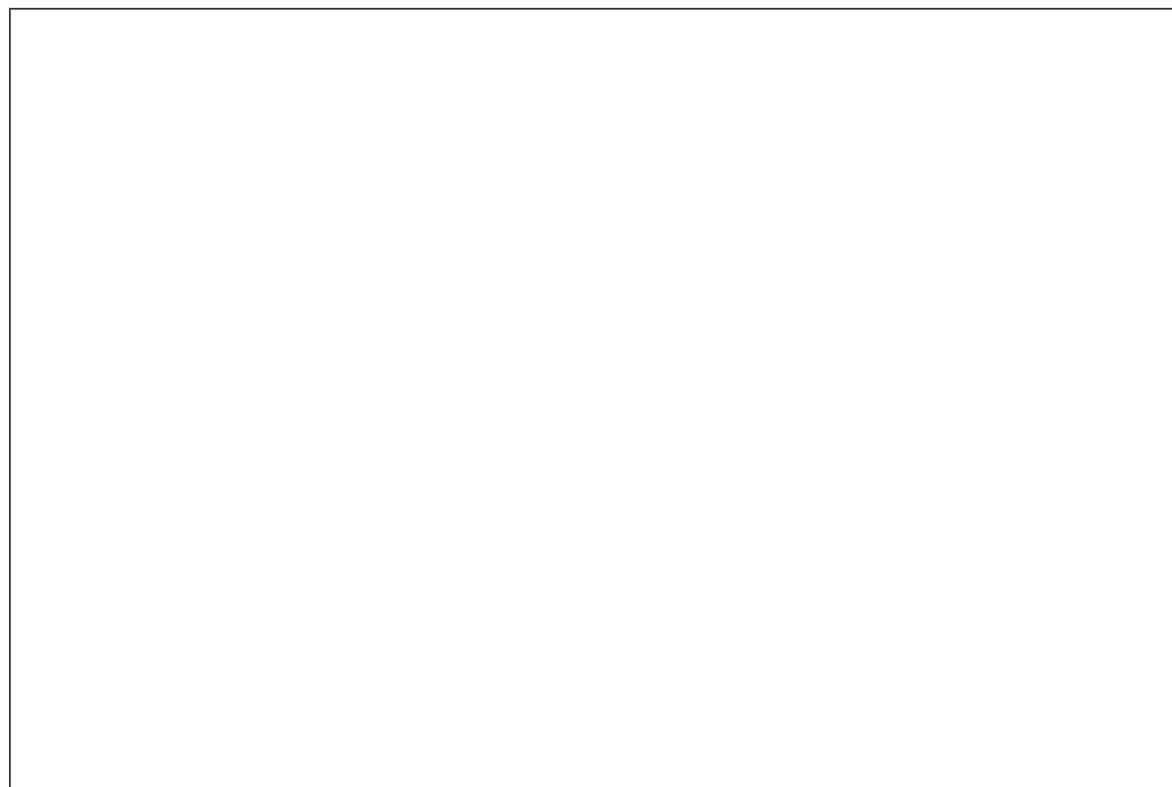


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# Did you Know? → Microwave Exposure Symptoms Align Closely with those of Chronic Fatigue Syndrome

Jay

16-20 minutes



Dr. Beatrice Golomb, MD, PhD of UCSD [recently published a study on the effects of microwave targeting of US diplomats in Cuba](#). The study is carefully documented with over 600 footnotes referencing other medical studies, including those that cover

Electromagnetic Radiation (EMR) exposure experienced by ordinary people (non-diplomats in circumstances outside of the Cuba incident). The study details the health issues diplomats incurred from microwave exposure. Golomb then compares these health effects with those suffered by non-diplomats who have had exposure to microwave radiation (in circumstances other than the Cuba incident)- and finds that microwave radiation is a good thesis explaining the Cuban “mystery illness” of diplomats.

What I found fascinating with Golomb’s description of the medical symptoms of those suffering from microwave radiation (whether ordinary civilians, diplomats, or people who suffer from EHS- electromagnetic hypersensitivity), **is how similar they are to those diagnosed with Chronic Fatigue Syndrome (CFS).**

This is personal for me as I have been diagnosed with Chronic Fatigue Syndrome (CFS) for 3 years now. Three years ago I had to leave my full-time job due to worsening fatigue that no doctor could explain. Despite all the specialists I saw and all the tests I had done, no one could identify a cause. Fortunately, I got in touch with one of the well known chronic fatigue clinics. Over the years, they have helped me deal with the symptoms- especially body pain and fatigue- with a broad array of treatments. But the cause of my condition is still unknown. Most CFS experts admit that CFS is a diagnosis we use to describe the symptoms a patient has *but where we don’t necessarily know the cause.*

Here are the similarities in symptoms of those diagnosed with CFS and Microwave Exposure:

## **1. Over-Active Immune System**

One of the most common symptom of someone with Chronic Fatigue Syndrome is that they will have developed an overactive immune system.

