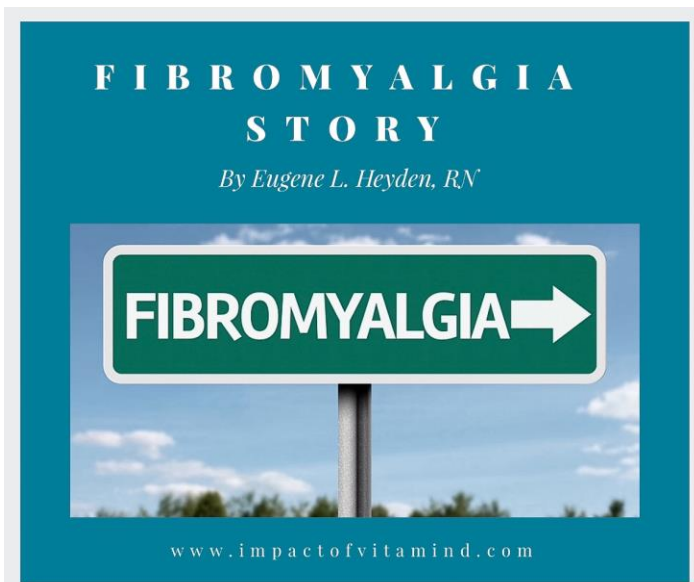


Excerpt from *The Impact of Vitamin Deficiency*



Fibromyalgia Story

I have spent well over a decade of my life attempting to solve the mystery of fibromyalgia, what it is, and how it selects its victims. What's my motivation? My sweet wife has it and has suffered greatly over the years from this disorder. And you think I am going to sit still and not go after this disease with all I've got?!! (You have to be joking.) After years of study, here is my conclusion: Fibromyalgia is whatever occurs that negatively affects muscles and nerves, producing, as a result, chronic widespread pain, pain that persists . . . unresolved. Well, that was pretty vague. Let's look a little deeper.

For a particular individual, fibromyalgia could simply be the symptoms of hypothyroidism, undetected or improperly managed. Hypothyroidism negatively effects just about everything, including skeletal muscle. Fibromyalgia certainly could be, as we have previously discussed, symptoms arising from prolonged vitamin D deficiency. Fibromyalgia could easily arise from any number of hormonal imbalances, particularly those related to the stress hormone cortisol. Undoubtedly, fibromyalgia could stem from a failure to adequately repair the everyday damage that occurs to muscles, damage that should be repaired at night, a time when one should be also be receiving adequate restorative sleep. This is my pet theory: Fibromyalgia could

be a manifestation of insulin resistance, a state of affairs that screws up just about everything. Finally, fibromyalgia could be a subtle inflammatory response to something yet to be identified, perhaps a bacterium.

Fibromyalgia is often characterized by depression, sleeplessness, muscle pain, and more sleeplessness and more depression. (Did I mention more muscle pain?) Fibromyalgia may not be one single thing; it may be many things that are all rolled up into a ball and given a name.

Since fibromyalgia is considered to be a “modern” disease, let’s see if we can give a modern person, like Betty over there, symptoms that we can later label as fibromyalgia. This should be fun! Let’s get started, and do so without delay.

Of course, we will want to make Betty vitamin D deficient. That’s a must! Over time, this is certain to harm muscle. And it should be fairly easy. Fortunately for us, Betty’s faithful use of sunscreen has given us a good head start. Faithful sunscreen use is the gift of vitamin D deficiency.

Since Betty is a young adult and not made out of money (and neither is her husband), she will need to work. So we now find her taking a job down at the local toothbrush factory. Toothbrushes are heavy and the work is notoriously demanding, so she is only able to work part time, say, at most, 3 days a week. On the other days of the week, surrounded by all her labor-saving devices, she will make it through the day resting and watching daytime TV. Historically, Betty has never hung clothes out on a clothesline, not once in her entire life, although she thinks she has seen one on the History Channel. “The Price Is Right” and “Days of Our Lives” have become important to her, more important than going outdoors and getting a little sunshine during the time of day when she could easily make 20,000 IUs of vitamin D per session and be better protected from disease. But I did notice that she received a paltry 400 IUs of vitamin D in her multivitamin supplement this morning, so she is sure to squeak by and we may have to wait a little longer to see if the symptoms of fibromyalgia will show up. But perhaps we can speed things along. We don’t have all day here.

