



Advanced SCD Techniques

Session 2 Transcript: The Top 6 Supplements

Steve Wright: Hi, everyone. This is Steve Wright and with me tonight is Jordan Reasoner. And tonight on the Advanced SCD Techniques Course, Training Session #2, we're going to be talking about supplements.

On this webinar we're going to do a deep dive into what we know about supplements including the top six supplements to help you reach your feel-good zone as quickly as possible. Now if you learn what we show you today, you'll be able to customize your SCD supplementation regime very rapidly. You're going to be able to increase your energy and have a better quality of life.

So the big thing is why should you learn this? The first thing is supplementation can be extremely confusing and potentially a money pit, if you don't know what you're doing. Understanding how, when, and what to use is invaluable in a world filled with snake oil people and magic pills. While your doctor is really, really good at prescriptions, by the end of this presentation you will know as much or more about supplements as he does. Your health multiplies and magnifies everything and everyone you touch in your life. So that's why we need to take this extremely seriously.

Doctor Mark Hyman, one of the leading functional wellness doctors in the world, says this about supplements, "In a perfect world, no one would need supplements. Given the stresses of our modern life, the poor quality of our food supply and the high level of toxins in our brains and bodies, most of us need a basic daily supply of the raw materials for all our enzymes and biochemistry to run as designed."

Okay, Mark. So not everyone needs supplements, right? That's our first reaction when we read that and I'm sure that might be your reaction as well. But we think it's time to come to grips with our current reality. Most of us know someone with cancer, diabetes, heart disease or someone who's overweight. These are all what we might call diseases of civilization. In fact, most of us probably know more sick people than we truly know healthy people who don't take any pills or might not need to take them.

So the bottom line is that unfortunately we are part of the sick club. We are dealing with real diseases here and therefore we can't think like we are part of the healthy club yet.

So for example, say you're out on your awesome yacht, your awesome boat, you're sailing out there and you start popping rivets and leaks are coming in a little bit here and there but it gets worse and worse. Now, you can throw a blanket at it, which is your diet, but if you don't specifically start plugging those small rivet holes with something like supplements, you know, bad things are going to happen in the end.

Jordan Reasoner: So, does that mean I have to pop pills forever? The short answer here really is maybe. And for right now the answer is yes, especially if you're looking to get off your prescriptions, to heal your gut, your brain, your body, all those things from disease. And if you want to minimize your recovery time and if you want to maximize your life until you're fully recovered.

If you remember, we've been teaching that your body is a system and in session one we explained that you are N=1. You are a system in and of yourself with inputs, outputs, and feedback loops. Now supplements are independent variables. They are inputs that you have control over and the biggest thing here is they're another tool in your tool belt.

So why the disclaimer, right? Well we explained before that no one completely understands the body. There's so much that we don't know, but we strive to give you the most up-to-date info that we have from published materials, studies, and especially our mad scientist experiences. So please know that the recommendations that we have, they may change over time as new discoveries are made in science and other areas. So with that said, let's dive in.

So in the beginning what is a supplement? And the simple answer is it's anything that's not a drug. And in the U.S. that's a huge distinction because what it means is it means the effects of these substances are not strong enough to warrant regulation by the FDA at this time. It also means that you need to look out for yourself.

So the million dollar question: are supplements a waste of money? Absolutely not. Number one, they usually support the body's natural processes instead of disrupting them. And second of all, the effects that they cause are not considered drugs and the side effects can be limited. And number three, you're starting from a less than ideal state, remember? We're acknowledging that we have disease. So you need all the support you can get.

The big point here is that supplements are tools. They're just another tool to help you heal and repair your body along the way. They're limited in capacity to help, just like anything else. Like diet, drugs, and even surgery. So they have to be treated with respect and that's why we use protocols in what we do. And it involves only taking what you need to avoid wasting money and negatively impacting your body. And the long-term goal is to just not be taking pills, but we have to be realistic. So remember we're starting from a disease state here and we may never fully recover without some added

support. And if you make lifestyle choices that conflict with living an optimally healthy life, supplements are probably going to be something that you have to use long term.

Our modern lives are just not conducive to health with chronic stress, we all have lack of sleep, we're all overdoing it. We're just trying to get by. So we need additional support, diseased or not, in most cases.

I want you to remember that everything changes over time. Expect your needs for supplements to change over time just like your foods do, especially as we're healing. So if you're in your feel-good zone and looking to save money or you want to stop taking pills, the best thing you have to do is test it. Just like any new food. And expect science and expert recommendations to change all the time.

So to step back a little bit, what makes up supplements? Well, most supplements contain active ingredients, fillers, the capsule that they come in, whether or not they're a powder, and then any additional flavorings there might be hidden in there.

Steve Wright: Okay, now we know what makes up supplements and why I take them, how can we spot ones that are of good quality? These are just some general principles to remember. First of all, less is more in terms of the ingredients. Obviously we want more active ingredients and less fillers and flavoring agents. Also you want to look for easy-to-understand labeling that clearly states the allergens. Also, in any supplement company, for that matter, you're going to want to look for somebody that has responsive customer support, if you're ordering from them on a regular basis. And if you're like me, you're probably going to want somebody who has good shipping and a website that's awesome as a bonus.

So, for example, we have a label here from Vitamin World, their Betaine Hydrochloride. And I just wanted to point out, in case anybody was unfamiliar with looking at labels, that the active ingredients are always going to be in the supplements facts area and that's really what you're buying, is the active ingredients. But what you really also have to always check is the fillers, and that's listed in the other ingredients area. And that's where we don't want to see a whole string of stuff. If the other ingredients are like ten times more than what the active ingredients are, as far as number, that's a bad sign.

Lastly, any supplement manufacturer that clearly states on their package their allergy info, just like is done on this example, I think that's a really big plus and it's a sign of good quality.

So this is a big question that a lot of people have and what makes supplement SCD legal. Well, it kind of comes on to two things. First is they could be the active ingredient could be specifically banned by Elaine based on its bio-molecular structure and you'd find that out if you searched on the A-Z Illegal Legal list, but the other thing that really knocks a lot of supplements off of our radar is the fillers and the flavoring agents. So we've made a complete list of those and they'll be in the Session Two handout, but at any point in

time you could also go to the Pecan Bread website and check out the latest rules surrounding those fillers.