Chronic fatigue syndrome appears to be linked to specific **changes in a person's immune system**, particularly increased amounts of chemical messengers that regulate immune responses, researchers report. The study adds to growing evidence that **chronic fatigue syndrome is caused by a malfunctioning immune system...The immune system of a new chronic fatigue syndrome patient appears unable to shut down or reduce its response...**"Their immune system is no longer resilient and able to bounce back **after this cytokine surge**"

(source: [WebMD; covering study in Science Advances](#))

With chronic fatigue, the immune system is elevated but then never resets to normal levels; it remains on full throttle. This overactive immune system can be detected in blood tests. For example, elevated cytokines, or "cytokine dysregulation", is a marker. Cytokines are molecules with a role in cell signaling — involved in the system's immune response, reacting to infections and inflammation. That they remain at an elevated level shows that an immune system is "stuck" in a highly active mode regardless of the presence of an infection. *These constantly active immune system processes can harm the body*, and contribute to fatigue and other health problems.

The body's auto-immune system is triggered with CFS. The body produces auto-antibodies that can be pathogenic or harmful. One common treatment with CFS is Rituxan, which removes

pathogenic antibodies that are harming the body.

It just so happens that **microwave frequency exposure also triggers the immune/auto-immune system.**

According to Golomb's study:

- "Oxidative stress provides a documented mechanism of RF/MW injury compatible with reported signs and symptoms....**autoimmune triggering**". (my note: RF/MW stands for Radio Frequency / Microwave — as in the frequency range cited in the Cuban microwave attacks- roughly 3 KHZ — 300 GHZ).
- "**Immune/autoimmune activation** is a documented feature in a subset of those citing symptoms from RF/MW/EMR"

In my reading through various conditions and causes, I did **not** come across too many that led to the triggering of the immune system, and maintained it at high levels. For this reason, I **found this overlap between Microwave exposure and Chronic Fatigue very interesting and relevant.** While there may be other similar environmental causes (such as mold) which also trigger a chronic immune response, it is fair to say that most standard medical conditions/causes do not cause permanently elevated immune system. Therefore, I believe the connection between microwave exposure and Chronic Fatigue is nothing to dismiss lightly.

## 2. Inflammation

We just discussed the immune system. However, this is related to another medical symptom: inflammation. Inflammation is a defense mechanism in the body; it is associated with pain,

redness, swelling — inflammation is the body's way of removing harmful stimuli or aid in healing. Chronic inflammation happens when the cause goes unaddressed or the body can't fix the problem; chronic inflammation can cause a set of diseases.

Those with CFS often have inflammation- these are said to be caused by the heightened immune system; for example, pro-inflammatory cytokines can cause tissue damage and inflammation.

Elevated cytokines are evidence of a “fingerprint” of high inflammation in Chronic Fatigue patients. From “*Chronic fatigue syndrome leaves an inflammatory fingerprint*” in the scientific journal Nature:

Levels of 17 immune-system proteins seem to correlate with the severity of symptoms experienced by people with chronic fatigue syndrome (CFS), also called myalgic encephalomyelitis (ME)..... Mark Davis at Stanford University School of Medicine in California and his colleagues searched for markers of inflammation in people with CFS, who often experience flu-like symptoms.....researchers found that 17 cytokines, including pro-inflammatory proteins such as interleukin-4 and leptin, tracked the severity of the disease.

From the Golomb study, those who suffer from microwave exposure also experience inflammation (whether they are people targeted by microwave weapons, or ordinary people who are exposed to microwave frequencies in industrial settings, or have EHS sensitivity). From the study:

- “One analysis found that of 100 evaluated studies that **examined the relationship of low level RF/MW to oxidative stress** in biological

systems, 93% supported a connection...oxidative stress promotes mitochondrial dysfunction, calcium channel effects, **inflammation**”

- **“In RF/MW-affected persons, as in diplomats, the effects can arise after hours of exposure, or hours after a short exposure — oxidative stress can cause apoptosis and can then trigger inflammation.”**

Chronic Fatigue patients often take over the counter medication such as Quercetin to reduce inflammation. Unsurprisingly, so do those with EHS (electromagnetic hypersensitivity) and TI's (those targeted with microwave frequency).

### 3. Sleep

Chronic Fatigue patients routinely complain of difficulty sleeping.

Chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME) is a chronic, disabling illness that affects approximately 0.2% of the population. Non-restorative sleep despite sufficient or extended total sleep time is one of the major clinical diagnostic criteria; however, the underlying cause of this symptom is unknown.

(source: [NCBI](#))

The Golomb study on MW/RF affected persons (microwave exposure) refers to “sleep problems”, “sleep symptoms”. 86% of MW/RF affected diplomats in Cuba complained of difficulty with sleep; 76% of MW/RF affected non-diplomats complained of similar. At 86%, **problems with sleep was the most commonly cited symptom** cited by US diplomats in Cuba targeted with microwave frequency.

### 4. Other Symptoms in Common

Chronic Fatigue symptoms will be familiar with the following symptoms:

### **Cognitive Impairment/Brain Fog**

In a second paper published today, Hornig and her colleagues showed differences in the **number of immune molecules in the cerebrospinal fluid** of healthy patients and those with CFS. That **fluid “gives kind of a window to what’s going on in the brain,”** explained Suzanne Vernon, Ph.D., the scientific director of the Solve ME/CFS Initiative. An immune response in the brain could explain the cognitive impairment CFS patients call **“brain fog.”**

(source: [Healthline](#))

Those exposed to microwave frequencies also suffered from cognitive impairment or brain fog. From Golomb’s study, MW/RF affected persons suffered from “cognitive dysfunction”. Exactly 81% of both diplomats and non-diplomats exposed to microwave frequencies complained of cognitive problems. Reference was made to “memory problems” and “concentration difficulties”.

Clearly cognitive impairment presents in both CFS patients and MW/RF affected persons.

### **Fatigue**

Fatigue is perhaps the most common complaint of CFS patients; it is called “chronic **fatigue**” after all. Fatigue is repeatedly mentioned by MW/RF sufferers in the Golomb study. It should be noted that Golomb’s study did not offer a cause for the fatigue in MW/RF sufferers; as to whether the microwave frequency itself caused a weakness in the body or its muscles, or if follow-on effects like triggering an overactive immune system contributed to

the fatigue (as it does in CFS).

## **Dizziness/Balance**

“Symptoms of CFS include dizziness and trouble keeping your balance”, says [Healthline](#) and I trust many CFS patients can relate, whether its POTS (Postural Orthostatic Tachycardia Syndrome) or non POTS-related. MW/RF affected persons in the Golomb study reported similarly that they experienced “dizziness” and “balance problems” with over 60% of diplomats and non-diplomats (affected by MW/RF) reporting these symptoms.

## **Related Matters**

Reading through the Golomb study on microwave exposure, I couldn't help but notice so many references to aspects Chronic Fatigue experts have spoken about. These include:

### **Mitochondrial damage**

There is considerable evidence that mitochondrial dysfunction is present in some CFS patients. Muscle biopsies studied by electron microscopy have shown abnormal mitochondrial degeneration....One consequence of mitochondrial dysfunction is increased production of free radicals which cause oxidative damage. Such oxidative damage and increased activity of antioxidant enzymes has been detected in muscle specimens... Mitochondrial dysfunction will result in fatigue and can produce other symptoms of CFS.

While doctors vary on their assessment on the involvement of mitochondrial dysfunction or its cause, many CFS doctors agree that mitochondrial dysfunction plays some role with the fatigue CFS patients have.

As it turns out, microwave exposure can also cause mitochondrial damage. According to the Golomb study, MW/RF can result in “mitochondrial injury”, “mitochondrial impairment”. The study emphasizes that microwave frequencies leads to oxidative stress, and that such stress is closely linked with mitochondrial damage.

### **Endothelial Dysfunction**

Endothelium refers to cells that line the interior surface of blood vessels and lymphatic vessels. Chronic fatigue patients suffer from endothelial dysfunction

The central finding of this study is that adult patients with ME/CFS ...**lend further support to the hypothesis that endothelial function is impaired in ME/CFS**, both in large vessels and in the microcirculation....these findings build on previous work reporting indirect markers of endothelial dysfunction, such as increased oxidative stress, inflammation and arterial stiffness

(Source: [ResearchGate](#))

Similar to Chronic Fatigue, MW/RF affected persons may suffer also from endothelial damage. The Golomb study states that such persons suffer “endothelial dysfunction (yielding blood flow compromise)”. It goes on to state: “Since blood flow is critical for cooling, and *oxidative stress leads to endothelial dysfunction and may compromise blood flow, affected individuals may experience greater impairment in blood flow....*”

Other symptoms mentioned in Golomb’s microwave frequency study that occur in Chronic Fatigue patients include:

- *Membrane damage* ([CFS link](#); Golomb lists “membrane damage”

as a symptom of MW/RF)

- *Blood-brain barrier permeability* ([CFS link](#); Golomb lists “blood brain barrier disruption” as a symptom of MW/RF)
- *Apoptosis* ([CFS link](#); Golomb lists “apoptosis” as a symptom of MW/RF). Apoptosis is form of programmed cell death. Biochemical events lead to characteristic cell changes and death.

