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**** Intro Music ****

Welcome to Supplementing Health, a podcast presented by Advanced Orthomolecular Research. We are all about applying evidence based and effective dietary lifestyle and natural health product strategies for your optimal health. In each episode, we will feature very engaging clinicians and experts from the world of functional and naturopathic medicine to help achieve our mission to empower people to lead their best lives naturally.

[01:07] *Dr. Nirat Nibber, ND:* Hello everyone and welcome to another episode of Supplementing Health. I am really excited because today we have a really exciting guest who today is going to talk about something I am seeing more and more of in my practice, and I think is incredibly important. So, we have Michelle Routhenstein who is a Cardiology Dietitian, Registered Dietitian Nutritionist and Certified Diabetes Educator specializing in heart disease management and prevention, and she has also authored a cookbook entitled *True Easy Heart Healthy Cookbook*. Welcome to our podcast Michelle, thank you so much for being here.

[0:01:49]: *Michelle Routhenstein:* Thank you for having me. I am excited to have our conversation.

[0:01:52] *Dr. Nirat Nibber, ND:* I think it is so timely given that this is also heart health awareness month and there seems to be a lot of campaigns around heart health but what I am finding, and my patients especially are asking for and I'm sure you see this a lot in your practice as well, is this desire to have access to tools so that they can actually implement some of these heart healthy choices. A lot of times, sometimes they may know better but it is about accessing tools to do better. Obviously you have your cookbook but what kind of tools are you finding and creating to help individuals live heart healthy lives?

[0:02:38] *Michelle Routhenstein:* I think that is a great question. I find that a lot of times, when it comes to heart health, many people are hyper focused on all of the foods they shouldn't be eating for their cardiovascular function. It should be the opposite. There are a lot of foods that our body needs in order for blood flow to be optimised, in order for the heart to beat regularly, in order for cholesterol to be excreted properly from the arteries. I really reframe it as, what foods are we currently eating? Oftentimes, people say to me "what's the best heart healthy diet?" They want me to tell them the Mediterranean diet, the portfolio diet, the vegan diet. Which one is the best? I hesitate with that because there are so many interpretations to each, and you can be a heart healthy vegan, but you can also be an un-heart-healthy vegan. To categorise it by everyone should be on this one diet is not very helpful. I find that the importance is that we need to take the science and their personal lifestyle and preferences and merge them together because this is a lifestyle change. This isn't a diet you do for a couple of months to see results and then go on your merry way because heart disease is a progressive disease. We need to be able to implement change forever in order to really optimise our blood vessel health and prevent heart attacks, strokes and cardiovascular disease.

[0:04:16] *Dr. Nirat Nibber, ND*: Thank you so much for saying that because I do find that leaders in this industry will pick one specific diet and they tend to speak to that only and I love that you are highlighting the complexity and ensuring that something is sustainable for patients, it means that you are taking their lifestyle into account. I would love to delve in a little bit more specifically on each of those factors that you talked about. So healthy blood vessel flow, healthy cholesterol excretion. If you could break down what it actually means to be heart healthy, what does a healthy heart look like?

[0:05:03] *Michelle Routhenstein*: I think from my perspective being in the cardiology space is that often times when people first talk to me they say, "Michelle, I don't understand how I had a heart attack. I don't understand how I have plaque in my arteries or why my blood pressure is high because I eat healthy." I think everyone's definition of what healthy is, is hard to identify or really quantify whether it is actually healthy. The difference when it comes to heart health is that we are really addressing your blood vessels. When you have high cholesterol or your LDL starts to increase, it is a sign that there can be extra cholesterol in the arteries, when that is coupled with inflammation and oxidative stress it leads that LDL to become oxidised which leads to plaque formation. Plaque formation is not something that you just get overnight. It happens over years and decades depending on your genetics. We have seen it in kids as young as eight years old and we have seen it significantly in fourteen and fifteen year olds, but it doesn't present itself until later because it takes a while for it to completely block the entire artery.

