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# Welcome

## The Shift to Better Health Starts Now

Dr. Madalyn Otto

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### Congratulations on Taking the First Step by Becoming a Patient.

No matter where you are on your health journey, the ball starts rolling *now*. At this point, you've had your first visit where we gathered a lot of data and spent time trying to connect all the dots and identify the various factors involved in your current health picture. Most likely, we have run additional tests to add to the story and help form an assessment. Then, the treatment phase begins.

### This is different from what you're used to...

The "mainstream" model of healthcare is to learn just enough about the one thing that is bothering you the most today, and provide relief in some way, shape or form. This is called an "acute care model", or a palliative model. That is simply not what we do in this practice because we believe the acute care model does not truly address the root causes of illness.



Now that you are a patient in this practice, we are beginning an ongoing investigation into what obstacles are preventing your body from operating at its best, and what key resources your body needs to attain and maintain health. The investigation started at your first visit and will continue throughout your life at this practice. As your Functional Medicine

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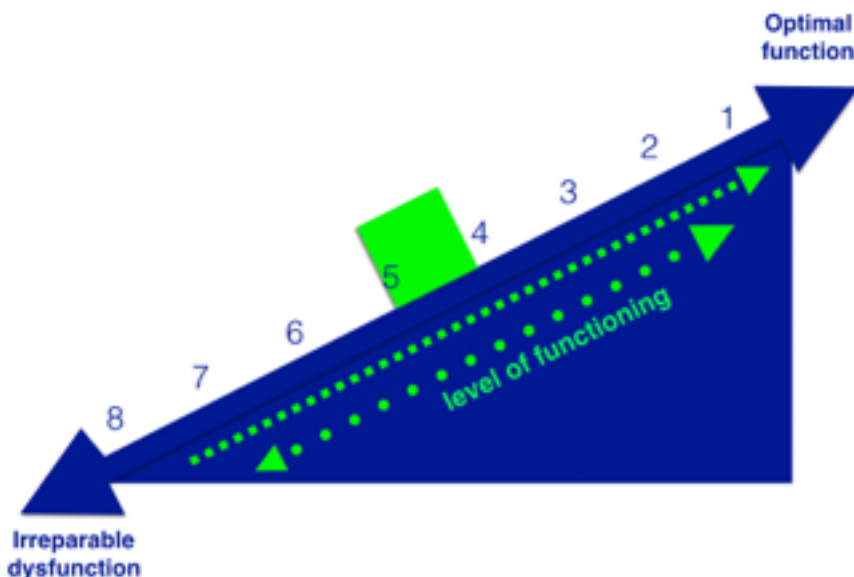
doctor, my first job is to be like a detective. But instead of solving crimes, we solve the health issues you experience today by analyzing the changes that occurred inside your body over the past months, years and decades. My second job is to be your personal biology & lifestyle engineer, finding ways to re-route faulty systems and promote healing in weakened systems so that your body works and feels better for a longer period of time.

I expect that with focus, commitment & adherence to a well-designed plan, you will begin to feel better within the first 1-2 months of our work together.

**“Great! So in a few months I’m all done?”**

Once you start to feel better, it’s tempting to veer off and go back to living the same old way until the next crisis befalls you. But that model leads to poor outcomes and a lot of frustration because your healing is incomplete and your faulty and weakened systems are still vulnerable.

In Functional Medicine, we abandon the dysfunctional “acute care model” where short-term solutions are applied to chronic, complex problems and are promptly forgotten about until those chronic problems reach a level of crisis. Rather, we recognize that health exists on a continuum. It is constantly fluctuating, constantly being tested, and requires sustained attention and effort if it is going to be maintained.



**If you stop actively working to correct the myriad underlying causes and contributing factors to poor health or if you abandon your health efforts too soon, then it is likely you will experience relapses or the onset of other illnesses.**

It’s important to understand that since your health is on a continuum, it can improve or worsen at any time depending on its environment and the function of your organs and cells. I

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tend to depict the health continuum on an incline to represent the fact that it is always *harder* to push the block up the incline towards better health than it is to let the block slide down towards worsening health. Giving the body the support it needs, taking your medications and supplements and changing your lifestyle requires ongoing effort and strength.

