

## **Can a Raw Food Diet help a person with Fibromyalgia or Chronic Fatigue? If so, what are the factors that might lead to improvements?**

It was almost 3 years ago that I contracted the flu but instead of leaving me to recover, it left me fatigued and anxious. It coincided with my younger sister having to take early retirement on health grounds as she was struggling with fibromyalgia. We experienced similar symptoms, hers were worse and included the well documented pain associated with this condition. We both wondered about the influence of the prolonged and very stressful family event that had preceded our illness as a contributing factor to what we were experiencing. This might have deterred us from looking to food to regain our health, but we knew enough to recognise the value of making dietary considerations part of the solution, irrespective of its role in the cause. We both took similar steps and we're both now significantly better.

### **My Story**

I consider myself fortunate in that my instinctive food-related response to the flu was to eat only fruit and 'light-weight' green salad vegetables. There was nothing else I wanted. It made me stop and think; I was certainly no stranger to vegetables, but significant quantities of fruit were not part of my day-to-day eating, instead, I was getting my calories from nuts, seeds, dehydrated foods and oils. I dread to think how much fat I was consuming, and yet I felt perfectly at ease about it, after all, I was eating a high-raw plant-based diet and I assumed it was good for me! But this strong desire for fruit and not the heavier foods brought to mind fragments of things I'd heard and read from some of the well-known plant-based doctors and I set about shifting the balance away from high fat and towards more fruit. Now I'm keen to look at the potential reasons why this way of eating might have led to my recovery from this post-viral, chronic fatigue; how much of my success is personal and how much might be applicable to others? It seems that this is a particularly good time to become familiar with what science is able to tell us. "Long Covid" is now a known term and in many cases Long Covid means various symptoms which often include on-going fatigue. According to research at Leicester University in England from May of this year, up to one in ten patients who have had Corona Virus could be at higher risk of developing Myalgic Encephalomyelitis (ME). So what *did* enable me to recover from Chronic Fatigue? What does the science reveal?

### **Two Fibromyalgia Studies**

An obvious place to start is with two studies documented at the beginning of this century that each examined the role of raw, plant-based food in improving the symptoms of fibromyalgia sufferers. The first, a study reported in the Scandinavian Journal of Rheumatology dated June 2000, looked at a range of symptoms from measurable health issues to subjective feelings. Participants were not randomly assigned to either the experimental group or the control group, instead they were allowed to choose. Those who chose to be in the intervention group were given instruction on how to prepare the living foods that would form their diet for at least the next 3 months. The control group followed an omnivorous diet. The first three months were successful across multiple parameters for those on the living foods diet, and included improvement in the quality of sleep and reduction of morning stiffness. For the next couple of months leading up to the second observation time of 5 months, the participants were free to continue as they wished. Full adherence to the diet waned at this point with participants gradually adding fish and / or meat back into their diet. The previously seen positive results diminished, with most of the parameters returning to the levels seen at the start of the experiment.

Just one year later in 2001 a similar study was carried out and published in BMC Complementary and Alternative Medicine. This study involved 30 subjects recruited from a fibromyalgia support group and again, various evaluations were undertaken ranging from physical performance measures to self-reported analyses of the impact of fibromyalgia on participants' lives. The diet this time was largely a raw whole foods diet made up of familiar and accessible fresh produce, wholegrains, nuts and seeds. In addition, participants drank carrot juice and dehydrated barley grass juice. Flax oil and extra virgin olive oil were also part of the diet. The initial observation was carried out after the first 2 months, and in line with the 2000 experiment, improvements were noted across the spectrum of measures under consideration. The trial lasted for 7 months and this time the final results progressed positively from the initial 2 month observation. These results represented new successful outcomes not previously seen in fibromyalgia sufferers; two earlier studies from the 1990s which had focussed on exercise rather than diet had far less noteworthy outcomes.

Both of these studies make a strong case for the benefits of a raw food diet to better manage and minimise the symptoms of fibromyalgia. The second of the two studies highlighted an additional but unplanned outcome, namely to not make the dietary changes so strict and complicated that they're ultimately difficult to implement. The living foods in the first experiment formed an excellent and successful diet when adhered to, but for participants who are unfamiliar with these foods, the complexity of juicing, sprouting and other hitherto unknown ways of preparing food proved prohibitive in the long-term.