Hey, I have an idea! Let’s give her financial worries, and, just for fun, let’s add the stress of pregnancy. The financial stress is sure to keep her up late at night worrying and losing sleep. And pregnancy, too, can be a very stressful event—expanding in size while being kicked at all hours by what feels like 3 pairs of legs. And what a coincidence. According to the

ultrasound, Betty is expecting triplets! The pregnancy, all the kicking and all the expanding, is certain to rob Betty of good quality sleep, restorative sleep, and do so on a continual basis. Skeletal muscles do not deal well with sleep loss. We know this because muscle pain can be produced relatively quickly, even in healthy test subjects, simply by interrupting their sleep patterns. With triplets, there *will* be more sleep loss in Betty's future. Triplets are always looking for something to eat (actually, drink), on demand, day or night. But I'm getting a little ahead of my story; the triplets have not been born yet. That will soon change. After a brief 23-hour labor, they have now finally arrived on the scene.

Because Betty has been made vitamin D deficient, her breast milk will not include vitamin D. Therefore, the triplets will be sick quite often, and "Mom" will, therefore, lose even more sleep and will feel like pulling her hair out from all of the stress. (Are you able to relate to any of this?) Betty the Mom will certainly be way too tired, and far too busy, to get outdoors during the time of the day when she would directly convert sunlight into vitamin D. Goodie for us. Bad for Betty.

Now the bills are piling up, so it's back to the toothbrush factory after a brief and insufficient maternity leave. She hardly ever sees her husband anymore (he's very busy trying to get ahead in life), so we will not mention him further. But on the chance that we run into him again, Betty has asked us to scold him for not helping more around the house and helping more with the triplets, one of whom, the runt, seems to be having motor and neurodevelopmental difficulties. The doctors are stumped. Can you see that we are deliberately setting Betty up for something bad to happen? We hope that the evil will be fibromyalgia, according to our diabolical scheme. Betty, however, seems to be more resistant than expected, but we still haven't got all day. So, let's throw a few more things her way. But first . . .

Let's see where we are at. We are making sure that Betty will be low in vitamin D and will remain low for an extended period of time. We are robbing her of restorative sleep, knowing that this, too, over time, can cause a syndrome of widespread, unrelenting pain. We have made sure that the only life that she has, apart from work, is more work at home, indoors. For good measure, we have added quite a bit of stress to her life. But Betty does have an outlet (or two), offering her a little diversion from the cares of the day. It is called late-night TV.

Late-night TV has become a central feature in the little life that Betty has left (to herself). This is the time when she also does her snacking and her snuggling. Who can blame her for this? After all, she does

deserve some quality time for herself and quality time with her husband. Okay, we've written him back into the story because, luckily for us (and for him), his plans include further loss of sleep for Betty. Soon after a brief period of stress relief, Betty's husband will be snoring (like a freight train), keeping Betty awake even longer and removing her further from *anything* that resembles a good night's sleep. And, poor Betty, because of her snacking on potato chips and the like, she is beginning to pack on the weight, particularly around the middle. Of course, she begins worrying about her weight and how she will fit into the bathing suit that she will never wear. All of this is according to plan. Fibromyalgia, here we come!

You and I are little stinkers. Just look what we have done to Betty! We've made her vitamin D deficient, and for an extended period of time. We've added stress, and it just keeps on coming! We have done our best to deprive her of restorative sleep. And to top it all off, we have started her down the path of living the insulin-resistant life. All the snacking (on simple carbohydrates and omega-6 fatty acids) is certain to come in handy as we inch ever closer to our goal. However, now that the triplets are all grown up, our plan may be in jeopardy. Now Betty may be able to get more sleep and have more time for leisurely outdoor activity. But don't count on it. Besides being all worn out, Betty is a creature of habit, so it is more late-night TV for her! And she will be losing even more sleep worrying over the triplets, the bills, and the possibility that the toothbrush factory will close and her job will be shipped overseas.

Now, we had nothing to do with the following, at least I don't think we did. Betty's hormones are starting to get out of whack. Things are certain to escalate! She will now become depressed (if she wasn't already). Accordingly, frequent visits will be made to her doctor, seeking relief from all her little problems. And, as luck would have it (for us), this doctor pays little attention to vitamin D, will eagerly throw drugs at symptoms, and will probably not get to the bottom of things. Betty may find some relief—drugs can be helpful—but probably not for the long haul. Her chronic vitamin D deficiency, plus everything else we have thrown at her, will eventually take its toll. The bags under her eyes, they are there for a reason.

Now the following we did not anticipate, and it is *not* good news for Betty. Betty has just found a lump in her breast. Could our devious scheme to make her vitamin D deficient, for years, have caused this unfortunate turn of events? Perhaps. But such is life.

Betty is now in a lot of trouble. Stress and worry will be intense and will dominate her life for quite some time. And bad things may happen (to muscles and precious body parts). This unfortunate turn of events may be all that it takes to push her directly into the path of fibromyalgia. I'm actually surprised that she has held out for so long with all that we have thrown her way, but we may not have to wait too much longer.