There are many things in life that operate on a continuum. In fact, most things operate on a continuum when you look at the big picture. If a person puts aside money for retirement for a couple of years but doesn't continue to save beyond that, they will almost always fall up short and full of regrets. If you don't nurture your vehicle with ongoing maintenance and required inspections, it will fall apart and probably do so prematurely. If you don't nurture your personal relationships with time, energy, patience and often behavior modification, they will eventually degrade.

Just as life events impact your personal relationships, just as the weather impacts your vehicle, just as the markets rise and fall in accordance with what's happening in current events and the economy, *your health is also constantly being challenged*. If we are not paying adequate attention to it, if you are not prioritizing it with necessary lifestyle modifications and supplementation, it too will spoil and degrade.

### True Prevention



Only when we have this shift in our mindset from REactive to PROactive can we possibly exercise *true* prevention. In mainstream medicine, Prevention plays a minor role. In Functional Medicine, Prevention is practically built-in because it acknowledges that body systems are connected, that health is a constant work in progress and that there are many ways that we can strengthen our genetic weak spots through lifestyle choices and supplement resources.

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## You Are an Equal Partner on This Team

While my job is to be your health detective and health engineer, *you* are ultimately running the operation. A good treatment plan is only as effective as its implementation. And, since the body is a complex organism, we will need to work closely together to solve mysteries as they arise, troubleshoot when the body is not responding to our efforts, and communicate openly when motivation dips. Just as the onset of a global crisis is hard to predict, both your body and life circumstances can surprise us as well. Our best bet is to plan ahead for challenges and to remain adaptable and flexible when we need to tweak our current plan. By seeing yourself as empowered and an equal member of your health team, you will positively influence the trajectory of your health.

Now that you are a little more familiar with why we are taking this approach, I hope you are as excited as I am to get moving!

In Health,  
Dr. Otto

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# The Purpose of Supplements

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Some of our patients are familiar with using natural supplements for various ailments or for nutritional support. Other patients have never used a supplement before. In either case, it's a really important topic to discuss at the beginning of care.

## **Our Goals:**

**To support the body's innate ability to heal from damage.**

**To provide the needed resources for cells to function optimally.**

What happens when you go to your primary care provider with joint pain? High blood pressure? Heartburn? Very often, you are prescribed a medication that opposes the specific symptom. You are provided with an analgesic to reduce pain, an anti-hypertensive to reduce blood pressure or an acid-blocker to reduce stomach acid.

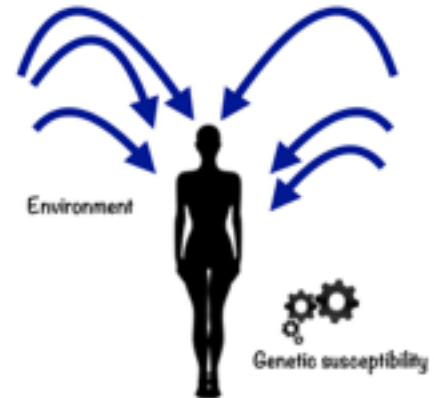


Most, if not all, medications are *reactive* medicines. They respond to an existing problem by applying a short-term solution which attempts to negate the symptom. More often than not, *they are extremely good* at negating symptoms. If you've ever taken an acid blocker for heartburn, you know how powerfully well they work. If you've ever taken a high-dose steroid for acute inflammatory pain, you've probably blessed its inventor from the bottom of your heart for the relief you felt. Medications are powerful and extremely important. Without these drugs, we would all suffer at some point in our lives. In emergency care, reactive medications aren't just convenient, they are necessary and life-saving. Medications can take a body in crisis and literally force it into normal function. We should all be grateful for these advances and the access we have to this type of care.