So it's all about the active ingredients right? Because for the most part supplements are a get-what-you-pay-for type of purchase. Now if you're not familiar, I've listed a bunch of different chelated minerals here. You'll see zinc oxide, zinc picolinate, zinc gluconate and same thing for magnesium. So what this is is these are chelated versions of the mineral that we want: zinc. And a chelated mineral basically to kind of dumb it down is just an easier way to transport the nutrient into our body. We make it more bio available is what they say. It's easier for us to absorb and use. So in a pay-for-what-you-get type of thing like supplements is zinc oxide is going to be the cheapest thing in the market, but from what I've read we can only get maybe like five percent of that actual zinc bio available for us to use. So that's where you end up having to spend more money on things like zinc gluconate. The same is true for supplements like B12. You have a lot of supplements that specifically call out their amount of B12 but they're filled with cyanocobalamin and not methylcobalamin. Cyanocobalamin isn't bio available for the body to use right away. We have to convert it over and honestly science doesn't know how well we convert over so you're just, again, throwing money out the window if you buy a supplement that's using this cyanocobalamin versus the methylcobalamin.

So it just comes down to basically there's expensive chelations and that are more easily absorbed by the body and it is a pay-for-what-you-get type of structure.

So the top six supplements. Together they work to really support the digestive healing. These six help us feel better faster and they've done the same for all of our clients. Now it's possible that not everyone needs all six and it's also possible that you may need others, but these top six have really been like the foundation that have supported our health and a lot of others health's.

Now ultimately supplements are your choice, so don't think that you obviously need to take all of these. Okay, so, start with fish oil. And again these are just the top six. They're in no particular order. But fish oil is a great supplement. So why should you take it? Okay, great. It's filled with Omega-3 fatty acids, EPA, and DHA that are extremely anti-inflammatory. Your brain is estimated to be 60 percent lipids and DHA is a very abundant important for the proper brain activity.

Fish oil helps to counteract our usually reversed Omega-6 to Omega-3 ratio, which if you don't know, you don't want Omega-6's really high which is what it usually is if you're using a lot of vegetable oils like Cottonseed Oil or Rapeseed Oil, that kind of thing. The latest research proposes that DHA might actually be essential, meaning that not only do we need it to live but that we must source it from our diet and we can't make it on our own.

So what really is fish oil? It's just basically extracted and purified oil from fish. So are there any risk factors? What should we be aware of when you're looking to possibly

supplement with fish oil? There definitely are, so I want to call these out for you. Fish oil reduces the stickiness of platelets, therefore, if you have any known clotting problems or you're on a blood thinning medication like Coumadin, or you're about to have surgery, you should not be taking fish oil.

What about pregnancy? Obviously, you want to consult your doctor but it's generally accepting that EPA and DHA are extremely important in the development of a healthy baby and they may reduce your birthing complications.

What about side effects? This is always something you should check into whether it's a supplement or a prescription drug. Well, as we alluded to in the first one, yes, with fish oil, there is going to slightly decrease time to clot. It's going to be different for everyone and it's basically kind of on your genetics and if you're on any other thinners. The other thing is if you ingest too much at once, expect some fast moving stools. It's a fat remember.

Another thing I want to call your attention to is there is a big difference between fish oil and cod liver oil. Cod liver oil contains EPA and DHA just like fish oil but it's also less purified and, therefore, contains nutrients like Vitamin A and Vitamin D. Well normally this is a good thing and we do recommend that you consume cod liver oil when you're on a maintenance mode with fish oil but for the dosing protocols I'm about to reveal to you, we want to stick with fish oil because Vitamin A can be toxic and at the amounts I'm about to recommend they will become toxic. So please pay attention to what I'm about to tell you.

So what we've found is Robb Wolf makes some awesome recommendations on three stages of dosing fish oil. Now when you're just beginning, you're searching for your feel-good zone or you're in a flare or something like that, you're what Rob likes to call the all banged up stage. And we've found these recommendations to work extremely well for us and for others and I know this is going to seem like a lot but hang in there.

For the all-banged-up stage it's going to be three weeks of special dosing designed to be extremely anti-inflammatory and what you're going to do is you're going to consume one gram of EPA and DHA per ten pounds of your body weight. Now I want to call your attention to that. One gram of EPA plus DHA. What you'll find on fish oil supplements is that they'll call out the amount of Omega-3 or fish oil that they have. They'll say like four grams per serving. That's not what I'm looking at here and that's not what you're going to look at, from here on out when you look for quality supplements. You're going to look at the actual number of the active ingredient EPA and active ingredient DHA and you're going to add them together. A lot of times it'll be like 300 milligrams for EPA and 200 milligrams from DHA. So if you add those two, one serving size would be 500 milligrams.

Now we've listed a whole nine life fish oil calculator that you can go and you can plug in the fish oil supplement that you have, your body weight and everything and it'll

calculate out your special put-the-fire out dosage, but just for example 180 pound man, like myself, would consume 18 grams of combined EPA and DHA and that's going to become as a shocker because that can be somewhere between 30 and 50 pills a day. But I just want to remind everybody that just even a can of sardines is about 2.5 grams of EPA and DHA. So it's really not that much. It's like eating a lot of fish, if you had a couple things of salmon and some sardines in a day.

So what do you do at the end of three weeks? At the end of three weeks you step down to .25 grams per ten pounds of body weight. So if we go back to my example of 180 pounds, you'd scale back from 18 grams a day down to 4.5 grams a day. So maybe back down to like ten pills a day. And then if you reach your feel-good zone and you're doing really well, and that could take anywhere from another week or two to a month or two, then I would say you might want to look at scaling back into a maintenance level which is your preference anywhere from 500 milligrams to 2.5 grams per day. And this is the point in time when you might look at using something else than fish oil and using a fish liver oil like cod liver.

So what recommended brands do we use and do we tell people to use? First up is the GI Pro Omega Max Liquid. This is really easy. The down side of this is you've got to keep it in the fridge, but look at that. One teaspoon is almost 3,000 milligrams of EPA and DHA combined. That's awesome. That means you're not popping like 40 pills like I talked about. However, you are going to pay more for this type of supplement.

