



# SUPPLEMENTS EXPLAINED MASTERCLASS

MODULE 5

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## TRANSCRIPT

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## Module 5: How to Use Supplements to Boost Your Immunity with Joel Kahn, MD

Nathan Crane:

Welcome to Module 5 of the Supplements Explained Masterclass. I'm your host and natural health researcher, Nathan Crane. I'm really, really glad that you're joining me and my guest experts and doctors for this important masterclass. In this module, Dr Kahn will be sharing with us the best supplements for helping support a healthy immune system. There's some incredibly valuable information in this module. You're going to learn a lot, so let's get right to it.

Dr. Joel Kahn:

Hi, I'm Joel Kahn. I'm a medical doctor. I'm triple board certified in cardiology. I'm a clinical professor at Wayne State University School of Medicine. And I have an active clinical practice in suburban Detroit, Michigan. I have been practicing cardiology for 33 years, but I retrained in the last two and a half years, because every doctor had to become more competent, familiar, and helpful to the patients in terms of their immune health. We know why. It's been a very challenging last two, three, four years in terms of immune health. So we're going to talk today a little bit about supplements that are active for the immune system, that help support the immune system, which supplements, what doses, how often to take and information that I hope will help you maintain your optimal health, your family's optimal health. We're going to keep it real, because I've had to really counsel patients in the trenches about this topic over these challenging times we've all been through, and are still going through. One of the important topics to understand.

Dr. Joel Kahn:

We take it for granted until we're ill, is that we have this monitoring system, this radar system, this surveillance system called our immune system, because we live in a world where we are exposed to infectious diseases, toxic diseases, manmade pollution diseases. Our skin is always on guard. Certainly our airway, our respiratory system is being exposed to all kinds of toxins, including the growing role of air pollution and health and disease that is being recognized, even in my field, of triggers of heart attacks, is air pollution. So our respiratory system, talk about from our mouth all the way through our GI system, to where we eliminate products of waste, constantly guarding our body and identifying potentially dangerous and toxic substances and having to deal with that. It's an amazing system. And we call that our immune system. B cells, T cells, natural killer cells, receptors that can identify patterns that are potentially injurious to our body.

Dr. Joel Kahn:

So to have an immune system that we're gifted with at birth, by maintaining it through our life and maybe really, maintaining it through more challenging times. Because we do know there are 80,000 industrial pollutants that weren't around 150 years ago, let alone new and novel infectious agents like we've been living through for the last few years. Our immune system needs to be optimized so that you feel your best, that you can enjoy your family the best, that you can stay active in your work and your career the best. Because we know how bad we feel when we get an infection or when our immune system is being attacked by something that's more powerful. So we're going to talk about optimizing it in ways that are science based. A lot of people have heard about a vitamin called vitamin D for many years. If you ask the public, very often the response would be, "I think that's good for the bones", and, "I think I can get that from sunshine".

Dr. Joel Kahn:

Both of those are true statements, but vitamin D has really risen to the top importance in terms of your immune support. We've talked about that more in the last couple years than probably we ever did before. Now, you can make vitamin D in your body and you can make it by exposing your skin in a reasonable way to sunshine. I practice in suburban Detroit, Michigan. We get a couple months a year of good sunshine. I assume my patients are low in vitamin D and there's a very simple blood test of vitamin D blood level that can confirm it. But I will tell you, because I have a telemedicine practice throughout most of the country, my patients in sunshine states very often show up low in vitamin D.

Dr. Joel Kahn:

It may have to do with their complexion and their skin color. There are genetic influences on how effective they are at using and incorporating vitamin D. And most people literally are not outside with their shirt off half an hour a day to really absorb vitamin D. So just assume you may not be getting enough. It wouldn't be fair to talk about vitamin D without mentioning it can be sourced from food. A lot of dairy and non-dairy products are fortified with vitamin D. I love mushrooms, I hope you like mushrooms.

Dr. Joel Kahn:

They have a lot of support for many functions, including the immune system, but even simple white button cap mushrooms are rather rich in vitamin D and they're a good food to go to whether they're sliced raw in a salad or cooked and sauteed in other foods. But with all that said and done, we have a wealth of studies, even if you just isolate it to the last few years, that entering an infectious process with a solid level of vitamin D in your blood versus entering an infectious process with a low level of vitamin D, could actually be a life and death difference. Could actually be a hospitalization versus a non-hospitalization difference.