[0:06:22] *Michelle Routhenstein*: When we look at heart health, we are really looking at making sure that the blood is flowing properly and that your blood pressure is normalised, 120 over 80 but we have even seen in the research that 110 over 70 is that ideal standpoint. We also can look at pulse pressure. We can also look at your cholesterol levels. There is this wide range of what is normal, but it is important that we assess the genetic risk factors and all of your risk factors to really know what is normal because we have seen in the research that LDL should actually be less than 70 and not less than 100 in people who are at an increased risk. Really taking it one step further to optimise all of these values can give us an indication that blood is pumping thoroughly throughout the body, that your heart is beating regularly and that you feel energised and productive, and you feel really good. It is a lot of science. I have to always say this because I don't think it is talked about enough, your bowel health and gut health is so important. If you are constipated or if you are not having good effective bowel movements then there is a likely chance that things are getting stuck in the arteries and not being excreted the way that it should be. Those are some signs that I look for when I am evaluating my clients.

[0:07:48] *Dr. Nirat Nibber, ND*: I think you touched on a few really important points. I would love to get more insight into what kind of risk calculators or insights are you using? You touched on genetic insights for patients to help frame what that risk means. I find sometimes with patients, you do need to explore and explain why something not happening ten years from now is important to start making those changes today, right?

[0:08:22] *Michelle Routhenstein*: Right. My clients are usually people who have already got high risk that has been identified, whether it is a family history, an elevated CAT score, a high LPA, high blood pressure, cholesterol, fatty liver disease, or a cardiovascular event or a bypass surgery. My clientele is already in the cardiology space. I don't necessarily use the Framingham study...studies. I look at it more as a thorough evaluation of assessing for insulin resistance, inflammation, gut issues and doing a comprehensive laboratory analysis of seeing where those numbers are and how we can optimise them.

[0:09:07] *Dr. Nirat Nibber, ND*: Do you have any advice for patients who are maybe just starting to explore their heart health in terms of advocating for some of that additional testing? Is that something they should do early on or are you finding that they can do that later?

[0:09:20] *Michelle Routhenstein*: Unfortunately, I find that a lot of people don't know what to ask for or know what to look for. A big part of it is having that conversation with your physician but knowing, going in, how do I assess for these things? I give my clients a list of the laboratory parameters that I like to see and usually I collaborate with cardiologists that I work with privately, but I also can collaborate and I have, with my clients' physicians to make sure that we are doing a proper analysis. One of the things that I do recommend is the lipoprotein A, it tells us a little bit about the inherited risk for atherosclerosis, so a lot of people who have premature heart attacks they don't really have any other big signs that they are susceptible to an early cardiovascular event but when we dig deeper into it their LPA levels were crazy high. If that was taken into account at an earlier age, they could have been more proactive and looked into it from an early prevention standpoint. I do recommend that everyone, whether you have cardiovascular disease or you don't, that you know your lipoprotein A level and that you don't just let the doctor say, "everything looks fine and I will see you next year." You get a copy of your lab reports, and you assess it year to year to see your trends. Many times, a lot of people are already on a statin when they have a cardiovascular event, so when I look at their lab trends their LDL went up twenty points in the year before their heart attack; that could have been a point where things were going in the wrong direction. Being an advocate of knowing your numbers and really assessing it and not just taking the advice of "everything is okay" and being more at that forefront is really important.

[0:11:17] *Dr. Nirat Nibber, ND*: I often find in practice that I am highlighting ratios so not just the static numbers, like you said looking over time how things are changing and also how they are changing in relation to each other. You mentioned LDL levels, on the flip side it is also really important to improve HDL levels. Can you speak to your experience with HDL and how that is an indicator and how it is something we can improve and how that impacts heart health overall?

[0:11:49] *Michelle Routhenstein*: HDL is looked at as a very big antioxidant. It helps to take some of the LDL and make it more protective because it helps with decreasing the production of it in your liver. We want HDL to be high. We want it to be above 60. We have seen some research in recent studies to show that we don't want it to be extremely high. 60 to 80 is the sweet spot of where we are looking for, but it is a protective agent. I want to emphasise and I hear a lot of people anecdotally say "I have a really high HDL." But that doesn't mean that your LDL should be dismissed. We need to look at the ratio and then each one of them by itself. We do want to get your LDL to a lower amount too, regardless of the HDL as well. We can do that through nutrition and primarily physical activity is influenced more with your HDL and your LDL is more influenced with nutrition.