Capsules are great for traveling, if you're on the road a lot or you don't have access to a fridge at work and you need to take them with you. So definitely go with capsules as they spoil a lot less. But we've listed off two different capsules here: the Omega Max from GI ProHealth and then the Now brands Ultra Omega 3, which are great as well, and then two liquids.

So, again, after you reach your feel-good zone maintenance level, we really like Carlson's Cod Liver Oil and Green Pasture makes a fermented cod liver oil which are great to -- both of those are great to supplement with and that's what both Jordan and I have moved on to after we did a lot of the Omega Max.

Number two on the list tonight is multivitamin. So who should take them and why? Basically, in short, it's a good idea for everyone who has digestive problems. It helps protect against known and unknown deficiency and any malnourishment. If you're experiencing any digestive problems you are not adequately absorbing nutrients that are most likely -- and you're most likely malnourished in some area.

If you've been sick for a while then you are likely deficient in one or more of the micronutrient areas. So what are they and what do they do? They're a combination of vitamins and minerals that are needed to live without known diseases. Basically they're the RDA levels that the US government recommends usually. They provide a minimum

necessary level for vitamins and minerals needed to avoid developing known diseases of malnourishment. So these are diseases like Scurvy, Goiters, and that type of thing.

Can you get it from your food? Obviously, it's possible. If you're eating the highest quality grass-fed, organic and you're eating a lot of organ meats and bone stocks, you can definitely get all of your needs without taking a multivitamin. But when you're starting from a sick or malnourished state and you're having diarrhea and/or constipation, we don't know what you're absorbing. So it's a great idea to use a multivitamin to support your body and rebuild your vitamin and mineral storage because it's not just going to happen overnight, even if you switch over to SCD.

So, let's examine the risk factors. For multivitamins there really aren't any risk factors unless you start taking more than the daily serving size, which we don't recommend. Are there going to be any side effects? None that we know of. Again, these are just the RDA levels usually from the government, so they're pretty low levels. However, I just want to call your attention to the fact that we are using supplements, right. And the body will probably build up a tolerance to them or the body just gets a liking to them just like if you ate the same food every day all the time.

So it's a good idea, and you don't have to always do this, but it's a good idea every once in a while just to take a week off of your supplementation, give the body a break, and it's always a good idea just to kind of retest those assumptions -- do I really need to be taking this.

So are there any tests to determine if you need this? In short, yes, but the ranges are always suspect. We still don't know what the optimal levels of each vitamin and mineral are needed and so the results can only tell you if you're clinically deficient. This is really a problem because a lot of the ranges in the labs for these types of tests are extremely large and the optimal range is just not known at this time. If you wanted to get tested for a multivitamin to avoid taking it, the best thing to do is get some intracellular testing done and this will let you know if you have any major deficiencies anywhere. And, again, I just want to remind you that science still doesn't know the ideal levels of each of these nutrients.

So, what brands do we like? For SCD legal brands we really like the SCD Complete from GI ProHealth and the only other one that we would really recommend you take is the Klaire Labs VitaSpectrum. Again, with the recommended dosage, it's one full serving a day and for the SCD Complete, that's six pills. Now you can split those up, two pills at every meal, three pills at two different meals, or all six pills at one meal but the idea here is to take it with some fat and protein and carbohydrates that you'd normally get these nutrients out of.

Jordan Reasoner: All right. So before we move on, I want to take a break really quick and I just wanted to show you something. You know that we're mad scientist engineers and we get real into this stuff and what I'm showing you here is a mind map

that we made from hours and hours and hours of researching and trying to understand the digestive process. And I'm just going to briefly skim through some of this so you don't have to read every single bullet point there, and again this is just the high level actually demonstration of the digestion process and what happens when we eat food.

But what I want to remind you is that we were talking about digestive diseases here and we acknowledge the fact that we all have broken parts and broken processes or we wouldn't have been sick in the first place, right? So this mind map should tell you that there are a lot of parts in this process that can be broken. So let's talk about how digestion works here.

Now when food enters your mouth; this is just the beginning, right? You start chewing and I've got a red circle here on a part that could be broken. There's an enzyme called Amylase that breaks starches into sugars and that's just the very beginning of something that could possibly be broken when we have digestive disease.

When we move down into the stomach things get even more complicated. Now when food enters the stomach, the pH level goes up, pH is very important here. Food usually spends one to two hours in there. The stomach gets triggered to produce gastrin which stimulates a degree of Pepsin that gets cleaved in the Pepsin and that works with HCL and it all breaks down the proteins and the big take-home point here is that once the food reaches a pH level below two it gets shipped to the small intestine. But what I want to point out is there are so many layers of these processes that can be broken when you have digestive disease.

Now I have circled stomach secretes gastrin. There's 15 parts to that puzzle in and of itself. So those parts could all be broken here. And the big take-away point is if any one of these parts is broken, there are probably many other parts beyond that that are also going to be broken because it all works together. So once the chyme reaches the pH level of two it gets shipped out to the small intestine.

So once it hits the small intestine things get really complicated, okay. Now you'll notice that quickly -- when you hit the small intestine, two things happen. You get triggers for secretin in the blood and you get triggers for a hormone called CCK into the blood, which is triggered mostly by fats. Now look at all those red circles; those are all different processes that could be broken. And again there are a lot of parts to those blue boxes and purple boxes, but you know what things like telling the gallbladder to dump bile salts, triggering pancreatic digestive enzymes to break down your foods, stimulating the liver to produce bile, telling the stomach to stop making HCL. All these are different feedback loops and signaling issues that can always be broken and our complex digestive disease system that we have here.

So what are the take-aways from what I just walked you through, which is just us being extreme nerds and trying to learn. Well, what you can take away is that each part of the system depends on other parts all working together and pH is very important. And in

fact the whole goal of the initial entry into the small intestine is to get the pH level between seven and nine so that the enzymes can properly break down your foods. So we go from below two in the stomach back up to seven and nine, just to be able to break down your foods and absorb the nutrients.

If any one of these parts is broken you can do some things to help until you heal. We still have a lot to learn here but with digestive disease comes broken parts and we just have to acknowledge that. So really quickly let's talk about a few take-aways here.

So while we're here, while we're talking about this, a few things to remember. Don't drink liquids during meals until one to two hours later when the food has moved on past your stomach. Remember your stomach is trying to break down the proteins and get the chime down to below two. Drinking liquids is nothing but deteriorate that and bring the pH level back up.

