Thanks for the invite. Love it.
Nathan Crane: Always.
Dr. Joel Kahn: Love to share.
Nathan Crane: All right.
Nathan Crane:  All right, everybody. Welcome. I'll just give another minute here for everyone to connect to the audio, and we will get started. All right, hello, hello, everybody. I am Nathan Crane, creator of the Supplements Explained Masterclass. Thank you all for joining us for this Q&A with Dr. Joel Kahn. Really excited that he's taken the time out of his busy practice to be here to answer many of your really important questions. For those of you joining us live, you can chat in questions or raise your hand on the icon and come in. We'll call you in, and you can ask questions live. We've got a lot of great questions that were
Dr. Joel Kahn:  Can I just point out, Nathan, that you and I are both standing for the hour and just want to set the example that health experts need to do some odd things to ensure their health. As a cardiologist, I don't
own a chair. You don't own a chair as a health expert. I think it's kind of a great thing that we're setting that example.  Nathan Crane:
We were just talking offline that normally you have a treadmill at your desk as well. The only reason

Dr. Joel Kahn:

Moving up and down, yeah. People would be noticing my motion and wondering if I was on the Titanic. So let's talk about supplements, not gait ability.

you're not right now is because it can be a little distracting for interviews.

## Nathan Crane:

In the masterclass, we do talk about exercise as well because it is something, I think, we get a little stuck on the idea of supplements are the cure-all, solve-all, be-all, but if we're not exercising and doing the foundational things, supplements are only going to move the needle so much. So, I'm glad you brought that up and-

You can argue if you walk to the supplement store and buy your vitamins and walk home, which benefited you more, the walk or the supplements? Not that I'm not an advocate for intelligent, targeted supplements. God knows I am, but walk there if you can.

#### Nathan Crane:

Exactly. So far, all of you should have had a chance to watch all the modules of the masterclass by this point, including the modules with Dr. Joel Kahn, which were Module 3, The Doctor-Approved Guide to Buying, Storing, and Taking Your Supplements. He also was in Module 4, How to Make Your Supplements More Bioavailable, and he was in Module 5, How to Use Supplements to Boost Your Immunity. If you've not seen those modules or any of the previous modules, make sure to go back inside your member's area and watch them because they are incredibly valuable.

# Nathan Crane:

In today's Q&A, Dr. Kahn is here to answer the questions you have about supplements. As one of the world's top cardiologists, Dr. Joel Kahn has treated thousands of acute heart attacks during his career. Even more, he's helped thousands of people prevent heart attacks and heart disease by teaching the most effective diet supplementation and lifestyle changes that lead to what we're talking about right now: a healthy heart, strong immune system, and a long and vital life. He's known as America's Heart Healthy Doc. Some of his international bestselling books, if you don't have them yet, you can go grab a copy. "The Plant-Based Solution" is a great book. "Young at Heart by Design" is another, and "Your Whole Heart Solution".

# Nathan Crane:

If you don't have those three, recommend you pick up one, if not all three of those. You can go to his website at D-R Joel Kahn, that's drjoelkahn.com. Dr. Khan, thank you so much for being here with us.

#### Dr. Joel Kahn:

Thank you. Let's answer the mysteries.

#### Nathan Crane:

Before we do that, everybody tuning in, please note, as usual, this is not medical advice. It's informational only, so make sure you consult with your physician with someone like Dr. Joel Kahn, if you have specific medical conditions. Again, let's go ahead and start on the website. And if you have questions, joining us live, you can chat them in. We had a great question from Christine asking, "What are the most important vitamin or herbal supplements to maintain a healthy heart?"

#### Dr. Joel Kahn:

For a healthy heart, so we're going to comb it down to that focus. There's two approaches. One is to measure and replace what's not optimal, and the other is just a supplement without that. For example, I am a practicing cardiologist in Detroit. A big component of my working with patients is lab values. Probably the single most common deficiency I see in my practice in blood testing is a low omega-3 fatty acid level. People often, if they're meat eaters, chicken eaters, pork eaters, very low. If they're plant eaters, like I personally choose to eat, can be very low. And if they're salmon eaters, sardine eaters, mackerel eaters, they might be in good shape, so that's one approach. Magnesium, vitamin D, selenium,

you can measure copper, zinc, vitamin C, vitamin B, vitamin A, vitamin E. And you can even do more profound panels, but those are my typical ones, the ones I just rattled off.

#### Dr. Joel Kahn:

Targeted supplementation, if you just say, "No, I just want support," with the most evidence would probably be coenzyme Q10. You can pick your dose, 100 milligram, 200 milligram, 300 milligram. Some people call it the most powerful antioxidant in the body. I guess it would compete with glutathione for that title. It's important in making energy in every muscle in the body, but the heart is a pretty critical muscle. As we age, we don't make as much CoQ10, and if we take a statin cholesterol-lowering medication, we really don't make CoQ10, so it's a routine in my office to always support people that need to take a statin like Lipitor with CoQ10. It's very safe.