[0:12:56] *Dr. Nirat Nibber, ND*: Can you speak to some of those influences? How do we start lowering our LDL?

[0:13:04] *Michelle Routhenstein*: LDL is not just one thing. Many things can increase our LDL. It can be insulin resistance. If we have excess blood sugars in our blood vessels that can increase our LDL. If we are having too much saturated fat or too much trans fats, then we want to make sure that we have a gauge on that. It is not necessarily in avoidance completely, but we do want to have a certain amount of grams per day depending on the individual. We also want to make sure that we have enough soluble fibre in the diet in order to grab the LDL and excrete it. That is a very simple way to look at it. If there is inflammation, our bodies can't grab the cholesterol. If there is insulin resistance or oxidative stress or if there is any gut issues, we can't excrete it properly. While that is an easy way

to look at it, we need to look at all of the other components and make sure that they have a checkmark to make sure we are getting the LDL out. I always say that you are not going to take a blood test every day to tell if the LDL is coming down, but if you have good effective bowel movements, that is where we are going to excrete a lot of that cholesterol. Getting to that point daily is vital.

[0:14:24] *Dr. Nirat Nibber, ND:* It is amazing how much people have normalised not having a daily bowel movement and will come into practice and I'm like, "oh my goodness, no. Let's get that moving." How do we start influencing and improving that? How do you do that in practice?

[0:14:43] *Michelle Routhenstein:* We have to assess if there are certain triggers in the gut. If someone has acid reflux that is not controlled or that's being controlled only by a proton pump inhibitor, we need to address the acid reflux. If the person has bloating or constipation or any indigestion, then we need to address that too. We need to also assess how is their microflora. Are they consuming the probiotics and prebiotics in the right quantities to allow for good gut health? We do everything very slowly depending on where they are. It depends on the individual and we want to make sure that we are addressing all aspects of digestion. I think it is also important to note the meal timing and meal patterns that somebody is having because that is going to influence the ability for your body to metabolise the food that you consume. We have to look at the whole picture and analyse it. It is interesting because many people have become mindless with nutrition., they don't realise the reactions to certain foods. They might say "I am bloated all the time" but when we actually dive in, we really see patterns and we are able to identify certain triggers that cause them to get indigestion. A lot of it is let's hone in and see what is going on so then we can address it appropriately.

[0:16:21] *Dr. Nirat Nibber, ND:* You've mentioned some of the diets, you talked about Mediterranean, portfolio, keto and vegan. What aspects of each of those is ideal? What parts of those diets do make them optimal for heart health?

[0:16:46] *Michelle Routhenstein:* That's an interesting question. I guess I would say if I had to choose, the portfolio diet really emphasises the soluble fibre and the plant sterols which are helpful in lowering cholesterol. I don't know if I mentioned this but when we were talking about blood vessel health and somebody has high cholesterol, if it is not addressed appropriately it can lead to high blood pressure, because if the arteries are getting clogged with that cholesterol material, it can cause that vasoconstriction and that can lead to high blood pressure. The soluble fibre and the plant sterols are great for lowering cholesterol, but they might not address other issues that are happening in the blood vessel. Those are two great aspects, but it is not necessarily enough from a blood vessel optimisation standpoint. When it comes to the Mediterranean diet, they really emphasise the balance of having lean protein and having your fruits and vegetables and your whole grains and that aspect is really advantageous from a macronutrient balance standpoint. I think a lot of times people can get confused because the Mediterranean is so wide and vast and so they pick and choose what they want to consume from it.

[0:18:08] *Michelle Routhenstein:* They are like "oh, in the Mediterranean we eat all of these high fat cheeses so why don't we do that? We could grill all of the time." There are certain aspects that can still lead to inflammation in the arteries, so we need to be cautious with some of those principles and what we hand select. The keto diet, it depends how you look at it. If you are looking at a traditional keto diet, it is mostly fat. There is no way to have a high fat diet that is not going to cause accumulation of fat in the arteries or the liver, unless you are choosing a keto Mediterranean diet which is more of the heart healthier fats. But still from a cardiovascular standpoint, you can overdo

fat consumption even if it is heart healthy fats, because it still can lead to fatty deposits and triglycerides to increase in our arteries. Vegan diet, it depends how you look at it. If you look at it from a traditional standpoint, having a plant forward diet is very advantageous for our heart health. Right now, though, it is kind of a trendy thing to do. So, clients will send me like “look I found this vegan restaurant and I found all of these vegan ice creams and cheeses” and if you look at it, the first ingredient is coconut oil. Coconut oil has the same amount of saturated fat as butter. You have to look at it together, in a sense of, is it really heart healthy just because it is not an animal product? Not really, because you still can have a lot of saturated fat which will clog your arteries. I like the plant forwardness from that aspect, but you also can be eating all processed foods on a vegan diet. We need to be careful with that as well.