Why might a raw, predominantly vegan diet be successful in treating fibromyalgia? Might similar results be seen in those who experience Chronic Fatigue (ME)? Is the raw aspect of the diet important, or could these results be seen on a cooked, wholefoods vegan diet? What do we know?

### **Successful Plant-Strong Diets**

It's interesting to note that the commonalities between the two diets were that they were both predominantly vegan and raw. The living foods diet emphasised that it was a low salt, uncooked vegan diet rich in lactobacteria, whilst the second study referenced the foods to be consumed and those to avoid, leading to a dietary intake of around 65% of calories from carbohydrate, 24% from fat and 11% from protein. As both studies demonstrated success, it makes sense to consider the possibility that a largely unprocessed plant-based diet may confer benefits directly and / or the avoidance of animal products and other foods omitted from the diet may be significant. There is compelling evidence of such diets in population studies, specifically a study published in the January 1973 edition of National Geographic which brought to light the dietary and lifestyle habits of some of the longest lived people at that time. The populations in question had proportionally high numbers of centenarians who, crucially, were living healthy lives in their old age. Their diets, especially that of the Vilcabambans in Ecuador and that of the Hunza in Kashmir (Pakistan) were very low in animal protein and high in plant foods giving them low fat and protein intakes and high carbohydrate values. Another group in the study, the Georgians in the Caucasus had a slightly different diet and profile. Their diet contained more animal foods than the other two and their calorie intakes were 57% carbohydrate, 17% protein and 24% fat, making this division of calories close to that of the fibromyalgia diet in the 2001 study and it's worth noting that whilst this population compared very favourably with their American counterparts

of the time, of the three groups studied, the Georgians likely had the lowest number of centenarians (figures for the Hunza could not be accurately confirmed) and they were the only group to be experiencing weight gain. Other peoples with similar profiles have included the Okinawans of Japan, considered the most well-known of the “Blue Zones” where good health and longevity were commonly seen until recently, and also to a large extent, the Chinese to varying degrees who were observed and studied comprehensively in Dr Campbell’s China study between 1973 and 1990. The data from all of these studies makes a strong link between good health and low animal protein intake, with the healthiest of all showing high carbohydrate intake along with low fat and protein. So, is meat and dairy avoidance the key factor in achieving good health or is calorie distribution the most relevant aspect? Of course, it’s highly likely that both of them play a role and in the case of the 2001 fibromyalgia study which detailed calorie distribution, the fat intake was low in relation to the standard western diet, but it was higher than that of many of the healthiest populations referenced above.

Removing most or all animal foods from the diet makes way for more of the body’s energy to be used for other purposes, such as healing. There are more processes involved in the digestion of protein and fat compared to carbohydrate, plus carbohydrate is the preferred source of fuel for muscles and the brain; fatigue and brain fog are frequently experienced by those who suffer with fibromyalgia and ME so a direct and easily obtained source of energy is likely to be extremely valuable to them. Many protein-rich foods are acid forming in the body meaning that buffering systems must be employed to maintain the delicate pH balance of the blood in the range of 7.35 - 7.45. Removing dense animal foods from the diet will relieve the body from the task of neutralizing the acid they form, once again easing the burden on the body which may otherwise lose nutrients in its efforts to maintain homeostasis.

### **The Question of Fat in the Diet**

But what about the fat? In the absence of an additional “lower fat” group in the 2001 study, we cannot know if the same diet with lower fat intake would have led to different outcomes. At this point I can only draw on what is known from other health studies alongside my own experience. Among the welcome improvements I noticed in my recovery from fatigue was a change in sensation when I palpated the area under my rib cage where my liver is located. This area had been tender to the touch compelling me to consider that maybe my liver was inflamed? Was it fat related? I had no way of knowing for sure, and all I know now is that the tenderness subsided and disappeared after a few weeks of my new low fat, high (wholefoods) carbohydrate diet. I was eating close to what has become known as an 80 / 10 / 10 diet, (where 80 represents the percentage of carbohydrates in the diet) and I subsequently learned how valuable this approach has been in reversing various health challenges. The Pritikin study from 1982 was based on such a diet, emphasising high carbohydrate and high fibre from unrefined plant foods and it proved very effective in a range of improvements from triglyceride and cholesterol lowering, to a reduction in fasting glucose and with it, the corresponding medications of the participants. Similar results with a similar diet were demonstrated almost 10 years later by the Physicians Committee for Responsible Medicine, showing noticeably better results than those of the control group who were following the dietary guidelines of the American Diabetic Association. The success of such a diet hasn’t been limited only to recovery from diabetes. High carbohydrate, low fat and predominantly plant-based diets proved successful in Dr. John McDougall’s program in

which cholesterol and blood pressure levels were reduced, in Dr. Dean Ornish's Lifestyle Heart Trial (and later his Prostate Cancer Lifestyle Trial) and also in Dr. Caldwell Esselstyn's program which, like the Ornish study demonstrated success in reversing significant heart disease process markers.