## Symptoms that are Distinct to MW/RF exposure

While there is considerable overlap in the symptom profile of Chronic Fatigue and Microwave Frequency Exposure, there are a number of symptoms unique to Microwave Exposure. It is important to distinguish these as to show how those impacted by microwave frequencies may fit the profile of CFS; but they have still other symptoms which they must address that others with CFS may not (CFS triggered by different causes present different symptoms). After all, there are numerous causes of CFS - microwave frequency is just one. The symptoms for Microwave exposure that are unique from the traditional CFS symptom profile include:

- **Tinnitus:** Note this is classified as tinnitus but is clearly explained as artificial sounds induced by microwave frequency (“Frey effect”). MW/RF affected persons heard “chirping, ringing or grinding noises” and heard them more often with low ambient noise (which is more common at night).
- **Pressure:** MW/RF affected diplomats attested to “pressure in the head and ears”. “Eye pressure” was also reported. Golomb’s study described a MW/RF affected person as having “perceived head pressure [occurring] with brain swelling”.

- **Vibrations:** MW/RF affected non-diplomats reported “I experienced internal shaking and vibrating throughout my body” and “ My body feels like it is vibrating”.
- **Hearing Loss:** From the study: “Hearing loss... [is] prominent in affected diplomats — and in RF/MW-affected individuals.”

Many, perhaps most, CFS patients do not suffer from Tinnitus, Pressure, Vibrations, and Hearing Loss. Those that suffer from the classic symptoms of CFS but *also* suffer from these symptoms above may want to consider that Microwave Exposure may play a role in their condition.

## Upshot

So, why go through all the gory detail that Microwave Exposure and CFS have much in common as far as their symptom profiles?

1. **For CFS patients to consider if Microwave Exposure plays a role.** Treatment for CFS focuses on lessening the symptoms- such as reducing the muscle pain and brain fog *since the* underlying cause of the condition, such as what is causing the immune system to be overactive, what is causing the inflammation — often remains unknown (or rather we may conclude that we have viral activations, but we don’t know what impaired the immune system to begin with; or we may know that auto-antibodies are excessive and treat that but don’t know what caused the overproduction). The true cause often eludes doctors — even after batteries of advanced tests. Many CFS patients may not realize that Microwave Exposure may be a cause; and if it is, there are steps that can be taken to reduce exposure such as EMF shielding. If CFS patients also have some or all of the unique symptoms listed

above (unique to microwave exposure and not part of the standard CFS profile such as tinnitus, pressure, etc.), this would lend more credence that microwave frequencies are a cause.

**2. For those with Microwave Exposure to Consider Benefits of CFS Treatment:** As mentioned CFS treatment focuses a great deal on symptom relief. I have benefitted from two years of being treated with chronic fatigue syndrome even though it now seems clear microwave exposure is a major cause (as I have the microwave-unique symptoms listed above).

Two years ago, I was mostly bedridden. Oxidative stress can wreak havoc on the body. Given how it damages so much, I wouldn't be surprised if those with MW/RF exposure similarly have a host of symptoms that go beyond even what Golomb cited in her study. For example, inflammatory cytokines (mentioned earlier as elevated in MW/RF affected person and Chronic Fatigue) can contribute to higher likelihood of SIBO (small intestinal bacterial overgrowth), [according to this study](#). SIBO was a debilitating condition in my case and I had not had it before my CFS began. My CFS doctor diagnosed it and treated with Alenia and courses of Xifaxan. This took me from being bed-ridden to upright and rid of this overall toxicity I felt in my body.

I began taking medications such as Cromolyn to reduce mast cell activation. This another condition that may be spawned by oxidative stress and which many CFS patients suffer from. Microwave exposed persons may suffer from this as well- and your average doctor will not check for it. I also had a set of other digestive problems coinciding with my CFS which were remedied by other medications. I had re-activation of viruses (due to a compromised immune system) for which I was prescribed Valcyte

and other medications which reduced their impact on my health.

There's more. But my main point is that I sympathize with MW/RF sufferers — whether they are targeted or have EHS. The problem is that you end up with cascading problems through your body- with one dysfunction leading to other problematic conditions. A CFS specialist doctor may be able to help you reduce your symptoms while you reduce your Microwave frequency exposure by shielding or other means.