



# SUPPLEMENTS EXPLAINED MASTERCLASS

MODULE 1

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## TRANSCRIPT

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## Module 1: Create Your Supplements Revealed Gameplan With Personalized Nutrient Testing with Joel Fuhrman, MD

Nathan Crane:

Welcome to Module 1 of the Supplements Explained Masterclass. I'm your host and natural health researcher, Nathan Crane. Supplements have been a big part of my life over the years. Having been researching and experimenting heavily with diet, nutrition, supplements, and holistic lifestyle for over 17 years now, I can honestly say I've experienced many ups and downs, a lot of wasted money and a lot of confusing information when it comes to supplements. My purpose in creating this masterclass is to cut through the noise, help you save money and not waste it on unnecessary and ineffective supplements. Give you the leading-edge research from world-leading doctors and dieticians. So you can not only take control of your health, but learn how and why to only take the supplements you actually need. During this masterclass, you'll learn first-hand which supplements work, which ones don't, which ones to avoid, which ones you really don't need. How to pick effective supplements, how to save money and time, and how to use supplements as supplements.

Nathan Crane:

Meaning, what is the most effective diet and lifestyle solutions you need to follow first and foremost to contribute towards 80% of your real health? And then how can you fill in that extra 20% of vitality and longevity with specific targeted supplementation? So I'm very glad you're joining me and my guest experts for this important masterclass. Let's dive into this first module with Dr. Joel Fuhrman. Dr. Fuhrman is a board-certified family physician, seven-time New York Times bestselling author and internationally recognized expert on nutrition and natural healing. He specializes in preventing and reversing diseases through nutritional methods. Dr. Fuhrman is the president of the Nutritional Research Foundation and on the faculty of Northern Arizona University health sciences division. He coined the term "Nutritarian" to describe a nutrient-dense eating style designed to prevent cancer, slow aging, and extend lifespan. In this module, you'll learn all about personalized nutrient testing and you'll discover which nutrients you actually need to thrive.

Dr. Joel Fuhrman:

Hi, I'm Dr. Joel Fuhrman. I'm a board-certified family physician, nutritional researcher, and president of the Nutrition Research Foundation. I've worked in the field of nutritional science for more than three decades, and it's been my passion to give people the opportunity to live long and happy lives, free of the diseases that plague other Americans. We simply can control our health destiny, and don't have to have heart attacks, strokes, get cancers and dementia. So I'm passionate about this message and I combine nutritional excellence and the conservative use of supplements to enable people to most effectively protect their health. Before we get started in talking about supplements and how critical they can be. Let's just say that supplements are something we use to make a healthy diet more complete. Looking at what ingredients or nutrients might not be optimally present in a super healthy diet.

Dr. Joel Fuhrman:

In other words, what I'm saying right now is that the quality of your diet is foundational to your health and your longevity, not as much the supplements you use but primarily the dietary portfolio you use. Because not only should food be your primary source of vitamins and minerals, but also there are literally thousands of phytonutrients that are present in real food and we get fibers and the fuel to growth of a microbiome.

Dr. Joel Fuhrman:

And we get this synergistic matrix in food that can't be supplied by supplemental ingredients. In other words, there's no substitute for eating the right diet. And I'm an advocate of what I call a Nutritarian diet. And the word Nutritarian means rich and comprehensive in the nutrients humans need. And that means the diet is based on vegetables, not based on meat or grains or processed foods, but actually has a huge assortment of vegetables. Of course, we also eat fruits and nuts and seeds and beans and mushrooms and onions and all types of foods. But I'm saying that the human body is a green vegetable-dependent organism. And without a high intake of green vegetables, we can't expect to have normalcy. So green vegetables don't just contain folate and bioflavonoids and antioxidants and phytochemicals, but they contain foundational nutrients that support the growth of our immune system and fuel the antioxidant response element in our cells that keep our cells clean and repair defects.