Of course none of this proves that the same trends would apply to ME or fibromyalgia patients, but equally, it makes sense to bear in mind that this type of diet: high carbohydrate, low fat and mostly plant-based has proven to be successful in the reversal of more than one disease and it correlated with longevity and good health in the epidemiological studies referred to above. Likewise, I cannot claim that reducing my own intake of fat was key; I was also eating more fruits and vegetables and therefore consuming more nutrient rich and anti-inflammatory foods. My sister took a similar dietary approach with the knowledge, in her case, that she also had high LDL cholesterol levels. Did this apply to me, too? I wasn't tested. It's also of interest to me that almost two decades ago I had an oestrogen dominant illness, endometriosis, which led to surgery and some unpleasant hormone treatments. When it recurred I had the good fortune to find a book that dealt with healing the condition through nutrition. The most profound change I made to my diet at that time was to remove all dairy which, with hindsight, will have removed a significant amount of saturated fat from my diet (I didn't replace cheese until much later when I learnt how to make nut cheeses). The reason for alluding to this here is to question the issue of fat in relation to me. Too much fat and the wrong mix of fatty acids i.e. disproportionate levels of saturated versus unsaturated fats and within that, an unhealthy ratio of Omega 6 to Omega 3 fatty acids exert significant influence over the composition of cell membranes and the hormone receptors that reside within them. One result of this can be an exaggerated effect of oestrogen on the cell which can result in oestrogen dominant diseases such as breast cancer, fibroids and endometriosis. Serotonin receptors may also be impacted by the quantity and composition of fatty acids, this time leading to a diminished effect either causing or contributing to mood disorders. When I changed my diet again to better respond to the Chronic Fatigue I was experiencing which included the avoidance of oils, plus significantly fewer nuts, seeds and avocados, the first, (and by my own evaluation, the worst) of my symptoms to subside was anxiety which had reached levels that were difficult to manage; frustration and tears over matters as weighty as which coat to choose to go out in! Was the fat reduction significant here? Professor Roy Taylor of Newcastle University UK who is gaining prominence as a result of his work with diabetes reversal has put forward the hypothesis that we each have a personal fat threshold. If his hypothesis is found to be valid then I think I may have figured out my own ballpark threshold and it's a far cry from the much higher level I assumed it must be for the lean person that I have always been.

It strikes me as likely that the test subjects in the 2001 fibromyalgia study may have benefitted even more from the simple removal of the flax and olive oils to bring down their overall fat ratio. Food is not conventional medicine where each disease is matched up with a specific medication or medications. Taking a dietary approach to healing is not about finding the silver bullet that may cure the disease, instead it's about giving the body the best support possible to facilitate healing whilst removing any unnecessary energy expenditure and this can be achieved on a nutrient dense diet that emphasizes whole natural plant foods where the calories consumed offer a high nutrient return. Fats of any kind are nutrient poor. They have much more to offer when they're eaten as an integral part of the wholefoods from which they're commercially extracted to be sold as oils.