#### Dr. Joel Kahn:

There are actually studies in Sweden, if you're over 70 and you're randomized in a double-blind study to CoQ10 and selenium or placebo / placebo, you actually have far fewer cardiac events. Just in the last couple weeks, the same study reported you have longer telomeres, which might actually be a marker of longevity. There's heart failure studies with CoQ10, I love when there's science, that if you have a weak heart and congestive heart failure, CoQ10 -- It's called the Symbio Q trial, randomized, double-blind study -- you're less likely to develop congestive heart failure. So, these are important benchmarks.

#### Dr. Joel Kahn:

After that would be omega-3 fatty acids, just because it's very common to be low. All the data how important they are, not just for the brain, which they are, but for blood lipid measurements like triglycerides, particularly, and good healthy cholesterol particles. They may actually slow artery calcification. So, if I'm not going to measure omega-3, I'm going to supplement with it a gram or two a day. But in my vegans, it's going to be chia, flax, hemp, walnuts, greens, and maybe algae-based omega-3 capsules.

#### Dr. Joel Kahn:

I'd say vitamin K2 would be right there. Kind of controversial because there's so much evidence that vitamin K2, which is difficult to get from food, and if you're a plant-based eater, it's particularly difficult. I buy little nattō beans and eat them because they're a very rich source of vitamin K2, and I've learned to just dump them in a salad like any other bean. You can buy them online. But otherwise, your dietary intake of vitamin K2 is probably pretty low. Some multis have a bit of vitamin K2, and then there are dedicated vitamin K2 supplements.

#### Nathan Crane:

Sauerkraut. Sauerkraut has K2.

# Dr. Joel Kahn:

Sauerkraut, yeah. A recent study-

# Nathan Crane:

Also, a lot of people don't realize that K1, if you are on a plant-based diet, K1 is the precursor to K2, and a lot of the in your gut can make K2 out of K1 if you're getting enough leafy green vegetables.

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Leafy greens, right.

# Nathan Crane:

So, that is broccoli, carrots, et cetera.

#### Dr. Joel Kahn:

Exactly. A bit of a difficult vitamin to actually measure in the blood, so it's not a routine one, unfortunately. One again, if you just empirically said, "I don't want blood tests," I'm a huge fan of aged, odorless, garlic. Maybe that's the last one I'll pick. Why? I always love when there's science, and it turns out there's a transformation of garlic when you age it. It becomes even more potent. It lowers cholesterol, lowers blood pressure. But there's some fascinating studies from UCLA, double-blind, randomized, human studies ... crazy ... that taking one or two tablets a day of age, odorless, garlic, if you have plaque in your heart arteries, the bad guy, it actually helps shrink the bad guy and the bad gal down.

#### Dr. Joel Kahn:

There's very few natural supplements you could actually hang your hat on and say not just one, not just two, but three, four, five, six-plus randomized studies. So, we utilize garlic like crazy, even in people that are eating a lot of garlic, which is always a healthy place to go in your diet, but aged odorless. That's enough to start with.

#### Dr. Joel Kahn:

I'd say finally, I personally take a broad-spectrum multivitamin, multi-mineral about every third day. I think my diet's pretty good. I think I'm getting a lot of nutrients from food, but we know the food chain is altered. The nutrient content is diminished, so just to fill in any potential holes, I take one of those multivitamins. It has 60 different things in it, and it takes four, five, six tablets or capsules to get a day's worth. But I don't do it every day. I don't want to flood my body necessarily.

#### Nathan Crane:

Yeah, and back to blood testing, I want to just emphasize the importance of it. My family, my wife, I, and my kids, we've been on a 100% plant-based, primarily vegan diet for well over a decade, and because of the concerns of B12 on a plant-based diet ... There are a lot of cases where a huge percentage of the population on an animal-based diet don't get enough B12 either, and so it's not a plant-based issue. It can just be a human issue at the same time or a bacterial issue in the gut. We got blood tests recently, and my wife almost never supplements with B12. And her B12's off the charts. Her B12 is so high she shouldn't be supplementing with B12.

## Dr. Joel Kahn:

She's got good colon bacteria.

## Nathan Crane:

So, assuming that she needs to take B12 every day would be a wrong assumption, which is why these blood tests, at least once a year, once every two years, are probably a really important thing to do.

I agree. That's fascinating. And there are a lot of plant-based warriors that resist the idea of any supplements and show very good B12 levels. Nori, if you eat vegan sushi, nori rolls can have B12, seaweed in general. And there is that potential to make it in our colon. It's just a matter of getting it to the small intestine where it's absorbed.

#### Nathan Crane:

Shiitake. Shiitake mushrooms are a decent source of B12.

Dr. Joel Kahn:

Yeah. Yeah, cool.

## Nathan Crane:

And we actually do eat quite a bit of mushrooms, shiitake mushrooms, obviously, algae can have B12.

#### Dr. Joel Kahn:

Yeah, there's a green ice cube you can buy online called Mankai, M-A-N-K-A-I, and their website -- I'm not affiliated -- is called Eat Mankai. It's actually grown in Israel and was being grown in Utah. I'm not sure if it still is, but it has an insanely high nutritional profile, including one of the few plants that actually generates B12 enough to get by and get what you need. So, you throw a cube in a smoothie.