Dr. Joel Fuhrman:

So inherently, the question here is then what do we need supplements for? If we're eating all these vegetables and fruits and nuts and beans and mushrooms, then what do we need supplements for? And the real answer here is that even when you eat an ideal diet, there are certain nutrients that are better found in animal products or better absorbed from animal products that we can supplement a plant-based diet to achieve those optimal levels to make sure we have the best of both worlds. The reduction in animal proteins, which slow the aging process and reduce risk of cancer. While at the same time, increasing some of those beneficial nutrients in animal products that enable us to make a plant-based diet complete. That's essentially a core component of the Nutritarian program. Now we utilize testing now, modern scientific blood testing, to tweak the nutrient levels of certain nutrients to make sure we optimally hit the sweet spot.

Dr. Joel Fuhrman:

Because one important thing to remember, is that a deficiency or insufficiency of nutrients could impair our health or our longevity. But an excess of nutrients, certain nutrients can also impair our health longevity. Let's take for example, vitamin D. We don't want to be deficient in that. And when we adjust our supplement level to that point, when we're in that sweet spot of the mid-range and not too high and not too low. So there's some people saying, "You don't need any vitamin D you're better being very low." And there are some people that are saying, "Well, take a lot of vitamin D. Take 5,000, take 10,000 IUs a day. Get your level above 80 in the bloodstream." And I'm saying, well, both those extremes may have some evidence to support them. But if we do a comprehensive review of all the studies, we find that we have potential risks in higher dosages, and we have potential risks in lower dosages.

Dr. Joel Fuhrman:

We have more data and science documenting that it's better to live in the mid-range. And I'm saying this now, because this holds true for many nutrients we're going to look at today. So with regard to vitamin D testing, whether you get some sun or you don't, whether you have darker skin or lighter skin. Whether you genetically absorb vitamin D easily, or that you don't, it's still important to get the blood test. So the amount of vitamin D you utilize gets your blood test, the 25-hydroxy vitamin D blood test. That's the one you want to use, the 25-hydroxy. To get the range in that 30 to 50 range, 30 to 50, that ideal range. Now, if I had a number of 27, I was already taking 2000-3000 a day, I think it's probably good enough. And if I was taking just 2000, I was hitting 52 or a little bit outside that range, I wouldn't worry about it.

Dr. Joel Fuhrman:

But I'm saying right now is don't think that if your range is 30, 35, 38 or 40, that you need to take an extra 1000 or two to get your level above 50, because I'm saying it's not worth the benefits and risks there. We're finding higher rates of certain cancers may occur when you over-supplement certain fat-soluble nutrients. Likewise, so I'm saying it's a good nutrient to check and we should probably check your level and make that adjustment every five years. Because as you get older, your ability to absorb might change as we age and you might need a little extra dose. Another nutrient we test regularly and I recommend testing is testing for vitamin B-12. Because vitamin B-12 is generally only found in animal products and is deficient in plant-based diets. So as we improve the quality of our diet by increasing plant matter and lowering or eliminating animal products, we don't get adequate exposure to B-12.

Dr. Joel Fuhrman:

While at the same time, a lot of people eating a lot of animal products can still be B-12 deficient because their production of intrinsic factor in the gut could diminish with aging. So it's one thing we're watching for and we're watching with aging and we're watching on our diets to make sure our B-12 levels are adequate. So usually we recommend people take something between 50 and 200 micrograms of B-12 a day. And we don't want to take 500 or a thousand, unless you need that. And the test that we check for B-12 is called an MMA or methylmalonic acid, M-E-T-H-Y-L, malonic M-A-L-O-N-I-C. Methylmalonic, one word, acid, which then rises with B-12 deficiency. Because if your B-12 on your blood test runs above 600, you don't need the methylmalonic test.