Dr. Joel Kahn:

These are usually judged in these studies by the simple blood test. I urge you ask your healthcare provider, "Can you please check my vitamin D blood level?" Various experts have various levels. The lab that I use and send to most often says, vitamin D between 30 and 150 milligrams per deciliter is the range. Other studies have focused on vitamin D blood level about 50 to 80 is optimal, 50 to 90, but I'm talking, people walk in my office and they seem to be healthy and their blood level is 11 or 14, severely below that optimal level. You can't eat enough mushrooms to get your vitamin D level up to where you really want it, so it's going to be supplement, supplement, supplement. When I was trained in medical school and got that wee little bit of nutrition and vitamin information, we often talked about 400 or 800 international units of vitamin D and that's what you'll commonly find in a multivitamin, multi-mineral. But nowadays, talk to your healthcare provider, but it's common to dose 5,000 international units of vitamin D.

Dr. Joel Kahn:

I'd be cautious about higher and I judge it based on blood levels, but even that level doesn't get everybody to this sweet spot, optimal range. Some people will take more than that, but they will retest on blood levels to be safe. Vitamin D is a fat-soluble vitamin. It's one of those vitamins you could overdo because it gets stored in your body. You're not going to eliminate it in your urine, in your stool, like vitamin C for example. So be a little cautious about fat-soluble vitamins, but there is again, a sweet spot between under dosing and overdosing. And frankly, it's a pretty simple process. There is a mineral called

zinc that has been on the horizon for a long time as an essential nutrient for health. In fact, it probably had the reputation as being involved in supporting fertility, until the last few years where our immune health has become such an important topic. But zinc has, according to scientific studies, some antiviral and anti-infectious activity.

Dr. Joel Kahn:

It is not necessarily obvious that you're going to have enough zinc in your body to have an optimal immune response to an infection or the risk of infection. Again, if you want to ask your doctor, there is such a thing as a zinc blood level, or if you want to even get more sophisticated, you can measure how much zinc is in your red blood cells; may be a little bit more reflective of your immune health. These are tests that are available, that I do run on my patients, but you can assume that you may not be getting enough zinc for your immune health. We talk about an intake of 10 to 15 milligrams a day in your diet. My favorite source are seeds and nuts. Other people eat oysters for zinc, but this is available as an isolated vitamin, as part of a multi-mineral, multivitamin and the dosing has come up.

Dr. Joel Kahn:

So it looks like zinc may actually have a great deal of activity against viruses. The challenge is getting zinc into the virus. And we'll talk about that in a minute, because there actually are complementary vitamins that you add to zinc and the two of them work together, sort of like peanut butter and jelly. One opens the virus, and then zinc gets in, to hopefully eliminate the virus from being active in your body. So either learn a bit about eating zinc-rich foods, or maybe source yourself a good quality multi-mineral, multivitamin, or an isolated zinc. I've been taking zinc for the past two and a half years. I've been taking a higher dose when the infection that we've been dealing with has been a little bit more serious and risk of hospitalization. Thank goodness, lately it seems to be a little bit milder diversion.

Dr. Joel Kahn:

So I've cut back a bit, because for your whole life you don't want to overdose yourself with zinc, like you don't want to necessarily overdose yourself with most vitamins or minerals. Some really, really bright physicians, I'll give a shout out to a medical doctor who has now passed on, Dr Zelenko, did some research early in this challenge we've had the last few years with a worldwide infection, that the challenge is getting zinc into a virus and it takes a complementary agent. Now there are some prescription drugs that do that, but they're not so easy to access. It turns out there's a really fascinating antioxidant polyphenol called quercetin. That's Q-U-E-R-C-E-T-I-N. Some people do pronounce it quercetin [quer-CEE-tin], which is fine by me. Quercetin was really pretty famous in my field of cardiovascular health. Quercetin is an antioxidant, it's an anti-inflammatory, but it turns out it has immune-supportive properties too.