## Nathan Crane:

Oh, that's pretty cool.

# Dr. Joel Kahn:

Pretty neutral-tasting green veggie that hasn't yet overcome burgers and fries, but maybe one day it will.

## Nathan Crane:

What's the plant that it's sourced from?

#### Dr. Joel Kahn:

It's called the Mankai, M-A-N-K-A-I. It's super green, and I don't want to necessarily say it's in the algae family, but it might be.

# Nathan Crane:

Very cool. All right, that was a wonderful foundation to kick off with, so thank you for that. You mentioned CoQ10. We do have a question from Diane. She says, "I have hypothyroid. Can I take CoQ10?"

# Dr. Joel Kahn:

Yeah, you can definitely take CoQ10. There's other nutrients like iodine and selenium. These are actually easy to measure, iodine, usually in the urine, selenium in the blood, and very common to see iodine deficiency. People are afraid of salt and iodized salt like the old-fashioned Morton's used to be where we got it. Seaweed, kelp, multivitamins have iodine in some occasion, but iodine deficiency is very common.

So, maybe get a simple inexpensive urine iodine level, but you can absolutely take CoQ10 if you have thyroid disease.

#### Nathan Crane:

Now, from the same Diane, she also says, "I have had breast cancer," so I'm assuming that was in the past, "and I have hypothyroid. Would taking glycine be okay to take?" For those who don't know, glycine is an amino acid that the body makes. You can get the amino acids to make it from legumes, I believe. But anyway, so she's asking to take it as a supplement.

#### Dr. Joel Kahn:

I just want to reemphasize what you said, Nathan. These are general comments. I don't know the questioner and their whole health history. I'm unaware of any problem with glycine and a history of breast cancer, any other situation. It is an amino acid that helps support healthy sleep. You can go online and buy a big bottle of it for a very inexpensive cost. I personally actually take glycine before bed. I actually take it with NAC, and that's called GlyNAC. If you want to read about a really interesting, inexpensive, anti-aging program that has science in humans, taking glycine plus NAC is growing in interest in the elderly, particularly for muscle strength, cognitive function, gait stability. It's actually fascinating data.

# Dr. Joel Kahn:

A new paper just came out in the last couple weeks, but I'm unaware of any problem. One just has to run a PubMed research review to see if there's any reason why glycine wouldn't be a good idea. I always think of glycine because my meat-based friends will say they eat an animal tail to snout because all that cartilage and animal parts give you glycine. And they point to me like a weak little vegan, "Where do you get your glycine?" Okay, I get it from fermented foods and other places. But I do take it because it's a really good natural sleep support.

# Nathan Crane:

Yeah, it's funny. When people ask those questions, where do you get this amino acid or that amino acid, you can't get this from a plant-based diet or whatever, and it's like every single nutrient and vitamin, mineral, amino acid either comes from plants or from the amino acids in plants that our body then converts-

## Dr. Joel Kahn:

#### Converts.

## Nathan Crane:

... into other amino acids or nutrients that we need. They don't realize that, and so they often make claims that are not true, which is unfortunate.

#### Nathan Crane:

There was a video. I actually have a video coming up really shortly about a really popular kind of person in the carnivore movement who says, "You can only get these nutrients from animal products, creatine, carnitine, choline, vitamin K2, carnosine, biotin, riboflavin, and vitamin B12, and you cannot get them on a plant-based diet," which is absolutely not true at all. Most of those things, our body either makes

internally or we can get them from plants, and then we can get them from plants, and our body uses those nutrients to make them.

#### Dr. Joel Kahn:

If you or I were as constipated as he is, we'd probably be saying crazy things like that too. I think I know who you're talking about.

Nathan Crane:

Yeah, you do.

Dr. Joel Kahn:

Let's go on to the next question before I get angry.

#### Nathan Crane:

Jolene. Jolene is asking, "Are there alternative supplements to taking cardiac meds with less side effects?" That's a great question.

#### Dr. Joel Kahn:

Yeah, that's one you always have to very carefully discuss with your doctor. I'll give you an example. About three weeks ago, I had a lady drive down. I'm in Detroit. A lady drove down all the way from the Upper Peninsula, six hours, to tell me that I'm a holistic cardiologist, and she was stopping her blood thinner in her cardiac medication because I would be able to give her a substitute. Well, she's older. She has a lot of disease, and she has what's called atrial fibrillation and a really high risk of stroke. The holistic cardiologist told her pharmaceutical, pharmaceutical, pharmaceutical.

# Dr. Joel Kahn:

There are certain situations you can't throw the baby out with the bath water. If you have atrial fibrillation, just to stick with that, your heart may be palpitating 120 times a minute, and simple medicines control it 60, 70 beats a minute. You're not going to find an herb or a supplement that substitutes. Again, I live by a little credo, "Be open-minded, but not so open-minded your brains fall out." It's stupid. You can work hard to replace prescription blood pressure drugs with supplements, but you have to work hard and take a lot, and it can be way more expensive.