Dr. Joel Fuhrman:

But if your B-12 and the blood test is running between 200, or let's say 250 and 500, you could still be somewhat deficient. Your level of 203, your 350 could be okay, but we don't know for sure, unless we check that methylmalonic acid to make sure that's not starting to rise. Now, we also utilize a test called homocysteine because homocysteine elevates also in the blood if B-12 is deficient and is usually a good indicator of that somebody needs more B-12. But remember homocysteine could also elevate from folate deficiency as well. But that generally doesn't happen on healthy eaters because in a person that's eating a healthy plant-based diet and eating salads and green vegetables, they're getting a huge amount of folate in their bloodstream and a huge amount of folate in their body. And homocysteine would not be elevated due to folate deficiency.

Dr. Joel Fuhrman:

If your B-12 test is adequate, your MMA is adequate and your homocysteine is still elevated. Then it could be you have a genetic defect found in one in 500 people. That's a methylation defect where you don't utilize and convert folate into the active form in the body effectively. And in that case, then folate supplementation would be indicated with methyltetrahydrofolate. Of course, that's very rare, not something most people should be concerned with. So we talked about B-12, we talked about testing for vitamin D. The next thing we should test for, probably the most important thing, is our omega-3 index. And most of these studies of late coming out in the scientific literature in the last five years, shows that lower levels of the omega-3 index, which means low levels of the EPA and DHA, those long chain omega-3 fats on the membranes of your blood cells in comparison to the omega-6 fatty acids, that above 5% of that membrane should be EPA and DHA omega-3.

Dr. Joel Fuhrman:

Cause if it's not, you're going to have more inflammation, higher risks of dementia. And we're seeing now, higher risks of death. A matter of fact, a recent study came out this year, showing that an omega-3 index below four equated to smoking a pack of cigarettes a day with more than five years of life lost on the average for people with low omega-3 index. So, us plant-based eaters who are not eating fish much or are not eating fish at all because we don't want to get exposed to microplastics and toxic metals and other pollutants, because we dump thousands of tons of garbage into the oceans every hour, and because the higher level of animal protein and diets ages our tissues and promotes cellular replication leading for tumor development and cancer, so we're keeping animal proteins and IGF-1 low, are controlling animal protein to lower levels or levels that if you have a little bit too low to get enough, let's say of those omega-3 fatty acids.

Dr. Joel Fuhrman:

So then we check that omega-3 fatty acids. So we can just check if we need supplementation, how much we need. What I'm saying right now, is the amount of plant-based omega-3 EPA and DHA you take is best adjusted to your needs based on a blood test. And the blood test, which can be OmegaQuant or the omega check blood test or there's different. But one of the name of the tests are, it's the omega-3 index. That's the primary part of that test you're going to look at. And I'm saying most of the evidence indicates that a level of above 5.2 is acceptable. So sometimes the test will say the acceptable level or the ideal level is eight to 12. And I'm saying, if we look at a comprehensive view at the science, below five could be at higher risk, below four definitely at risk, but above 5.2 is adequate.

Dr. Joel Fuhrman:

So a level of 5.5, six, 6.5, seven or eight, that's what we're shooting for. And we're adjusting our supplements accordingly. I actually produce an omega-3 fatty acid supplement and which we call DHA+EPA Purity. The reason I produced it or started to produce it is because I had so many vegan patients that developed dementia or Parkinson's or neurologic issues that were diagnosed and found to be extremely low in omega-3 fatty acid in their blood; super low levels. And you can't fix it once you develop those diseases. But also cause when you started supplementing with people, a lot of people got indigestion and a bad taste in their mouth and burping. And a lot of these supplements go rancid over time at room temperature. So we made one that was packed in dark glass to keep it fresh and pure and we keep it refrigerated at our warehouse.

Dr. Joel Fuhrman:

So when people order one, they're getting a fresh product that's never been outside of a refrigerator so it has more a higher shelf life and it's obviously lower rancidity scores. So we're very careful about that. And then how much should you take? We recommend three quarters of a dropper to take each day, but that's just a guess what most people need. Because you may need a little more and some people may even need less. If your level is seven or eight or above, then take less. Because what we found is that some people are able to convert the short chain omega-3 fats into long chain effectively, even though that's less than 20% of people can make enough. Eighty percent needs some supplementation and some people don't convert at all. But I'm saying the ability for those conversion enzymes is very genetically determined. And also body fat interferes with the ability not only to convert, but also to have the right percentage of omega-6 to omega-3 on the cell membranes.