Dr. Joel Kahn:

It is sometimes called a zinc ionophore, meaning it opens the virus in a pathway that is still not completely understood. And then, zinc can enter and have its effect on some of the enzymes that are internal, the replicative enzymes in a virus. So quercetin and zinc may be complementary and work together better than either of them in supporting immune system. The supplement industry has responded by creating a number of choices that you can source that have those two nutrients at proper doses. There are other benefits of quercetin. It's good for blood pressure, cholesterol support, blood vessel support. It had, again, the reputation as a cardiovascular vitamin. It is in really healthy foods like garlic, onions, berries, some nuts and seeds. So it is available through the diet, typically in a range of

about 250 to 500 milligrams a day. But during an active infection, sometimes we double that up a little bit for a week or two, and people do respond really well to it.

Dr. Joel Kahn:

You can't talk about supporting your immune system without bringing up the biggie, vitamin C. Vitamin C, this is really important and something, again, that I stress with my patients. The human body can't make vitamin C. There's actually only four species on the planet that can't make vitamin C, and humans are one of the four species. If my brain is really sharp, I can shoot out the other three. But they're strange ones, actually, like fruit bats is one of them and some of the primates also can't make vitamin C. So we're one of the few species that, if we don't eat it or we don't supplement it, we won't have enough vitamin C. Vitamin C is so important in making strong bones, strong tissues, good skin, something called collagen for your blood vessels.

Dr. Joel Kahn:

I love vitamin C for cardiovascular health, and that's where a very famous double Nobel prize winner, Dr. Linus Pauling, got a lot of fame towards the end of his life was vitamin C for cardiac health. But it's very essential in immune health. Why? It's a powerful antioxidant. It has anti-inflammatory properties. It supports good action of our B cells, T cells, natural killer cells, this army we have on standby if we do get attacked by a infectious agent. So you can, of course, source vitamin C and it's going to be solely plant-based products. Leafy greens, lemons, limes, other citrus, oranges, tangerines, watermelon, acai berry, amla berry, something called the gooseberry. These are great sources of vitamin C, but of course it's available. It's a water-soluble vitamin. You can find it in almost any source from lozenges to capsules, to tablets, to powders, to liquids. The key to vitamin C is, we absorb it efficiently in little doses at a time.

Dr. Joel Kahn:

So during an illness, some people will take vitamin C four or five times a day. You know you can walk into a drug store and buy a powdered vitamin C for that illness you have. You've seen those packets all over the place, but you want to dose it at maybe 250 to 500 milligrams a few times during the day. The biggest risk is, if you really go high on vitamin C, you may get a bit of loose stool and that'll tell you, I've taken a bit too much, but other than that, it is a water-soluble, safe supplement / vitamin to take when you want to support your immune system. Well, in the alphabet soup of vitamins that support the healthy immune response to a potential infection, and we're going to go beyond vitamins, to also talk about minerals and supplements. There's a compound that goes by three letters, NAC, some people call it NAC, but it actually stands for a little more of a mouthful, N-acetylcysteine.

Dr. Joel Kahn:

Cystine is an amino acid. It's one of the building blocks of proteins, but it's not well absorbed. And acetylcysteine is well absorbed, and it's a very inexpensive, widely available vitamin supplement support. It turns out, to have a great immune system you want to have a lot of a compound in your body. There's another mouthful called glutathione. Glutathione with a G. Well, we make glutathione and we need N-acetylcysteine to make glutathione. The other components we usually have in our body pretty readily. So if you want to have the most active antioxidant support, you come across a virus, a bacteria, fungus, a parasite, and you want to have the ability to deal with it and hopefully eliminate it, you want a lot of glutathione. It's called a master antioxidant, in your body. Bottom line, NAC is a way to accomplish that.

Dr. Joel Kahn:

It's an inexpensive supplement. It's felt to be a very safe supplement. Some people get it intravenously at drip vitamin infusion clinics. That's an efficient way to get it. But frankly, we absorb and create glutathione very efficiently by taking extra NAC. So there are now interesting combinations that'll have zinc, that'll have quercetin, that'll combine vitamin C, vitamin D and NAC, and put all those immune supports in one. But a lot of people just get a well-sourced, high-quality, and fortunately, inexpensive bottle or capsule or tablet or liquid of NAC and support their immune health. It's one of these supplements that I've been taking the last few years regularly and believe it's one of the reasons I've been able to maintain my health at a very high level during challenging times. Cystine is one of the sulfur amino acids and acetylcysteine is modified cystine.