# Dr. Joel Kahn:

You can work hard to replace cholesterol-lowering medication with supplements, same statement, and diet and fitness and stress management, but the challenge is if you're a serious heart patient, the current recommendations are to get LDL cholesterol so low. It's gotten harder and harder to do it with supplements alone. We're no longer accepting an LDL of 100, for example, after a heart attack. We're trying to get your LDL to 50. It's gotten more challenging to do that with supplements alone.

# Dr. Joel Kahn:

But yes, the traditional medical model, first step, prescription pad. The lifestyle medical model, first step is lifestyle and supplements, and unless there's an urgency, medication is further down the road. Second time I used this quote today, but in the year 1100, the famous physician and rabbi, Maimonides, said,

"Treat no disease with medication till you've tried diet." And diet would also include dietary supplements, but there's times that that's not reasonable.

#### Dr. Joel Kahn:

We don't have a great natural blood thinner if you're really at risk of stroke. We can talk about vitamin E and fish oil and turmeric and nattokinase and lumbrokinase and others. But if you're really at risk of stroke, thank you pharmaceutical industry, you gave us some good, reasonably safe options. You just got to go over it carefully with your doctor.

#### Nathan Crane:

Yeah, that's a great, great answer. From the same person. Similar question, you kind of answered already, you may just say "I already answered it," or you may want to go into more depth, but I'll leave it up to you. She's also asking, "Are there alternative supplements that work as well as pharmaceuticals to regulate AFib?"

#### Dr. Joel Kahn:

Yeah, that's probably the most challenging. There's a system. And again, I'm practicing as a preventive, integrative, natural, holistic cardiologist, but there's standards. There's standard of care. There's just good care of people, and I don't think it's reasonable to say you never use prescription drugs. That's not in a patient's best interest. But in a disease like atrial fibrillation, there's very low-risk people for stroke and very high-risk people for stroke. We have the education and the knowledge how to risk stratify, so there's a lot of people that you just cannot do it without prescription meds. And all you can do is present them that data. Some of my patients, despite that, won't take them, and I still work with them, but God knows I'm going to chart five times that they were offered the standard of care.

# Nathan Crane:

Yep. Yep, I love that. Good, thank you. Grace just chatted in. So, staying on topic of AFib, atrial fibrillation, Grace, "What about the use of liquid magnesium for helping manage AFib?"

# Dr. Joel Kahn:

Liquid magnesium can be used for many uses, and AFib is one of them. It's not going to be a standalone. The one situation liquid magnesium or oral magnesium as a capsule or even topical is there are people that get episodes of AFib. That's called per paroxysmal AFib. They're not in it all the time, and we know that magnesium deficiency is very common. Of course, there is a blood test. The optimal one is called the Red Blood Cell Magnesium, but even a plain old Plasma Magnesium. But there are people that, particularly CoQ10 and magnesium, instead of 10 episodes a month, they might have one or two or hopefully zero, so that has use. But it's not a blood thinner. It doesn't do a lot to slow the heart rate in atrial fib, so it's a partial answer, but usually not a complete answer.

# Nathan Crane:

Got it. All right, we are moving to Rocky. Rocky, Raki, Rocky, so I hope I pronounce your name right. Grace said thank you, by the way. Great question, Grace. Raki is asking, "I understand it's best to cycle supplements. Take a break every so often for things like magnesium, et cetera. Do you recommend a specific kind of cycling, like skip a week every couple of months, or what's your recommendations, and which supplements does this specifically apply to?"

In general, there is the potential to overdose. I think selenium is one commonly mentioned. You might want to guide your dosing by this standard 200 micrograms a day. Selenium, you can get it in your food if you're eating your Brazil nuts. Maybe a multivitamin has selenium, and you're taking an iodine vitamin. You do have to be a little careful. I will say I very commonly see patients that their selenium level is high, and I see that much more than I see it low. And there is some toxicity, Vitamin D, for example. So, again, guide with blood tests when possible.

## Dr. Joel Kahn:

I mentioned multivitamin. There is mixed data. Do people benefit routinely from taking a multivitamin or not? And a powerful standard medical group called the U.S. Preventative Task Force just made headlines saying there is no major role for a multivitamin in health promotion, but I follow ... Actually, the reason I take mine every third day is Dr. Valter Longo, a famous nutritional scientist from the University of Southern California. He takes his every third day, and he gives a very logical explanation that I did, that my diet's excellent, but I still can't be certain I might be missing a trace mineral, so maybe two, three times a week without overdosing.

#### Dr. Joel Kahn:

There's a little concern all of a sudden about a super dose of B12 may be a slight risk to you, so staying in a sweet spot might be a better place to stay. But in terms of an actual cycling of supplements that's a formal plan, I don't really have any for you. I would take CoQ10 every day. I would take omega-3 every day. I'd be happy if you'd take vitamin K2 every day, some garlic every day.