Dr. Joel Fuhrman:

Because you have extra omega-3 fat stored in your body you're going to be supplementing all day. You're not going to get your level up to that favorable index. So another important thing to look at, and the other nutrient we often recommend testing with people is ferritin because ferritin is your best source of knowing if you're deficient in iron. We're particularly careful not to supplement with things that you don't need, that you could have excess amount, and taking iron is dangerous when you don't need it. Most people should not be taking iron. They shouldn't be taking copper. They shouldn't be taking selenium. They shouldn't be taking metals when they don't need them. But iron, in particular. Some women, for example, need iron because they get deficient in it because they're menstrual bleeding, they're losing blood and they're losing iron or they just don't absorb it well as they go through menopause, they're not good iron absorbers.

Dr. Joel Fuhrman:

So generally we don't want to take extra iron unless your ferritin's below 40. And we don't use serum iron as an indicator of iron stores because the serum iron doesn't really drop and go down low until your iron stores are totally depleted. So checking for serum iron is not the right way to check if you're iron deficient. It's better to check your ferritin. So even in pregnancy, you know how in pregnancy doctors tell women take a prenatal vitamin that has folic acid and iron in it? I do not recommend that because the studies show, number one, folic acid is toxic. We'll talk about that later. It's not the same as folate you get in food. But number two, there's no benefit for pregnant women taking iron if they have iron adequacy. There's only a benefit if they have iron inadequacy.

Dr. Joel Fuhrman:

In other words, we're seeing better health outcomes with their children if they don't take iron, unless they need to. So we don't have a cookbook approach, giving the same amount of the same supplement to all women that are pregnant. We give them a small amount of iron if they need it. A little larger amount of iron if they need that, and no iron if there's indication on the blood that they don't need that. And keep in mind when a person does need supplemental iron, they're better off taking a low dose and taking it more frequently because the higher dose, you're not going to absorb very well. It can cause constipation and other GI issues. And we recommend taking a low dose like 25 milligrams and taking it more frequently because you only absorb a little bit at a time. Now I need to mention also that the red blood cells have a turnover of about three months, which means that when we're checking for something like the omega-3 index and you find your level is too low...

Dr. Joel Fuhrman:

Let's say you did the blood test and it showed your level was 3.8. Not bad, but not good enough. So you doubled your dose and you went from 75 milliliters to 1.5 milliliters a day. Then you've still got to wait four months to test that again. Because we have to make sure all the red blood cells are replaced and you had a month of taking the right supplement; the higher dose. And then three months of those red blood cells clearing out the old red blood cells, replacing them with new ones. So when the blood test is done four months later, we're testing the new level of supplementation you're taking, not the old level of supplementation. So you don't need to test too frequently, but it's recommending people test maybe every five years or so, but you do need to repeat the test if it comes back abnormal and then you change your dose of what you're taking and then you repeat that again in a few months.

Dr. Joel Fuhrman:

And I'm saying four months, let's say, to recheck that you're now hitting that level right in the sweet spot of what you're aiming for. The other thing here is that why not just do these panels that test for everything? Why test these four things I'm talking about? Well, because the panels are not accurate. And for example, with vitamin A, your body doesn't even lower the level in the blood until the liver's totally depleted. With zinc, the levels are going to be adequate. That, in other words, we don't store zinc in the bloodstream and blood is not an accurate indicator whether you need it or not. And the levels of zinc in your body, because zinc is not stored effectively, is a very narrow range of between inadequacy and toxicity.