Oh! I'm so sorry! I just keep rattling on. So, to be kind to you, I will bring this story to a close. Later, I will tell you how things went for Betty (unless I forget). Besides, Betty isn't exactly a real person. But you are! And I'm a little worried about you, dear fibromyalgia patient. And my fear is that you will not receive the medical attention that you need.

But you are bright. You have learned the lessons from my story about Betty, realizing now that fibromyalgia is not the great mystery that it is made out to be. It is a disease that results from a damaging lifestyle. A drug, here, is not needed. A lifestyle change, that's what is needed! Correcting hypovitaminosis D, engaging in activities that help reduce stress (get outdoors and do stuff), making restorative sleep the highest priority, taking measures that improve insulin sensitivity, and correcting hormonal imbalances may help you walk away from this disease we call fibromyalgia, or at least give you a kinder and gentler fibromyalgia instead. Did I say walk? Walking is great form of exercise, a great way to reduce stress, and, during mid-day, a great way to get vitamin D. But start slow. You have fragile muscles at this point in time.

What a surprise! (And I didn't see it coming!) It only took one more complete paragraph for Betty to finally come down with fibromyalgia. You and I succeeded! Her doctor poked around a little, found the required number of tender spots on her neck, back, and arms, and proclaimed the news. End of story.

You will find Betty, and possibly yourself, written all over the following papers:

If you question whether fibromyalgia could result from vitamin D deficiency, read this chapter again. You should also read the following:

—**Matthana MH** 2011 The Relation between Vitamin D Deficiency and Fibromyalgia Syndrome in Women. Saudi Med J 32(9):925–929

—**Biala A, Khan S, IrfanLiqbal M, Qureshi FS, Fazal MO, Shsheen M, Iqbal S** 2009 Effect of vitamin D Replacement in Patients of Fibromyalgia. A.P.M.C; January–June; 3(1):51–58

If you feel the need to question whether sleep deprivation is a factor in fibromyalgia, review the following two papers:

- Moldofsky H** 2008 The Significance, Assessment, and Management of Nonrestorative Sleep in Fibromyalgia Syndrome. *CNS Spectr*; March; 13(3) (Suppl. 5):22–26
- Dattilo M, Antunes HKM, Medeiros A, Neto AM, Souza HS, Tufik S, de Mello MT** 2011 Sleep and Muscle Recovery: Endocrinological and Molecular Basis for a New and Promising Hypothesis. *Medical Hypothesis* 77:220–222

If you wonder if stress and hormonal imbalance is involved in fibromyalgia, read this:

- Gupta A, Silman AJ** 2004 Psychological Stress and Fibromyalgia: A Review of the Evidence Suggesting a Neuroendocrine Link. *Arthritis Research & Therapy* 6(3):98–106

If you doubt whether insulin resistance and hyperinsulinemia is involved in fibromyalgia, I direct you to the following:

- Holmäng A, Brzeninska Z, Björntorp P** 1993 Effects of Hyperinsulinemia on Muscle Fiber Composition and Capillarization. *Diabetes*; July; 42:1073–1081
- Mäntyselkä P, Mietola J, Niskanen L, Kumpusalo E** 2008 Glucose Regulation and Chronic Pain at Multiple Sites. *Rheumatology* doi:10.1093/rheumatology/ken220
- Aragno A, Mastrocola R, Catalano M, Brignardello E, Danni O, Bocuzzi G** 2004 Oxidative Stress Impairs Skeletal Muscle Repair in Diabetic Rats. *Diabetes*; April; 53:1082–1088

If you have been told that there is no muscle pathology in fibromyalgia (and you were considering believing this nonsense), you should read:

- Sprott H, Salemi S, Gay RE, Bradley LA, Alarcón GS, Oh SJ, Michel BA, Gay S** 2004 Increased DNA Fragmentation and Ultrastructural Changes in Fibromyalgic Muscle Fibers. *Ann Rheum Dis* 63:245–251
- Gronemann ST, Ribel-Madsen S, Bartels EM, Danneskiold-Samsøe B, Bliddal H** 2004 Collagen and Muscle Pathology in Fibromyalgia Patients. *Rheumatology* 43:27–31
- Bengtsson A** 2002 The Muscle in Fibromyalgia. *Rheumatology* 41:721–724

The papers (all free) listed on this and the previous page can be read in less time than it takes to go to the doctor, wait in the waiting room, sit on the exam table while the doctor is trying to decide whether you are or whether you are not crazy, and the time to fill a prescription for a drug that may cause significant weight gain, further depression, and thoughts of suicide. Enough said?

I was planning to write a book on fibromyalgia. Perhaps, after writing *Fibromyalgia Story* and placing it here, I may not need to.

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