# Nathan Crane:

Yeah. Often herbalists in my study in herbalism, in interviewing and getting to know master herbalists, there is a common practice in herbalism to cycle those kinds of supplements or herbal medicines because it kind of prevents your body's adaptation to becoming dependent on them. And so, in herbalism specifically, I'm not talking about vitamins and minerals, but herbalism specifically, a kind of common practice would be, you might take that supplement for a few weeks and take a week off. You might take it for a couple of months and take a month off, so it's not a one-size-fits-all. It's not a you have to do this kind of thing. It's just a standard general practice to really help your body not ...

## Nathan Crane:

It's like exercise. If I go to the gym, and I do the exact same weight and the exact same movement every single day, eventually my body adapts, and it no longer gets stronger or fitter or better, so we have to change things up. That's where that kind of theory and philosophy comes from for those who are tuning in, and I cycle on and off things all the time. I do recommend it when people ask me. I think it's a good practice. Is there a lot of science that supports it? Not that I know of. But as a philosophy I think it's a good practice.

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Dr.	Joel	l Ka	nn	ľ

I agree.

## Nathan Crane:

Grace is asking if eating three Brazil nuts a day ... No. Is eating three Brazil nuts a day a good practice of selenium intake? What are the risks of selenium? Can it be toxic?

## Dr. Joel Kahn:

It can be toxic according to the literature. There are some supplements you can get into trouble. We always say the fat-soluble vitamins, A, E, D ... I think I'm covering the bases there ... because they get stored in fat stores, excessive amounts can build up and be toxic. Whereas water-soluble vitamins, generally you'll eliminate the excess. Although, as I mentioned, vitamin B12 has come on scientific literature in the last 12 or 18 months as even a water-soluble vitamin, a B vitamin, may not be a great plan to have an excessively high blood level.

# Dr. Joel Kahn:

Three Brazil nuts a day should just about give you 200 micrograms of selenium, and that may be just fine for you. And there is some data that even a Brazil nut a week lowers your cholesterol. That was actually a crazy but actual scientific study.

## Nathan Crane:

Wow.

#### Dr. Joel Kahn:

A significant lowering of cholesterol, so maybe three Brazil nuts a day would do it more, but that wasn't the dose they studied in the article. Yeah, I'm a fan of Brazil nuts. If I were to reach down right here in my snack drawer, you'd see raw, organic Brazil nuts. A couple a day I eat.

#### Nathan Crane:

Another question that came in, "For heavy metal detox in addition to zeolite clay and spirulina ... " This is from one of the other modules, but if you can answer this as well. In addition to zeolite ... Oh, these are three things. Zeolite, which I talked about in that module. Clay like bentonite clay, we talked about, and we also talked about spirulina. She's asking, "Is cilantro considered to also have the strong detox properties, especially for detoxing heavy metals? I want to confirm if that's true."

## Dr. Joel Kahn:

Yeah. There is scientific literature and certainly traditional treatment that half of us hate cilantro. The taste half tolerate it and enjoy it. I'm in the half that enjoy it. That's a taste bud phenomenon that apparently is under genetic control, but there is data that you can assist detoxification of heavy metals with cilantro. Maybe you make a nice salad, a nice bean salad. Maybe you juice it. Maybe put it in a smoothie, make a nice guac[amole], whatever you like. I certainly would also add infrared sauna, rebounding, sweating, hydration, and some other assistance to detoxification.

## Nathan Crane:

The other reason I love cilantro is because it's anti-inflammatory, it's antiseptic, it's antifungal, it's antimicrobial, and it's a chelator of heavy metals, so it will bind to those heavy metals and pull them out of the system.

Dr. Joel Kahn:		
Agreed.		
Nathan Crane:		

You don't need a lot of cilantro. That's the beautiful thing about strong herbs like cilantro and parsley, oregano, as you mentioned earlier, garlic, these kinds of strong medicinal herbs. You don't need a lot of it to get the benefit of it. You add it to a smoothie, cook with it, make some salsa fresca with some cilantro in there, add a little bit, add it to your salad, add to your soup. It doesn't take much, and you get a significant benefit.

#### Nathan Crane:

What are your thoughts, recommendations for B complex? You recommend including this water-soluble supplement.

#### Dr. Joel Kahn:

B complex, my recommendations. You can get lots of B vitamins from diet. We think we believe that there are people with a genetic condition that's pretty commonly known, the MTHFR gene. There's a version of it called the 677 allele, and one called the 1298 allele. This a blood test, pretty widely available, 23andMe, and other Ancestry[DNA], Apeiron, and other genetic screening tests people can pay for and get it if they want to know. I commonly measure if my patients have the normal wild version or the abnormal version and if they got it for one or both parents.

#### Dr. Joel Kahn:

So, if you inherited the double abnormal MTHFR version of particularly the 677, you don't metabolize the homocysteine methionine cycle as efficiently, and you can overcome it at least partially by taking special B vitamins. We think that methylated B vitamins are more effective. That's not absolutely proven. There's a kind of B12 called methyl B12, and there's a kind of B12 called cyano.

# Nathan Crane:

You said that's absolutely proven or not absolutely proven?

Dr. Joel Kahn:

It's not absolutely proven.

Nathan Crane:

Not absolutely, okay.