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**But on a day-to-day basis, most of us are not sick in an acute health crisis.**

Most of us are seeking physician advice because we are chronically ill. And chronic symptoms are *not* best managed by crisis medications. A chronic symptom is a message from the body that something is malfunctioning beneath the surface, that something necessary is missing or something that shouldn't be in the body is present. A true solution to a chronic problem first requires a thorough understanding of the factors at play both in the external environment (lifestyle and environmental exposures) and the internal environment (genetics & maladaptations). After all, our total health picture is a result of our internal and external environments combined.



### **What does this have to do with supplements?**

Once the internal and external environments have been assessed, we aim to correct problem areas. In addition to finding solutions to chronic problems through nutrition, stress management, stress reduction, physical activity, etc., nutritional supplements are almost always prescribed to achieve one or more of the following:

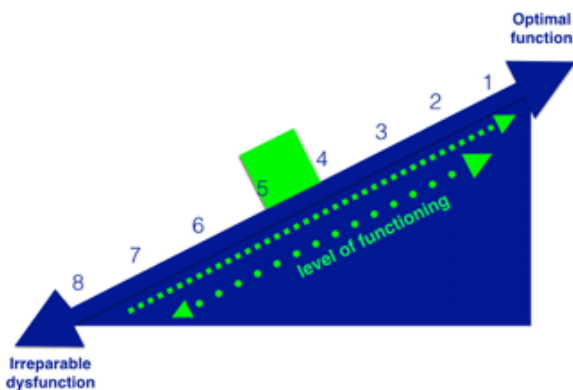
1. Augment nutritional intake in a way that would be difficult to do consistently through diet alone.
2. Attempt to compensate for a genetic weak spot in the body that otherwise renders a natural biological process sluggish, inefficient, overly-efficient or faulty.
3. Compensate for something in the environment that cannot at present be removed - e.g. the burden of high stress or chronic occupational exposure to chemicals or pollution.
4. Improve cellular function & cellular behavior beyond what is typical for the body's age to ensure high quality-of-life during our now longer human lifespans.
5. Provide short-term relief that is safe and non-toxic when something goes wrong, i.e. an injury occurs, you become acutely ill, etc..

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A natural supplement is any naturally-occurring substance we include in our treatment plan to promote health in one of the aforementioned ways. This usually encompasses the use of herbs, vitamins, minerals, phytochemicals and nutrient co-factors alone or in combinations. Often, though not always, these substances are prescribed in supra-physiologic doses to facilitate the desired physiologic response.

### **You Will Likely Always Need Supplementation.**

Because your health exists on a continuum and requires ongoing effort and attention, supplementation will always be an important tool. It is important to recognize that your supplement plan will change depending on circumstances and your current health state. There will be times that you will take more supplements or different supplements because you are manifesting different internal imbalances or there is a downward trend in your wellbeing. There will be other times where you will take very few supplements and at lower doses simply to keep your body strong and resilient. This is particularly true when you are further up the incline on the health continuum.



**Supplements are not a replacement for lifestyle modifications & strengthening. They should also not be seen as fulfilling the same role as prescription medications.**

Rather, they are essential components of any well-balanced care plan that endeavors to promote physical and emotional resilience, reduce an individual's overall dependence on medications and surgeries, and promote high quality-of-life.

In the next segment of this packet, I will explain the importance of supplement *quality* in an industry that generally resembles the Wild West. I mentioned earlier that a good treatment plan is only as good as one's ability to adhere to it. To the same degree, a good treatment plan is only as good as the quality of each of its elements...

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# Supplement Quality

Why Highest Quality Control is Essential in a Functional Medicine Practice.

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Nutritional and herbal supplements, when used therapeutically and judiciously, are incredibly powerful tools to aid the body both in healing and in prevention. Asking a Functional Medicine doctor to practice without the use of supplements is like asking a fisherman to fish with bait but no rod. In a Functional Medicine practice, supplements are chosen based on each patient's biochemical needs in order to re-direct the body, guide the body, and facilitate

healthy functioning of cells and organ systems. It allows us to both accelerate and ensure the positive effects of a healthy lifestyle. It also allows us to alleviate pain and discomfort when you need it most without the use of harmful drugs and chemicals.