Chew your food well. Help it break down before you send it down. Eat slowly and relax while eating. You know that stress hormones can trigger different feedback loops and cause problems when you're eating. And most importantly don't graze over a few hour period. That can really crush you because you want to get that food in there, you want to let it do its thing and you want to get it moved on to the small intestine. Grazing over time just causes that pH level to consistently be changed.

So let's get back to those supplements we've been talking about.

Number three here is digestive enzymes. So who should take them? If you have digestive disease or high inflammation, you probably need digestive enzymes for the exact reasons that I just explained. Additionally, if you're experiencing things like sugar cravings, difficulty gaining weight, nausea following big protein heavy fatty meals, bloating, diarrhea, constipation, especially if you're having undigested food in BM's. If you're seeing greasy stools, if you're seeing nutrient deficiency, things like anemia and iron deficiency. Those can all be signs you're not breaking down your food well.

So what do they do? Well digestive enzymes break down the food you eat so it can be used for nutrients and energy in your body and all the foods you eat is worthless if it doesn't get broken down and absorbed by your body. Each enzyme in your body has a specific job to do like some break down protein, some break down sugars, some work on starches, things like that.

So what are some tests to find out if you need them? Well, you can do a Genova Diagnostics CDSA stool analysis. It's not completely reliable but we haven't seen much else out there that's pretty effective. Essentially what they'll have you do is stop taking any enzymes, if you are taking them, and they'll try to measure what your natural secretions are.

Some of the risk factors -- if you have damage to your stomach lining, you may experience some minor irritation when you first take digestive enzymes and that's from the proteases irritating that damaged lining during the first few weeks, which is an adjustment period that does go away.

So, like I said, when starting your enzymes, the body may need to adjust for up to three weeks. Some of the side effects you might notice might be some hyperactivity, maybe a little stomach ache, maybe some increased thirst, potential for diarrhea and constipation there as well.

Now the brands we recommend: GI ProHealth makes a really, really high quality one called Prozymes, others that are SCD legal are Klaire Labs has Vitalzymes as well as Enzymedica has a couple numerous that are SCD legal, Digest Gold and SerraGold are good quality. The dosages and protocols that we recommend are to start with a half capsule at each meal. You've got to work up slowly if you feel that stomach burning, if you know that you're reacting to those proteases you're going to want to work up to one to two capsules each meal but you're going to want to ramp that up over a few weeks. If you don't have any stomach pain or reactions, you can ramp up over a couple days.

So next I want to talk about Betaine HCL. Now I just talked to you about those charts and the pH levels and how it flipflops and how each system depends on another. Well Betaine HCL plays a big part of that. So anyone experiencing diarrhea or constipation, if you have low energy from bad nutrient uptake, stomach pain, heartburn, GERD, you know, lots of stomach noise, lots of belching after eating, undigested foods in the stools. Those are all signs that you potentially have a digestive problem with reduced levels of stomach acid. Additionally, if you have things like Candida or C. diff or H. pylori, those can all send out their own signals that suppress stomach acid.

Now stomach acid is important. HCL and Pepsin, they work together to help digest and absorb the food by breaking down the proteins into smaller molecules and they get that pH level right. If the stomach acid pH is too high, due to low amounts of Betaine HCL, the pancreatic enzymes do not get secreted properly, the food doesn't get broken down properly and, additionally, the enzymes in the small intestine really rely on that pH level to be perfect to be able to do their job effectively.

So, what are some tests to find out if you need it? Well, that home stomach acid test is something you could do three mornings in a row. You can mix a quarter teaspoon of baking soda and four-ounces of cold water. As soon as you wake up, chug it down. Now, get a time of how long it takes you to belch. Now if you don't burp within five minutes, just stop timing because you likely have low stomach acid. If your stomach acid is good you should burp within two to three minutes. And I'm talking a really guttural belch, not just maybe little burps from drinking water too fast.

Now what happens there and the reason that that works is if you have normal stomach acid levels the Betaine HCL will react with the baking soda and it'll produce Co2 which causes you to burp.

Now there's a more reliable test, called the Heidelberg Test where you could swallow a pill that would actually measure your levels and give you accurate readings there as well, so that's an option too.

So let's talk about the risk factors because there are risk factors with everything that we do. We've talked about Dr. Jonathan Wright's book, *Why Stomach Acid is Good for You*. He mentions HCL supplements should never be taken by anyone who is also using any kind of anti-inflammatory medications such as corticosteroids, i.e. Prednisone, aspirin, Indocin, ibuprofen, and other NSAIDS. These drugs can damage the GI lining that supplementary HCL might aggravate, increasing the risk for gastric bleeding or ulcers. But he does not when there are occasions when risks related to HCL replacement maybe higher than we'd like, but in these cases, as long as the potential benefits outweigh the risks, he might still recommend the treatment.

So what are the side effects? Well, if you take too much, you're actually going to have some mild stomach burning, some belching, things like that. There's a potential for nausea, vomiting, and diarrhea, like we talked about the peptic ulcers in the stomach lining. Rarely, there's a bad taste in your mouth, some people noticed that when they first started taking it, but that's more of a rare occasion.

So, what brands do we recommend? Well, Now Betaine HCL is a good quality, Freeda Betaine HCL is available, it does not include pepsin, which we prefer that you get ones that do include pepsin. Thorne Research Betaine HCL, Vitamin World Betaine Hydrochloride.

Now, here's the key thing; the recommended dosage protocols. Start with one pill at a protein-rich meal. So if you have like four to six ounces of a meat, you're going to want to take it. If you're just having some veggies and some fruit, for whatever reason, or a smoothie of something like that, you don't want to take it. It's not going to really give you good accurate results. But you want to build up until you have a slight burning, or you notice a little heat in your stomach. So, you're going to start with one at the first meal, if you don't feel it, go up to two at the next meal, if you don't feel it, go to three at the next meal. And work your way up until you start to feel that burning or irritation.

So, for example, if five pills burns, you're going to want to back down to four and that's your level. Now, Dr. Wright states that the normal dosage he sees average around 3,200 to 4,600 mgs at meals. Many that we have worked with needed less. We've heard of people who needed much more. But what I wanted to add too is, don't be afraid of getting to that burning point. You can always drink some water to help neutralize that a little bit. If it gets really bad, you can take a shot of baking soda and

water and help neutralize that. So you don't have to worry too much about getting to that upper limit and being afraid of it.