# Dr. Joel Kahn:

You'll be surprised sometimes to see really high-end vitamin companies that don't have methyl B12. They think that there is ample data. I listened to a podcast ... It's a while ago ... but by the woman that described the MTHFR gene, and she was not a fan of methyl B12, just to confuse the public a bit. But anyways, a B complex vitamin, whether it's methylated version or the standard versions because there's different kinds of folate. There's methyl folate in a lot of B complex, pretty inexpensive broad-spectrum B vitamins. They sometimes have names like homocysteine lowering or homocysteine resistance or

homocysteine supreme because they help maximize efficiency of that methylation cycle, bring down elevated blood levels of homocysteine. That all makes sense.

#### Dr. Joel Kahn:

Does the general public need a B complex? Well, most multivitamin, multi-minerals will have B complex vitamins. And again, whether you're cycling like I do maybe every third day, every second day, daily you'll get B vitamins. If you're a big, big drinker, there's supposed to be a big concern about thiamine. That's vitamin B1, and it's very important for heart health, so that might be a consideration. Obviously, don't be a big, big drinker, but some people are, and taking thiamine might be a good idea, or you can measure a blood level. Again, B vitamins are easy to check in the blood. I don't have all my heart patients on B complex vitamins. I have my MTFHR patients on B complex vitamins.

#### Nathan Crane:

Gotcha. There was a quick technical question here. I can answer this real quick. Says, "Thank you for the great series. If there are updates to the series in coming years, do us existing buyers get automatically updated as well, or do we have to buy the series all over again?" No, if we do add any additional materials to the masterclass, or Q&As, or updates, you will get access to it for free, and we'll let you know. So, just wanted to answer that for you and great question.

## Nathan Crane:

Biyargeone ... Sorry, I hope I pronounced your name right ... is asking, a female, "I'm dealing with osteoarthritis in the last two years in a body already with osteopenia. I'm taking MSM chromium and lecithin. Do I need to test my levels for those? Thank you."

#### Dr. Joel Kahn:

There is a way to test chromium, I think, in the urine. It's really more applied to people at exposure because they're working in metallurgic industries where chromium is part. It's not a routine test. You don't normally check for those. The hottest new natural therapy of osteopenia is six prunes a day. That was a new randomized, double-blind study in the last two months, made the headlines all over, but it was an actual study. Much better bone matrix formation with prunes, so go enjoy, just stay close to your toilet with double-ply paper. I use a whole body vibration plate every morning for a while to do a workout on that has some actual science about increasing bone density without taking a supplement.

## Nathan Crane:

I've got mine right there. It's right next to me. I use it every morning as well. I love it. I do my meditation and Qigong and a little bit of energy medicine, yoga on it.

	Joe	

Me too.

#### Nathan Crane:

And it's good for the lymphatic system, good for the bones. Good for-

I got to get one for my office and see my patients vibrating. I think that might be a bit annoying to them.

# Nathan Crane:

That would be pretty funny. Yeah, I guess that's the other thing is exercise for osteopenia, right?

Dr. Joel Kahn:

Yeah, of course. Correct.

Nathan Crane:

What exercise do you recommend?

## Dr. Joel Kahn:

We always say weight-bearing exercise. Some of my workouts, I wear a weighted vest and either walk outside, walk on a treadmill. It makes it a little more challenging. Try not to hurt your lower back, then laid up and no fun. But weight-bearing exercise. So, swimming is amazing, but swimming's probably not promoting bone density like walking is.

#### Nathan Crane:

Got another question from Ulrike. "I increasingly hear about how fish oil is not as healthy as thought, often rancid, et cetera." What would you say is a safe option other than buying some company's capsules that she's talking about?

## Dr. Joel Kahn:

We did during my comments about how do you judge supplement quality that were in the masterclass, we talked a little bit about there are these independent labs, like Consumer Labs. You can read their reports and hopefully trust them. If you go to an integrative doctor, they may have their favorite brand that sometimes are called pharmaceutical-grade fish oil. And some of the companies clearly have third-party testing that they've measured for heavy metals like mercury and many other toxins and have kept the levels very low or undetectable. It is a risk.

# Dr. Joel Kahn:

Fish oil can oxidize. Some of the brands add in some antioxidants like a bit of vitamin E or gamma-linolenic acid, GLA, to try and keep their product pure and unoxidized, rancid. But, yeah, fish oil is one of the ones. Is there any downside to fish oil? There's been discussion. Prescription fish oil can be as high as four grams a day. This is a drug written by your doc, and recently a particular brand called Vascepa [vas-keep-a] or Vascepa [vas-see-pa], people pronounce it different ways, was associated with a slightly higher rate of atrial fibrillation by taking four grams a day to lower your triglycerides, so it put a little chill in the fish oil market. Most people are not taking four grams a day, and most people are buying a mixed variety of fish oil as opposed to this super-concentrated, EPA prescription version, and it may be unique to that.

# Nathan Crane:

And what about an algae supplement instead of fish oil?