## **Why the *Brand* of a Supplement is so Important**

For better or for worse, the supplement industry is unregulated. On the bright side, this allows companies healthy competition in innovation and in pricing. Unfortunately, it also means that the supplement industry essentially operates by the "honor system"<sup>1</sup>. The small amount of regulation that does exist has set a very low bar for the quality of supplements, and there is virtually no enforcement of this low standard. As the patient and the consumer, you are at the whim of the company's personal level of dedication to quality.



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## **Nutritional and herbal supplements are not created equally for a few key reasons:**

1. Where and how the herb or nutrient was extracted is not regulated. A company is not required to verify the species of plant, for example, from which it is making the product. If you are taking an herbal formula, this is in the best case a waste of your money and time, and in the worst case it is extremely dangerous. There is an alarmingly high rate of products containing false information on their labels<sup>2</sup>. They may boast on their label that they contain, say, 200mg of a specific herb when in fact, they contain *none* of that herb whatsoever<sup>3,4</sup>.

2. Requirements for testing for contaminants are also minimal, even in formulas that boast special certifications. In a trade-heavy world, this gap within regulations results in concentrated levels of heavy metals, radiation, toxic minerals, microbes/ pathogens, allergens, and other contaminants *without any reference* to them on the product label<sup>3,4,5</sup>. This is particularly true of herbal products, probiotics & fish oils.

3. Herbal medicines are only therapeutic if they are grown, harvested and concentrated properly. This requires masterful knowledge within the company and the application of advanced technology to ensure the potency, concentration and bioavailability of the therapeutic phytochemicals within the herb in every single batch of product produced. Unless the company *chooses* to undertake this complex task throughout the manufacturing process, your product is likely close to useless.

This is why at our Practice, we only recommend brands that take the extra steps and spend the extra time and money to ensure that every step along the way from growing and harvesting to manufacturing and shelf-stability is thoroughly tested and third-party verified using the most effective technologies available. *We are using supplements as primary tools to achieve positive health outcomes. It is critical that we know you are using safe & effective products.*

## **Why the Distributor You Buy from Matters so Much**

In recent years with the development of online retail and profit-seeking on massive scales, we have seen another big problem arise for our patients. Our patients may find themselves tempted to purchase supplements from an illegitimate supplement distributor because the price seems lower or the delivery more convenient. Unfortunately, this comes at a

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huge quality cost to the consumer. There are a myriad of ways individuals are scammed day after day by purchasing from commercial online-retailers who distribute from large general warehouses *or* from individuals who are actually selling these products illegally independently or through a big-name online retailer's website.

1. A seller will empty the bottle and re-fill it with a decoy capsule/tablet and re-seal it as the original product. Aside from being morally disturbing, it also means that your product is, in the best case inert and wasteful, in the worse case dangerous to your health<sup>6,7,8</sup>.

2. A seller will scratch off/remove the expiration date from the bottle. They may or may not add a replacement expiration date that extends long past when the bottle was set to expire by the original manufacturer, or simply not include an expiration date at all. This is an illegal practice, but accountability and prosecution are rare due to poor enforcement of safety standards.

3. The warehouse where the product is stored is not climate-controlled. Unless you are purchasing from a source that makes the painstaking efforts to diligently control the environment in which the product is stored, your product will not be of therapeutic quality. A product in a warehouse can be kept at high temperatures, in a humid environment *for months, even years* before it reaches you. Herbal medicines are from organic material and are only therapeutic when kept within certain ranges of heat and humidity. Fillers operate much the same way. Probiotics, fish oils, and various food-based and synthetic nutrients also require specific temperature and humidity controls to maintain their efficacy and shelf-life. For the same reason you need to be cautious about where you leave supplements in a house during the summer months if you don't have AC, you need to know you can trust the distributing location<sup>9</sup>. The importance of environmental control to maintain supplement quality is not understood by general retailers who are non-experts in the herbal and nutraceutical industries. Additionally, enforcement of optimal storage conditions may not be adhered to because it costs retailers profit, and there is no legal obligation to adhere to these standards. A classic example of a consequence of inadequate storage is with fish oil. Fish oil notoriously becomes rancid in heat, altering the chemical composition of the fatty acids present. Not only does this fatty acid damage negate the health benefits, but will also cause deleterious health effects.