Dr. Joel Kahn:

Sulfur amino acids, they have that smell of rotten eggs, but we usually talk about things like ginger, garlic, onions, the broccoli family. It's called the Brassica family. But the broccolis, the kales, the brussels sprouts. These will all support and provide these amino acids. And although I choose not to eat them, eggs are the final food that will support sulfur-rich amino acids like cystine. When you talk to patients in my clinic and you bring up mushrooms, you get a very interesting range of responses, because there are some people that just do not like mushrooms. Fortunately, the supplement industry has responded, because there are now many, many versions of mushroom-based capsules, tablets, powders. There's even mushroom combined with coffee and other drinks that actually smooth out the traditional drink and are really quite pleasing. I've tried many of them. Why bother with mushrooms? Well, I believe I've mentioned already that mushrooms are a source of vitamin D3.

Dr. Joel Kahn:

There are some data that people that regularly consume mushrooms may have less risk of certain cancers, and breast cancer comes to mind. But in terms of the immune system and maintaining a healthy army fighting against bacteria, viruses, parasites, fungi, and other invaders, yeast. There are components in mushrooms that support our immune system. Probably the best known, other than a source of vitamin D, is something called beta-glucans. And beta-glucans is a source of fiber found only in plants, they're found in oatmeal. Oatmeal is a wonderful food that you might consider also as a source, but mushrooms are rich in beta-glucans. Beta-glucans have many functions in the body, but one is they do seem to support a healthy immune system. They're also excellent for cardiovascular health, my main field. So you might need to source specific mushrooms. Shiitake mushrooms and maitake mushrooms are particularly rich in beta-glucans, but again, the supplement industry has made this rather easy.

Dr. Joel Kahn:

There are high-quality, GMP certified, even organic sources of mushroom immune support supplements that you can research and consider taking. Particularly if you feel that your immune system isn't at its optimum. So again, in my weekly routine of supplements, some days a week I will add in an immune support mushroom mix. But I try and get it in my food too. I don't know how many times the patients in my clinic have heard me say, "Food is medicine", or, "Food is poison." And if you stop and think about that a bit, the reason that's the case is, we're actually incorporating into our body, a meal, a snack, something on the run.

Dr. Joel Kahn:

One of the issues is, if it's wrapped in poor-quality plastic wraps, you're also eating food that basically has incorporated plastic toxins in it. So be careful about that. But everything has to be entered into the mouth, swallowed down the esophagus, get digested in the stomach and it enters the intestines. The intestines have the ability to absorb and they can pick out nutrients like fiber, pick out nutrients like vitamin C, pick out nutrients like vitamin D, amino acids. Glucose, of course, starches, and support healthy metabolism.

Dr. Joel Kahn:

But they're also exposed to all kinds of toxins, whether it's a poor-quality processed food, whether it's the plastic wrap that melted, whether it's the microwave container that was heated up and incorporated plastics and other toxins into the food. The quality of food matters. So our GI system is an incredible barrier. It's an incredible wall, trying to keep the bad stuff out and let the good stuff in. It's not an easy system. So in fact, 70% of our immune system in our whole body is concentrated around that tube that we call our gut or our GI tract. So gut health is total body health. In fact, Hippocrates, a famous physician of Greek over 2000 years ago, said, "All health starts in the gut." And that really makes sense, because that's the fuel. That's what we're providing our body to be healthy or ill, to grow or to shrink.

Dr. Joel Kahn:

And it all has to be defended, digested, and incorporated into our body. So being very careful, one of the messages I wish we would've heard a bit more over the last few years with the challenge worldwide was eating healthy. Incorporating more fresh foods, colorful foods, increasing your plant-based consumption and home cooking, decreasing your processed fast foods, frozen foods and salt, sugar, and animal-food-rich, poor-quality choices. These are lessons that it's not too late to incorporate into your diet, because good gut health is good immune health and you can really see quick responses. Within two weeks of making a decision, I'm going to upgrade my health. I'm going to eat an apple a day, a salad a day, have a bowl of oatmeal and stop necessarily outsourcing it to companies that don't care so much about your health. You can literally run a panel of the labs of your gut health, your immune health, see tremendous advantages in just two weeks. That's how quick we can change from an ill gut to a healthy flourishing gut and the immune system that comes with it. So do that. Don't wait. Start now.