Yeah, algae supplements, generally, we don't believe you worry as much about contamination, mercury, PCBs. They're usually not grown in the ocean. Most algae is grown in vats where you can control the water quality, and hopefully, you're picking good brands. So, there hasn't been much rumor or actual proof that you're as likely to get contaminated algal oil, omega-3 vegan supplements, as those from fish.

#### Nathan Crane:

Another question, "Four months ago, my doctor put me on statins because of high LDL and cholesterol. In three months it brought the numbers down dramatically. Other than diet, which I am working on ... It'd be great to know more about what you're working on with your diet ... but other than diet are either 1.3 grams sterol esters per day and/or Cardio Miracle a safe alternative?"

# Dr. Joel Kahn:

So, number one, anytime I hear the word statin ... I'm a pro-statin cardiologist IF a person has serious heart disease at risk, like a bypass, a heart attack, a stent. Much of the public is on a statin and may not need to be. You just need to do the right artery tests and find out if you have disease. But, of course, people who've had bypass, heart attacks, stents have disease. You always, in my world, want to support at least with CoQ10 because the same pathway that creates cholesterol and is interrupted by a statin is the same pathway that leads to coenzyme Q10 production in the liver. You really wouldn't volunteer to have your CoQ10 production diminished. It's an important antitoxin.

#### Dr. Joel Kahn:

Recently, there's been an introduction of a new supplement for people on statins I'm very excited about. I know the literature well. But when you take a statin, you not only block the full production of CoQ10, you block the production of vitamin K2, MK4, testosterone, and protein muscle synthesis. And you can take a supplement called GG Pure. GG is Geranylgeraniol Pure. It's from a plant in the Amazon, and it actually helps restore those four important nutrients, CoQ10, K2, testosterone, and protein muscle synthesis while you're taking your statin.

## Dr. Joel Kahn:

I'm not a fan of plant sterols. Plant sterols can be found in orange juice, margarine. You can take capsules, powders. They compete with cholesterol in the gut, so if you flood your gut with plant sterols, you'll absorb less cholesterol. So, your blood level of cholesterol goes down, but your blood level of plant sterols goes way up. And it may be that plant sterols are still taken up by arteries and involved in plaque formation. There's some medical literature, not opinion, that plant sterols may actually lower your cholesterol but do not prevent atherosclerosis.

# Dr. Joel Kahn:

So, they're not my choice for people trying to lower their cholesterol. I'd much rather go to red yeast rice, bergamot, berberine, niacin, artichoke leaf extracts, or very low-dose plant sterols, but not the typical two grams a day. Other scientists in the cholesterol world have issued warnings about the long-term consequence of plant sterols, but it's still a theory. There's no recent study that really gives a chill to the whole topic.

## Nathan Crane:

Great, thank you. Another question, "Does chromium picolinate supplementation for the purpose of glucose management in the blood, is it a danger for creating calcification of heart and joints?"

#### Dr. Joel Kahn:

Chromium picolinate is one of the supplements often picked to aid blood sugar, insulin resistance, along with things like alpha-lipoic acid, berberine, bergamot. I'm probably missing a few, fenugreek. Fenugreek's kind of a cool supplement for blood sugar. I'm unaware of any data ... and I've read widely ... that taking a chromium supplement is going to accelerate calcification of arteries. If it actually works to improve your insulin sensitivity, it should theoretically actually promote less aggressive calcification of your arteries.

#### Nathan Crane:

Interesting. So, this question, there's a couple other questions about omega-3s again. We talked about that earlier. "Is it recommended to take daily, or do you recommend testing?" You talked a little bit about that. Maybe just recap briefly. This is part two. "Is there anything as an overdosage toxicity related to omega-3," specifically asking about algae-based, but let's just say omega-3 in general? Can you overdose on it?

#### Dr. Joel Kahn:

Yeah, I can only speak. I have never read science studies. I can only say my patients that come to me and their omega-3 blood level's super low, and they start eating daily or supplementing daily or both. And I recheck their blood level, and it comes up to a normal level. You don't see excessive levels. Now, could they also do that by supplementing every other day? Yeah, they probably could.

## Dr. Joel Kahn:

I think one of the realities is people get pill fatigue. Doc, I can't take 16 pills a day, so I take eight of them one day and eight of them the next in terms of that. Honestly, that may be reasonable versus just throw it all away and give up. So, I don't usually hassle them too much if that's how they accommodate it. There's really not a known toxic omega-3 blood level or syndrome, but yeah, I don't see people even getting close to super-high levels with a gram or two a day. When we're talking vegan algal oils, the capsules are still relatively lower dose compared to a big honker fish oil capsule, looks like a suppository. So, nobody gets into too much trouble with the algal omega-3.

#### Nathan Crane:

Thank you. Drew, he's asking, "Requesting if you could repeat the list of things that statins block, CoQ10-"

# Dr. Joel Kahn:

Okay, four things. Four things, and if you were to look up, there's a very cool company in New Zealand called Xtend-Life that makes GG Pure, and I've just been using it in my clinic. They have this beautiful graphic, how your liver has a pathway. It's called the mevalonate pathway. Statins partially block the activity of that pathway, so at the bottom of the pathway is cholesterol. You make less cholesterol. But there's a side arm, and the side arm it's called the GG pathway, geranylgeraniol. It leads to four things: vitamin K2, MK4, CoQ10, testosterone, and muscle protein synthesis.