Steve Wright: Okay, so number five, B-Complex. So who should take them and why? In short, it's a good idea for everyone who has digestive problems again. Again, we're going to protect against known and unknown deficiencies and any malnourishment. If you've been sick for a while you're at more of a risk. If you are experiencing any low energy problems, if you drink alcohol, use nicotine or caffeine, then your body needs lots of the different B vitamins to deal with these problems on a daily basis, so you're definitely more at a risk and should look at them.

So what are they used for and what are they? They're water-soluble vitamins that usually coexist with each other when found in nature. And up until rather recently, they thought there was just one B vitamin, but now we know that there's a huge range of them. So they're all very important for many different cell metabolisms that take place. They enhance your immune system and nervous system function. They're essential for healthy skin and muscle tone. And there's been some studies that linked them to possibly helping anemia by promoting growth of red blood cells. And that's specifically B6 and B12, which should be supplemented together.

Is there any risk factors that we should talk about? There's definitely one with women and if you're using any oral contraceptives. The oral contraceptives specifically deplete several of the B-Complex vitamins and you should be supplementing your diet with them. Generally B vitamins have no known upper limits and they are basically regarded by the FDA as generally safe and no problems there.

Are you going to have any side effects if start to supplement with them? Well, you're going to notice one right away, and that is, your urine is going to turn bright yellow. But don't worry, it's not harmful. This is specifically because of Vitamin B2. It doesn't mean that you're excreting all of the vitamins and you're just wasting money, it's just specifically B2 in it and that's just what it does. And I want to call your attention to one other B vitamin, and that's Niacin, Vitamin B3. At dosages above 500 mg, a lot of times the Niacin will cause flushing and that's like a really hot feeling. Your skin will get really blotchy and red and it normally only lasts 30 to 45 minutes, but it's really wise to know about it if you ever decide to specifically dose Niacin. 500 mgs will not be in any of the B-complexes we recommend, so you don't have to worry about this, but Niacin is commonly recommended to lower your cholesterol, so some of you could have gotten this recommended by your doctor. So I just want to tell you about it. There's also some long-term liver damage that you have to be aware of when you use Niacin for a long time. So you want to have your physician checking your liver enzymes.

So which brands do we recommend? So again, we're just talking about B-Complex, which is a wide-range of many of the B Vitamins, not specifically like Niacin or B12 or B6 right now. So the best one on the market really is the GI ProHealth. And I know we've been saying that a lot in this presentation, but I urge you to compare all these other SU

legal brands, Klaire, Kirkman, Freda, Thorne, and anybody else you can find. Just compare the labels, again, look at the active ingredients, look at the chelations and find one that rivals the GI ProHealth B-Complex, because we haven't found one yet.

So dosages and protocols for this. This would, again, just be another one per day type of thing with a meal, so probably the same time you might take your multivitamin or you could even do it in reverse.

Jordan Reasoner: So the sixth and final supplement tonight is Probiotics. Now what is bacteria all about? Well, it's commonly said that humans have ten times more bacteria than human cells in their body. So, a common saying is, we're more bacteria than we are human, right. Well, there's three kinds of bacteria. There's essential or beneficial flora, that's the friendly bacteria, like Bifidobacteria, Lactobacteria, e-coli. Yes, some strands of e-coli can be friendly. Now, there's opportunistic flora and there's like 500 various species of microbes in your gut that fall in this category. And they're actually controlled by the beneficial flora, so they're kept in check. And they do cause problems once they overgrow. This is the bad bacteria.

Now, there's a third kind, which is transitional flora. Those are microbes from the outside of environment. So those are things you take in through food and drink and environment. Right? Breathing, living. They can take hold and damage guts and cause disease. In this case, you know, Central Beneficial bacteria usually keep those in check and prevent that from happening.

Now, what do Probiotics do? Well, when we take Probiotics, they support our beneficial bacteria specifically. So they help control the opportunistic bacteria from getting out of control, and they protect from the transitional bacteria and pathogenic organisms from taking hold in our damaged guts.

So who need Probiotics? Well, people experiencing diarrhea, constipation, but anybody with digestive disease or high inflammation. People using frequent antibiotics, people who are having brain dysfunction like anybody on the ASD Spectrum or if you're having depression, anxiety, any of those things. Anybody with bacteria yeast overgrowth, specifically people with leaky gut.

You know, our friend, Jay, has this burnt lawn analogy that I love and I just have to share at this point. And he says; imagine you have a big beautiful green lawn. You have a big circle in the middle that's burnt to a crisp. Right? Chemically burned. Like all the grass is dead. So, would you just let it go and let all the weeds grow so you have this beautiful lawn and in the middle you have a big giant circle with all these weeds and nasty stuff growing out of it? Or would you do what you needed to do to replant the seeds and let everything regrow? Right?

So that's what Probiotics are doing. We're protecting the beneficial bacteria, we're replanting those seeds, we're trying to repair out gut flora. So, test to see if you really

need them. Genova Diagnostics has a CDSA, it's pretty reliable, but it is debatable in some cases. Those will give you real readings on your Bifidobacteria or your lacto bacteria and your e-coli as well. It will also look for things like Candida, H. Pylori, C. diff.

So, what are the risk factors for people? Well, we know that Bifidobacteria can take over and cause health problems in some cases. It is a beneficial bacteria, but the problem is, it's just not a good neighbor. So sometimes it can overgrow in and of itself. That's why we usually recommend to avoid it in the beginning. Now, people with short bowel syndrome, which is more rare, they can develop a Lactobacillus infection in that same way. Some of the side effects you might see are die-off experiences and they can range from diarrhea to constipation, bloating, gas, brain fog, fatigue. The key is, it should only last one to three days after you start or increase your dosage.

So what strains do we recommend specifically? Well, you're safest bet to start healing is *Lactobacillus acidophilus* and stick to the Lactobacillus family unless you have a test indicating that you have other deficiencies in the Bifidobacteria area. But initially, it's very important to avoid the Bifidobacteria because you're vulnerable.