### **Putting the Spotlight on “Raw”**

What about the “raw” aspect of these diets? Was it likely a key factor? Considering the healing effects of the cooked plant-strong diets alluded to above, it’s hard to dismiss the possibility that a cooked vegan diet may have also proven successful in treating fibromyalgia; it would be interesting to see how the two versions of a plant-based diet compare in practice. Since no such experiment appears to have been conducted, we can only draw on what we know. It certainly is the case that a number of nutrients are lost or diminished through cooking and these include certain vitamins as well as phytonutrients with their high antioxidant capabilities. Many of these are water soluble and thus destroyed by heat. Additionally toxic by-products may be formed through cooking although in the case of a vegan diet, the only such substance to really be wary of is acrylamide which occurs when amino acids and sugars combine at high temperatures. Other cooked food toxins relate in the main to the consumption of meat and other animal products. And even on a predominantly cooked food vegan diet, acrylamide formation can be averted by using cooking methods that do not exceed 120°C such as boiling and steaming. It makes a lot of sense to avoid any unnecessary strain on the body especially when it is trying to heal, so refraining from burdening the body with substances that it must detoxify as a result of baking, grilling and frying is certainly relevant. It is a pity that there is no recent published research to support one of the most potentially fascinating benefits of a high raw food diet. A Swiss researcher, Paul Kouchakoff found increases in white blood cell counts following the consumption of cooked food, a condition known as digestive leukocytosis, but most interestingly, these did not occur with the consumption of raw food. Leukocytes are white blood cells which are part of an immune response. Their production in response to eating cooked food, therefore, would indicate that the ingested foods are regarded as foreign or toxic substances. These findings may be relevant but as the study was conducted in the 1930s and has never been reproduced, can they be relied upon as solid data? Whether or not they can, there are both known and other likely benefits of including more raw foods in a healing diet, but it is probably far more significant first and foremost that the diet be based on whole plant foods; a raw emphasis is then more of an ‘added value’ aspect of the diet.

### **Another Consideration**

Is there anything else to consider? It seems there is, although robust and comprehensive results are in short supply due to the relative infancy of this field of study. I refer to the microbiome which is either affected by, or a contributing cause to both ME and Fibromyalgia with dysbiosis being evidenced in various microbiome studies linking to both of these conditions. I have included links to three studies at the end of this essay which point to alterations in the microbiome of both ME and fibromyalgia patients. There is still a lot to uncover and learn about the microbiome and its role in both illness and wellness, but we do know that for better and worse, diet plays an enormously important role in determining the composition of the microbiota, most especially the gut microbiota. According to a study from 2016, the “right combination of microbes can tip the balance between disease and healthy status. Unhealthy high fat and high sugar diets associated with a Western-style diet are known to have substantial adverse impact on the composition and diversity of gut microbiota leading to an unbalanced ecosystem known as dysbiosis.” We know too that antibiotics, especially frequent courses of antibiotics cause alterations and microbe loss in intestinal gut flora. We are also learning that stress and trauma can negatively impact the microbiome. The extent to which each of these, not to mention the combined effect of more than one,

might affect someone with one of these conditions, or who goes on to develop fibromyalgia / ME cannot be measured, at least not currently, but it is an area of study that merits much more attention and it will be interesting to see new research as it emerges. Anecdotally I can say that my sister and I had both experienced a profoundly stressful event prior to our illness. Could this have altered my gut microbiota and subsequently reduced my immunity, making me more vulnerable to the flu virus I contracted? I can also confirm that whilst I was not eating a standard western diet, my diet was high in fat which may have adversely affected my internal ecosystem.

It is all too tempting to read of new developments such as these, linking gut dysbiosis to these two conditions and conclude that we have uncovered “the answer”. In all likelihood, this discovery is yet another part of the puzzle which science is still piecing together to create a bigger picture. Luckily, anyone jumping to this conclusion, and resolving to attend to the health of their microbiome, will almost certainly be persuaded to adopt a diet of diverse and fibre-rich plants which will have positive health effects not just on the microbiome but also on their wider health status. And by the same token, anyone deciding to adopt either of the diets in the Fibromyalgia studies from the early 2000s will, by virtue of the raw plant foods in the diet, be encouraging a healthy internal ecosystem with more and better fed probiotics whether or not this is their objective.

### **Final Thoughts**

I may never find out which aspects of my diet had the most profound effect on my ability to make such good progress towards healing from chronic fatigue, but there are undeniably some powerful clues in the fibromyalgia studies and my own sister’s anecdotal experience. I value all parts of it; the fresh fruits and vegetables with multiple essential and supportive nutrients, some of them yet to be discovered. I value the diversity of mostly raw plant foods that are most likely creating a healthy internal environment full of microbes that will mostly work *for* me rather than against me. But perhaps more than anything, I value the education that has enabled me understand how to put all the parts together and shift the emphasis from a potentially harmful approach to one that is health-promoting, sustainable and within which I can remain open to both new information and most especially to changes in me that may require tweaks and adjustments. A whole-foods plant-based diet may well be the best diet on the planet for optimum health and longevity, how terrible then to miss out on making a success of it through adherence to misinformation and changing food trends.

### **References and Research**

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