So, you have to. If you're interrupting the pathway up here, you're going to reduce everything below it. You're going to have to reduce those four critical components. And the interesting thing is when you take a capsule of geranylgeraniol, or GG, from a plant in the Amazon, you will boost those four important metabolites, but it doesn't affect the cholesterol pathway. It's kind of like the perfect metabolic play. This is all research. If anybody's really a geek, there's a wonderful PhD named Barrie Tan, T-A-N, and he's been instrumental in identifying the health roles of vitamin E. Right now, GG is his current passion and scientific project.

## Nathan Crane:

Got it. There's a follow-up question about the product Cardio Miracle. Are you familiar with that?

# Dr. Joel Kahn:

I'm familiar with it. I'm pretty sure there's a decently high dose of L-arginine, and I no longer really use L-arginine. I was trained 25 years ago, even in conventional cardiology, that there were certain situations. Mayo Clinic was doing studies with high doses of L-arginine, but then there were a couple papers about, particularly in the kind of patients I see in my clinic, heart attack patients, that L-arginine may be unwise after a heart attack. So, I look for other ways of boosting nitric oxide through diet, through exercise, through dietary nitrates. And also, I personally don't use Cardio Miracle.

#### Nathan Crane:

Yeah, I'm looking at the ingredients.

#### Dr. Joel Kahn:

And I know there's 50 or 60 components to it. There can't be too too much of any of them if there's that much.

## Nathan Crane:

Yeah. 624 grams of their nitric oxide blend, the first being the L-arginine complex, which is different.

## Dr. Joel Kahn:

Yeah, it's a little pricey. I'm familiar. There's a lot of products like it. Right now, that's the hot one that patients ask me about. They must be doing some advertising and marketing. It may be a very beneficial product. I just can't speak from experience.

# Nathan Crane:

Got it. All right, now, if people want to reach out to you personally, get a copy of your book, people want to schedule an appointment with you, come to your clinic, what's the best place for them to get in touch with you and your staff?

#### Dr. Joel Kahn:

I'm just looking. I have one of my books behind me, but that's all right. I'm in Detroit, but I'm licensed all over the place and do a lot of telemedicine, so it works out, and a lot of international patients. I have people fly here or people Zoom here, whatever works better. But it's drjoelkahn.com, D-R-J-O-E-L-K-A-H-

N.com. That'll take you to my podcast, my books. My clinic has a special button there. The clinic is called the Kahn Center for Cardiac longevity, a pretty unique place. We're small, but we're mighty and way over 1,000 five-star reviews.

#### Dr. Joel Kahn:

And we work hard. We work hard to try and identify the root cause, risk, and come up with natural solutions, but we can't throw everything away. People leave here with no supplements. Now, very often it's a diet plan, a fitness plan, a sleep plan, a stress plan, reassess. Certainly emphasize really advanced blood work and cardiovascular testing. But it's not a super-expensive clinic. Some of my colleagues, people keep saying, "Why are they charging 25 times more than you?" I said, "That's what I want to know." That's all right. I'm very grateful. We're busy, and we have a good time.

#### Nathan Crane:

Well, your clinic, I think for those tuning in that want some more personalized, hands-on approach is a great option. Also, your book, I can't recommend enough, "Your Whole Heart Solution", "What You Can Do to Prevent and Reverse Heart Disease Now".

# Dr. Joel Kahn:

There it is. Look at that pretty cover. It even has Mark Hyman and Dean Ornish and Joel Fuhrman and Daniel Amen and Caldwell Esselstyn. People gave accolades.

#### Nathan Crane:

What I love about it is that you've put 75 simple, low-cost things that people can do right away to help reduce their heart attack risk. We know heart disease is the number one killer in America, so anyone dealing with any chronic health condition, heart disease has got to be at the forefront of your mind of either preventing, or if you're dealing with it, how do I make my best effort to reverse it naturally. And your book addresses that from an evidence-based approach. Highly encourage people to get a copy. You can get it on Amazon. You can get it... Amazon's probably the best place. I don't know anywhere else.

Dr. Joel Kahn:

I agree. I agree, yeah.

Nathan Crane:

Your Whole Heart.

Dr. Joel Kahn:

While you're there, get some Brazil nuts.

Nathan Crane:

But don't eat too many. You don't need to overdose on selenium, just three a day, and you're good.

Dr. Joel Kahn:

All right, well, thank you very much for the challenge.

# Nathan Crane:

Dr. Kahn, thank you, yeah. Thank you so much, Dr. Kahn, for taking the time out of your busy schedule to come here and answer all these amazing questions. I really, really appreciate you, so thank you so much.

# Dr. Joel Kahn:

All right, have a great day, Nathan and group. Bye-bye

# Nathan Crane:

Take care. Thank you all for tuning in. This replay will be available inside your member's area shortly in the next couple of days. You can go back and watch it, and I wish you all so much health and happiness. Take care.