So what are the recommended brands? Well, GI Pro Scdophilus is great, It's non-dairy, it's tested SCD legal, it's very high quality, it has a long shelf life, it's rigorously tested. Now for some of you that might be more advanced, there's a company called Custom Probiotics, they have a pure *Lactobacillus acidophilus* powder. What I will caution you and say is that it's a very, very high amount of CFU's, like 200 to 400 billion CFU's. And Steve and I both experimented with this extensively. And you know, we're mad scientists in that way. And it's just... it's more of an advanced thing. I think we're going to talk a little bit more about it in Session Six, but I just wanted to make that available to you right now, the company Custom Probiotics is pretty good stuff.

Another advanced technique is going to be fermented foods. They provide you a good array of Probiotics in that way. We're going to go over that more in Session Six as well. And I can't forget the almighty SCD yogurt, which when you ferment between 24 and 28 hours, sometimes that can produce up to 700 billion CFU's of Probiotics in, I believe, it's one cup, if I remember properly. So that is an option. If you're in your feel good zone, test the yogurt. Test if it's good. If you can handle the yogurt, a lot of times it can take you to the next plateau. Again though, test it. Be careful. We don't recommend people start with the yogurt just because dairy tends to crush people in the beginning. Once you've had about 30 days, you're in your feel good zone, go ahead and test that SCD legal fermented yogurt at well.

So our recommended dose just for Probiotics are just to start low just to see how things go and what you're going to experience. For example, if you buy the Scdophilus from GI Pro Health, they have a three billion CFU pill, or 10 billion CFU pill, so you would take one of those the first day. The key is that you want to get it in your stomach when you're going to have the best odds of it getting through the stomach acid. So during a meal is not ideal. You don't want to take it 30 minutes before a meal or like up to two

hours after a meal. Ideally right when you wake up or right before bed. Usually before bed it's been you know, four to five hours since you ate possibly, so those are going to be your best odds to get live cultures down into the small intestine and large intestine.

Now, you want to work up slowly to 30 to 40 billion CFU's per day. You want to do that over a couple for weeks and then adjust if you experience any side effects.

Steve Wright: Okay, so we just got done talking about the top six supplements that we recommend. And what I want to call your attention to is what we're calling the intersection point of all these different pathologies. You see Crohns, IBS, Celiac, whether you have constipation, yeast, a parasite thing or even if you just have stomach pain and you have no idea what's going on. There's an overlap there that we're saying is about 80 percent of the puzzle anyways when it comes to supplements. And those top six supplements just recommended, we really feel, it doesn't matter your pathology that they will really help you and this should be something you should very seriously consider if you have any of the risks or the possibilities to need those that we talked about.

So, what about the last 20 percent? Right? So, the first 80 percent we've found as there a pattern that we observed. They're what worked for us and then they're what repeatedly what worked for our clients and the other people that we've talked to have been successful getting over their digestive problems. So there comes a point though, just like any statistical analysis where you get outside of that 80 percent. The last 20 percent can be kind of difficult. It's usually more difficult to get rid of you last 20 percent of your symptoms, to figure out the last 20 percent of your foods. And the same is true of your supplements.

But I do want to say that we are recognizing some other patterns in the last 20 percent. And it's just that, in this area, we're not as confident to recommend that everybody should be on the following supplements. But we are going to call attention to some of the patterns we've seen, and again, we want to call out some risk factors and some possibilities on clues that you might need to take the following. And when it comes down to it, if you're talking about symptoms like energy and brain fog, that kind of thing, these extra supplements might make a world of difference.

Okay, so the first step is Vitamin D3. So who's going to want to take Vitamin D3 and why? Anyone who doesn't get regular sun exposure, anyone who is living in the northern climates, if you're battling system wide inflammation and you know you are like leaky gut or UC or crohn's. And anybody who, really importantly, are affected by seasonal depression problems or anxiety problems.

So why is vitamin D3 so important and why are we seeing it all over the news? Well it's because it actually acts like a hormone in the body. It helps bone health, it helps immune system, it protects against cancer, it helps your skin problems, protects against

cardiovascular disease, helps asthma, and many, many more diseases and pathologies inside the body. It's really... it's an amazing thing.

So what kinds of risks are there if you start supplementing with Vitamin D3? Well again, the science in this area is a bit more grey; it's still evolving. So, we don't actually know the most optimal level yet, but we do know some ranges in which people have reported the best benefits without any side effects. But I do want to highlight one thing here with Vitamin D3 here. Because it is a hormone and we can actually make it with our body, we don't need anything external, this is the way to go about getting it. We don't, again, we don't want you taking pills; we don't want to take anymore actual pills than we have to, unless you really need it. But if you're not going to be able to get out on a daily or near daily timeframe to get sun exposure, you're probably going to want to look into Vitamin D3.

So if you are able to get outside, what should you do? You should try to get about 20 minutes of sun around the midday and the more of your body that you can have exposed the better because it's all about the surface area of your skin. Right? So the more you have available to produce Vitamin D3, the better. So if you're somebody who isn't going to make it out very often, you live in the northern hemisphere in the winter and you know, there's not very much sun to begin with, what should you supplement with and how much?

So first off, the recommended dosage, about 2,000 IU's to 5,000 IU of Vitamin D3, depending on if you're a smaller woman or a smaller man, you might want to stick with 2,000, if you're larger or you know you are very deficient, then you'll probably want to go with 5,000. As far as brands, GI Pro makes a great brand. There are tons of brands out there. Again, we've educated you on how to detect an SCD legal supplement now, so many people, including Now, Vitamin World; everybody makes a D3 that's legal, SCD wise.

So what should you do about your vitamin D status? You should definitely ask your doctor for a 25 OHD test. And this is going to give you... you can either start and get this test before you do the Vitamin D3 supplementation or a lot of gurus and physicians that we follow will say that you can actually start supplementing and then get your D3 tested later on just to get a baseline. But what you'll find when you get your 25 OSD test done is that the lab range on the receipt that you get or the slip that you get is zero to 30 nanograms per milliliter. This lab range is really... the research is indicating the lab range is completely not worthy. Like, don't pay attention to it. If you're in that range, then you're most likely definitely deficient, especially if you're below 30.