4. The *delivery* from the warehouse is similarly not well-controlled. Even in a world where the product *was* kept in a cool enough, dry enough environment to ensure the

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health of the product during storage, it is then shipped out to an individual's home where the environment *during transport* is not controlled. This is why at our office we pay extra to have products' shipping conditions well-controlled to our standards.

Your time as well as your emotional and financial investment in your health are important to me. In fact, I also feel emotionally invested in the time and effort you dedicate to getting well. Because our therapeutic tools depend on an industry that is self-regulated, we must be incredibly vigilant about pranks, scams, and profit-seeking measures that prevent you from healing and staying healthy. We must demand the highest quality from distributors and our manufacturers. *This is why supplements matter. This is why we must know who made the product, and where the product has been before it arrives in your hands.*

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# The Purpose of Follow-Ups

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Including a functional medicine doctor on your healthcare team means that you are enlisting a provider whose mission it is to change the trajectory of your long-term health in a more positive direction and help you stay on that better trajectory even when life throws you curve-balls. To do this, we need to first invest the time up-front to tackle existing issues and build a strong foundation. Then, we need to remain proactive for the duration of our doctor-patient relationship to promote a steady state of health.



The first phase of our time together, “Turning the Tide” typically lasts anywhere from 3-12 months, depending on the severity, complexity and duration of present illness. During this time, we follow-up every 2-6 weeks to intervene and implement changes in order to reverse illness and improve health.

The second phase, “Dig Deeper” can last anywhere from 2 months to several years, again depending on the complexity of the case. For example, A 30-year-old patient with chronic heartburn will have a short phase 1 and phase 2 compared to a 55-year-old patient with multiple autoimmune diseases, heart disease, IBS and chronic migraines. Once we achieve stability in your unique case, we enter the third phase, “True Prevention” where we are truly looking ahead and carving out the brightest health future possible for your individual situation.

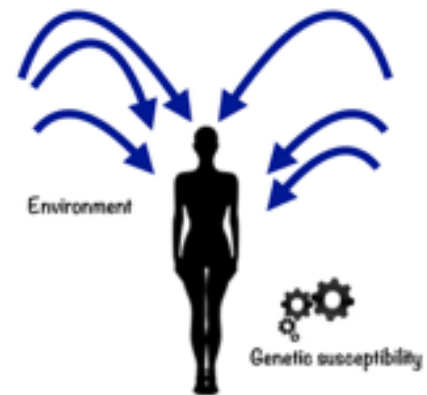
During the “True Prevention” phase, we engage in lifestyle maintenance & early correction measures 2-3x per year. At this point in the flow chart, you are already “brushing

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and flossing daily” (a.k.a. engaging in healthy nutrition habits, exercise, stress management & taking the supplement regimen prescribed). Your follow-ups allow us to fine-tune things and ensure that our strategies are working. These follow-ups also ensure accountability to the plan and facilitate ongoing discussions about health-promoting lifestyle habits and supplement changes as life circumstances evolve/shift and normal aging occurs.

### Why Not Just Once Per Year?

You’ll learn pretty quickly that we cover a lot of ground during our appointments - reviewing lab results, discussing dietary patterns, finding the right physical and emotional support resources for you, reviewing supplements, answering questions about your health & physiology, coaching on ways to stick to positive lifestyle changes, etc.. Because of the breadth of our dialogue, visiting just once per year is often insufficient. Routine follow-up 2-3x per year during the True Prevention phase allows for long-term behavior changes and progress towards evolving health goals.



**Remaining in the driver’s seat when it comes to your health requires that you always keep your hands on the steering wheel.**

Now that you understand the flow-of-care, the health continuum and the basics about lifestyle and supplement support tools, I think you’re ready for your first follow-up!  
I look forward to seeing you soon! :)