Dr. Joel Fuhrman:

So checking the blood doesn't really help you. And some of the tests like iodine are based to what you had the last couple of days and you would need 24-hour urines done every week for a few weeks and then to average them to get a good idea. It's too complicated for accuracy. It's better in most of these cases of supplements, it's better just to hit the sweet spot of supplemental use and not test the blood. And in other nutrients, it's best to test and supplement so you can make the necessary adjustments. And before I wrap up this segment, I want to make clear that the cumulative evidence over the last decade has shown us that increasing levels of animal protein in the diet leads for shorter lifespans. We have more and more corroborating studies that show that people should not be eating animal protein if they want to maximize protection against cancer and maximize lifespan.

Dr. Joel Fuhrman:

That doesn't mean a tiny bit, a small amount of animal protein, a few egg whites a week or one or a half a piece of fish twice a week is a major factor in shortening lifespan. But certainly eating these animal products regularly, daily, in normal amounts definitely is. And so we're advocating a person, because of environmental concerns and personal philosophical concerns and ethical concerns, but most importantly about health concerns and about longevity concerns, that it seems like the evidence is overwhelming. That a diet that's overwhelmingly plant based, where you're either eliminating or using animal products in very small amount is the one that will afford us the best opportunity to live the longest life possible and be healthy to a hundred. So what I'm saying is it's better to make sure we have zinc adequacy because zinc is better absorbed through animal products.

Dr. Joel Fuhrman:

We get zinc in plant foods, but the phytates prevent the absorption of zinc so it's not as effectively absorbed as animal products. And as we age, zinc absorption goes down and zinc supplementation and zinc adequacy is linked to low risk of infection with aging, low risk of pneumonia as people age, and stronger immune function. So what I'm saying here is even when you're using some animal products and a little or small amounts, you're not getting the optimal amount of zinc when your diet is predominantly plant based. So it's an important thing or a beneficial thing to utilize some zinc in supplemental form, even in smaller amount, 7.5 to 15 milligrams a day, for example, because too much could be bad too. So we try and hit that sweet spot. And there's a case when supplementation isn't going to work.

Dr. Joel Fuhrman:

And I'm just making clear that we're not adding more animal products to get enough zinc, because you'd have to add too much, then that would shorten your lifespan. Better to add the zinc, better to add a little bit of EPA and DHA in a purified vegan form to adjust that accordingly, rather than just keep adding



enough fish to make sure your level is adequate. Because with fish, then you're just getting microplastics and other carcinogenic substances if you start to eat enough fish to achieve omega-3 adequacy. So to summarize those four nutrients I think it's good for people to test regularly. And the most important one is omega-3 based on the omega-3 index. And even if your doctor can't do the omega-3 index and never heard of it or giving you a hard time, you can order a finger stick on my website that has the omega-3 index kit you can get.

Dr. Joel Fuhrman:

But sometimes you can do it locally with your own doctors. Some doctors are aware of this, but vitamin D testing is pretty much available everywhere. I think we do sell a vitamin D finger stick kit, but most people can do that right at their local blood test or their local doctors can do that for them. So the B-12 testing you can do anywhere. The MMA and the homocysteine, pretty much doctors can do regularly, are easy to get. And, of course, we're saying here the ferritin is a standard lab done anywhere. So those tests: vitamin D, ferritin, B-12 with homocysteine and maybe even an MMA, if those things, so probably if I would do it, I would probably do the B-12 with a homocysteine and an MMA once. And if it's normal, then you could just check the B-12 or the homocysteine and you could forget the MMA and maybe do that every 10 years with an MMA to make sure you're in that right range.

Dr. Joel Fuhrman:

But the first time to check everything's good, do the B-12, the homocysteine and the MMA. Cause we want that homocysteine to certainly be below 15. And then of course the last test, not that important for men, but especially for women who are more likely to be iron deficient, to get a ferritin blood test. And I'm saying that men should not be supplementing with iron, their blood, their multi or whatever they're taking should not have iron in it. And women, they should not be supplementing with iron either, unless there's a documented deficiency as determined by a ferritin below 40 or documented insufficiency. Okay [give thumbs up]; hope you got that.