What the research is indicating is that 40 to 80 nanograms per milliliter is actually better. And the higher end of that is more if you're in the higher inflamed state, you're dealing with a flare or if you having a really... or you're in that all banged up state that we talked about in the fish oil. Once you get into your feel good zone, everything's getting optimized and you're searching for that last, you know, 90 percent... or not 90

percent, the last five percent of your health, you can start to taper back down to the 40 to 50 range and be totally fine.

So, the last 20 percent supplement number two is Magnesium. Now, Magnesium deficiency is very rampant in western societies. It's not very talked about, but Magnesium is extremely important for the body. It's involved in at least 300 chemical reactions that we know of.

Now, signs that you might need it. If you have a gastrointestinal disorder, you're most likely not absorbing what you need. Again, this talks about the stool transit time and everything that Jordan spoke about getting everything, the PH right to absorb Magnesium. It's usually not there.

If you drink alcohol or if you're elderly, you're going to need more Magnesium to deal with the side effects of that. Lastly, if you have any constipation and even after switching to a high fat version of SCD and using Probiotics you're still dealing with some constipation issues, most likely you're going to need some magnesium.

So are there any risks to using Magnesium? Actually, there is, and that's the acute overdose of Magnesium manifests itself in diarrhea. And the funny thing is that you buy this when you buy a commercial laxative. Most commercial laxatives, at least 50 percent of them are just Magnesium Citrate or Magnesium Oxide or something like that. And they're just giving you a pill form that they know is way over what you should take to actually absorb it in order to turn your constipation to diarrhea.

Now we do want to call light to the fact that people with impaired kidney function are at a higher risk for long-term adverse effects of Magnesium supplementation. So if you do have some kidney problems or known kidney problem, you probably want to just get a little bit of Magnesium from your multivitamin and not supplement with any more unless you're under the care of a doctor who can monitor your liver and your kidneys.

So what are the recommended dosages and brands? Number one that we recommend for a powder and for dealing with constipation is called Natural Calm and it's made by Peter Gilliam. The unflavored version does taste pretty decent actually and it is SCD legal. They do make a flavored version with are SCD legal. So if you were trying to get rid of constipation or you experience some Magnesium deficiency symptoms, you can start with a half scoop before bed and then work up to two servings or about 350 mgs. Now the other thing you can do is, if you're elderly or you want to supplement with Magnesium but you're not worried about constipation. You can get some Magnesium Glycinate that we talked about before. And again, Now brands, Vitamin World, GI Pro Health, they all have Magnesium's that are SCD legal and you can start using 100 mgs a day with that.

Now if you wanted to test to see if you really needed this, again, there's intercellular testing that will tell you exactly what your Magnesium level is in your cells, but the jury

is still out on what the optimal range is. And so until the researchers get that figured out, it really goes back to testing, observing what happens to your body. Because remember you are an N=1 experiment.

So the next one on the list is Vitamin B12. So anyone with digestive problems is going to be at risk for Vitamin B12. And this is really important because B12 is actually absorbed in the small intestines using enzymes from the pancreas. As long as it's bound to your intrinsic factor, IF. Well, IF is secreted in the stomach and it can be inhibited if the stomach is not properly producing acid. The entire process can breakdown before it begins if there's not enough HCL and pepsin and therefore the B12... it's not going to be able to break the B12 away from the proteins.

So to reorganize that and say it a better way, if you don't have enough stomach acid and you can't cleave the B12 away from the proteins in your stomach, the intrinsic factor that's in the stomach is not going to be able to attach to the B12. And then if things... the motility isn't correct and the PH isn't correct as you go through the small intestine, you're not going to hit the receptors for the B12, when it has to be linked to intrinsic factor to actually absorb it. So a lot of things have to happen for you to absorb B12 and that's why a lot of people with digestive diseases are deficient in B12.

Some clues or symptoms that you're deficient would be, feeling dull, tired, depressed. In children, it's linked to asthma.

So what are some risk factors? If you're following a Vegan or Vegetarian SCD diet, then you definitely need to monitor and supplement B12 because the other thing about B12 is it is only found in animal products. So, as of now, there's no known toxic or adverse affects that have been associated with high levels of supplemental B12. However, it is advisable to supplement with B6 during B12 supplementation. So in other words, if you're going to decide to supplement B12, it's best to do it along with a B-Complex even though you'll get a little bit of B12 out of a B-Complex. The amount that you're going to get supplement with B12 is going to go up into the 1,000 to 5,000 mg range, whereas a B-Complex will probably be only like 200 to 500.

But B6 and B12 can mask each other in how they manifest themselves in their clues and stuff. So you could have a B12 deficiency and you treat it and then it will unmask a B6 deficiency. So that's why you want to supplement with them together.

So recommended brands and dosages. We really like the Methyl-Mate from New Beginnings Nutritionals because they're the only SCD legal one. If you wanted to take one with Stevia, which you know, Elaine was kind of against, but Pure Encapsulations makes another B12. The other thing you can do that's even sometimes better if you're severely deficient in B12 is you can get injections from your doctor. Again here, you can test for serum, which is blood levels of B12, and you can also test for intercellular B12. But we don't know the optimum range and the only thing it's really going to tell you is if you're really extremely deficient.

So the last 20 percent vitamin that we're going to talk about tonight is Vitamin C. So anybody who is dealing with digestive problems, again, is at risk. And this is, again, because of the malabsorption problems. But also, I want to call attention to anyone who's on a low carb version of SCD. Especially if you are avoiding fruits, if you display any signs of lethargy, if you bruise easily, if you have inflamed gums because those are all signs of scurvy, which is a Vitamin C deficiency disease.

So what is Vitamin C and what does it do? Vitamin C is needed for synthesis of collagen, proper neurotransmitter synthesis and it's a master antioxidant. It really is like the number one antioxidant that you can eat.

So another big time you want to take Vitamin C is anytime you get sick because Vitamin C has been proven to stimulate both production and function of leucocytes, which are blood cells, so it helps... it helps arm your immune system and really mobilize the white blood cells to go attack any infection that you have.

So what are the risks? High doses of ascorbic acid, which is Vitamin C, will again, the acute toxicity of it will cause diarrhea. And some doctors will advise you to do this and this is called a Vitamin C flush. We're not saying to do that, but this is another way, if you were constipated and you needed to get it out right away. If you overdose on Vitamin C, you'll find out right away. You can't actually overdose and do any long-term damage because your body will just diarrhea everything out. So again, there's been no upper limit of Vitamin C has been found yet and it's generally regarded as safe. You'll find Vitamin C... they do IV drips of Vitamin C for cancer patients right now in much higher dosages than you could ever take in because of the diarrhea thing.