[0:19:55] *Dr. Nirat Nibber, ND*: I love that you say plant forward. It really highlights and emphasises that plants are emphasised and at the forefront. You are right, I keep seeing all of these highly processed meat alternatives that are plant based but when you look down to it, it doesn't have as much plants, it doesn't have that balance of the antioxidants, the flavonoids, the fibres that we require. You also spoke to the coconut fats. Can you speak to the difference oils and fats for cooking and how someone can delineate and choose the best fats for them?

[0:20:44] *Michelle Routhenstein*: I like avocado oil for cooking oil because it has a high smoke point. What that means is that when it goes onto heat, it doesn't change its form. The oil remains a monounsaturated oil which is cardio vascularly healthy. You don't have to worry about the heat temperature even though from a cardiovascular standpoint we want to avoid dry high temperature cooking because it can lead to advanced glycation end products to form which can cause inflammation in the blood vessel. Avocado oil is my preferred cooking oil. When I am using cold preparation or very low heat, extra virgin cold press olive oil is a really great oil as well because of the high concentration of polyphenols in it. Those antioxidants are very potent, but we see in the research that when they are exposed to heat a lot of them get destroyed. We want to keep them intact as much as possible so using them on a salad or in a dip that you are creating or as a topping, for flavour topping on top of your meal, that is what I would prefer.

[0:21:59] *Dr. Nirat Nibber, ND*: Of course, the topic of the podcast is supplementing health. In bringing in the aspect of supplementation, a lot of key antioxidants or active ingredients within these rich foods like polyphenols in red wine for example are being extracted and there seems to be a growing movement in the supplement industry for high dose antioxidants or flavonoids. What is the role for supplementation in a complete heart healthy diet?

[0:22:38] *Michelle Routhenstein*: I feel that this is such a common question. It is so hard to give a blanket, everyone who has heart disease or who wants to prevent it should have this supplement because supplements are exactly that, a supplement. It supplements your diet. From my perspective I need to try and make sure that we are trying to get all of these nutrients through food. If you can't, and we see that there is a struggle or an underlying issue like you are on medications that deplete certain nutrients, we can rely on supplements. But I use it kind of as that, well what is going on that we can't get from food that we need a boost of, and then making sure that it is a quality supplement. I think that when it comes to supplements, we need to make sure that we are not buying into a lot of marketing because a lot of supplements are in toxic doses that our body can't recognise or process. It can cause issues in the kidneys and liver. We need to be super aware of that. I also say that you should contact your health provider team because when I provide a supplement, I am making sure there are no fillers or emulsifiers and things that are actually going to cause inflammation in the arteries because there are so many of them in the supplemental industry and it is not regulated. We need to be super cautious around that too.

[0:24:04] *Dr. Nirat Nibber, ND:* I think you absolutely hit the nail on the head because it is meant to be supplemental, and those who rely only on supplements for that I think are missing that opportunity to have a whole foods approach which is in balanced doses as nature intended. That seems to be all of the time that we have today, but I thank you so much because I think it is so important to start with an individualised approach to heart health and with a complete understanding of context and you have provided a lot of that for our listeners. Thank you so much for your insights today.

[0:24:45] *Michelle Routhenstein:* Thank you for having me.

[0:24:47] *Dr. Nirat Nibber, ND:* Where can listeners find you?

[0:24:51] *Michelle Routhenstein:* You can find me on Instagram @heart.health.nutritionist. You can also find me on my website at entirelynourished.com.

[0:25:02] *Dr. Nirat Nibber, ND:* Like I said, check out some of those cookbooks, just some great material and lots of information there. Thank you again and we will talk to everyone next week.

** * * Outro Music * * **

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