So recommended dosages and brands. It totally depends on what you're supplementing for with Vitamin C. If you're on a low carb version of SCD and you're noticing some things like lethargy or bruise easily or something like that, a good idea is to stick in the one to four grams a day, just basically as a prevention. And you're going to want to split that up into maybe two grams in the morning, two grams at night. Again, because if we were to overload four grams at once, probably half of us would have diarrhea right away and the other half won't have diarrhea. You have your own personal limit and I have my own personal limit. But if you're in a time of sickness, any kind of inflamed state, a lot of times you'll want to go up to four to 10 grams a day. Again, you need to spread these evenly out otherwise you will cause a diarrhea, so every four hours is a good bet. And if you suspect... if some of those things that we mentioned before, like lethargy, bruise easily, inflamed gums, if you have all those signs, you're going to want to look up more signs of scurvy and probably see a doctor right away because you might need intravenous Vitamin C to help you get rid of that.

So if you're not doing intravenous Vitamin C or pill, we really recommend GI Pro Health, they have a great Vitamin C pill, it's 1,000 mg each pill, really easy to take and SCD legal. For powders, this is an easier way to get even higher dosages and not swallow more pills

if you're against it. Source Natural makes a great one, so does Now Brand, Thorne Research and Nutricology.

So we've talked about a ton of different supplements tonight and we just wanted to include some, you know, the places that we get them and how best to get them. So if you're not going to be ordering from GI Pro Health because that's the only place you can get those vitamins, we recommend the following four sites. BodyBuilding.com, VitaCost, Amazon, and iherb.com. If I'm looking to pick up a new supplement and I've done some research and I've found an SCD legal one, I don't order until I check those four sites. And especially I usually am ordering off of Vitacost.com because they'll give you free shipping if you order more than \$50.

Jordan Reasoner: Okay, so we've gone over 10 different supplements at this point. And we've covered quite a big range here. So we just wanted to wrap up and tie up a few ideas. The first big thing to take away is that injection does not mean absorption. So as anything we do, there's a catch to supplements and what we eat, right? Just because we take a supplement in a given dosage, doesn't mean that's what we actually get in our bloodstream. And that's for lots of things, from stomach PH, enzymes, and transports; they all have to work together for that to happen.

The other point is that absorption is not delivery. Getting nutrients into your blood stream is only half the battle. Sometimes there's more delivery problems beyond that. This happens when feedback loops get scrambled by digestive disease, drugs and other toxins we have going on. So your cells could actually be starving for a nutrient even though you have high levels in your blood. So, how can you tell you're not wasting money and taking unnecessary pills and throwing money down the toilet, right? Well, you can track and observe your results. What happens when you take the recommended dosages we're talking about? You can get tested, but always remember that you're unique system. You are an N=1 experiment and you're the only one that's going to know what really happens when you take them.

So, there's different testing methods that we've referred to. Serum levels always means checking your blood levels, so that's like the normal things that usually your doctor will give you a slip for that your insurance will cover, right? Those are like when you go get your blood drawn, the doctor gets a sheet back, those are your blood levels that are normally looked at.

Now, if you want to get really technical. You can go to cellular level which is actually what gets into the blood cells in your bloodstream. And those are a little bit beyond what usually your doctor can get you. Companies like Spectra Cell does a really high quality intracellular test. A lot of times you've got to pay out of pocket for those, but those are going to show you exactly what's in your cells for your body to be using. There's problems with both. The lab readings for both are skewed, you know, think about it, right. A bunch of sick people are getting tested and they take all the sick people's data and that's how they figure the ranges out. And in fact, a lot of those sick

people are eating the standard American diet. So, you're thinking like, how can you make a range for that when you're using bad data to make bad ranges. So that's our caveat with that.

The bottom line really is that no one really knows what optimal really is at this point. So, what can you expect from supplements. We've gone over a lot of supplements tonight, you have a lot of options depending on what might be a good fit for you; supplements are tools in your tool belt, right? They're going to help with these broken processes that we know happen with digestive disease. They're not magic pills though; they're not going to make you get that 80 percent of healing tomorrow. So the best mindset you got to have is neutrality. Right? You're going to treat each supplement like a test. Track the changes over time. Do not jump to conclusions.

Steve Wright: The reason why is, remember we showed you this graph before. But your body always seeks homeostasis. So just like any system, your body is going to search out for steady state. And you don't want to jump to a conclusion if the day after you take a supplement you notice a really big swing to how your body responds to it because if you continue with that dosage, maybe day three or day four, things will level out again. There always is a time period in which a system must adjust to the new variable that you've introduced.

And when it comes to supplements and it comes to some of these malnourishment issues such as multivitamins and B-complex and some of these other just really supportive type vitamin and minerals. It can take up to a month for you to really see some change.

Okay, so let's bring this home. Remember, you need to think of your body as a unique system, the N=1 system. And you're going to need to test these supplements like an engineer, just like you test your foods. You're building a custom version of foods for SCD, but you're also going to be building a custom supplement protocol. Now, we think that the core six supplements that we talked about tonight will really... they're part of the blueprint to get you to the feel good zone as fast as possible and it should be really important for you to investigate first. We've also included the other four that you should look into if you've already looked into the other six and you know the outcomes from those.

The point here never be satisfied until you reach your feel good zone. And use there supplements to get there. Now, if you're struggling to introduce new foods, keep tweaking supplements also. Remember that sometimes, based on the diagrams in which we showed you how digestion works, there's nothing that the foods could be doing that could be causing the reactions. It's actually that you're going to need some supplemental support just to even introduce one new food.

Okay, so what to do next. We've talked about 10 different supplements tonight. We just want you to pick one and test it next week. Pick anyone that you've not already

tried or using and try it for four days. Track the results and just mark down how you feel. Either you're going to get closer to your feel good zone or your not. You can use the Session Two worksheet to keep testing and follow up with all the specific protocols that we've outlined here tonight.

We want to thank you for being part of our Session number two of the Advanced SCD Techniques Course. This has been Steve Wright and Jordan Reasoner and we'll talk to you later.