Introduction and Dr. Sinatra Tribute

– Well, hello audience, welcome back to the Reverse Heart Disease Naturally Summit. Thank you and do not go anywhere, as we say, buckle up your ready for an exciting interview.

That has a lot of meaning to me because this is a mentor of huge importance in my life. And without further ado. Mark Houston MD in Nashville Tennessee, how are you? – I'm good, thank you for having me – Now for sake of time. I do want to say this is one of the most honored and awarded and academic doctors in the field of preventive cardiology, preventive medicine. A recent book I just got through absolutely amazing the truth about heart disease. Mark Houston, MD. And I will show you for those of you listening in right now, the biography for Dr. Houston, I could take the next 10 minutes.

Vanderbilt University School of Medicine UCSF Training back to Nashville and now for a long time the director of the Hypertension Institute, clearly a world referral center for issues of blood vessel health, blood pressure and what we're going to talk about in a minute, metabolic cardiology. I'll also say my office is full of books from DR Houston. He's a prolific author, I've been in his office.

He's been featured in so many magazines in Nashville around the country, It's crazy, It's wonderful. But we're gonna just take a detour for a minute and share some thoughts from Dr. Houston.

Before we go to the medical part of it about a mentor to you, I believe. Fair to say, doc Houston and a mentor of mine and that would be a doctor we lost in 2022 rather sadly Dr. Stephen Sinatra this book among so much else that he did was just radical, revolutionary. Free thinking about about cardiology, which we'll talk about. I will say that I you know, not knowing this was going to happen this way. I wrote you a brief little comment about how wonderful your book was right above it is. Dr. Sinatra's comments.

So I'm glad we're there. We reached out to his family and said, can we take a minute and really honor the memory of a great and innovative cardiologist to we wouldn't have this summit. I'm not sure you'd have your practice exactly like you got it in my practice exactly like I have it.

If it wasn't for, you know, the free thinking and innovation of Dr. Sinatra. So, I'll stop there. Just reflect for 567 minutes about when you met him and the influence and his legacy that unfortunately is a memorial legacy.

– Absolutely Joel. And again, thank you for your kind words, your introduction and specifically about your your role with Dr. Sinatra the book. And also He's he's been a mentor for me for years. And as most of you know, Steve was a pioneer in cardiovascular medicine. He was the first one to recognize how important coenzyme Q10 was for cardiac function. Way ahead of his time.

It took almost 30 years later before people actually begin to do clinical trials to to prove that his theories about metabolic cardiology and co Q 10 were actually correct.

He wrote many books about metabolic cardiology. He studied information on the truth about cholesterol and the cholesterol myth. He wrote a very incredible book with Jonny Bowden. And later he started doing work with other thing and the role of that relating to cardiovascular health, but also health in general. Steve was an incredible man.

I mean, he he was one of the kindest people I've ever met. he never said anything bad about anyone. He was always optimistic, god fearing man, potential for research and teaching beyond anything. You can imagine an incredible family and incredible career.

And everybody really probably around the world knew who Dr. Sinatra was, because he was a presence that no one else could command.

Metabolic Cardiology for Heart Failure

He he was so prolific in his writings and in his research and in his speaking, I had the pleasure of editing two books with Steve actually on nutritional aspects of cardiovascular medicine. In fact, the last book that he and I edited together was published about two weeks after he died.

And that's with CRC Press, I'm sure as we go through this summit, you'll be able to show that book as well as the previous one that he and I edited together.

But it's a it's a composite of many prolific authors, a state of the art book and the role of how nutrition can only prevent to treat cardiac heart disease Steve was a professor at diverse Connecticut chief of cardiology um and was well respected not only in traditional medicine but also in integrated cardiology throughout the world.

I had great respect for Steve. I miss him as a friend, incredible colleague and I see my incredible respects to his family. He will be missed not only for the person he was, but also for the incredible contributions he made in cardiovascular medicine.

– And I think it was a beautiful, beautiful tribute. You know, I got to meet him through my integrative cardiology training that you were the key mentor. But you know, I was an interventional cardiologist before that and I never got to meet Andreas from Switzerland.

But everybody commented, I know his biography very well and he tragically died in an airplane crash. He was flying 19 if he would walk in a room and there'd be a presence and I only say that about it Dr. Graham because that was certainly Steve Sinatra and the presence was a smile and it was warm and it was welcoming and you know, an arm around the shoulder. And I mean he did not know me from a lot of other people around you had a much closer relationship, but that was very, very special. You also do a excellent job of that Dr. Houston.

And you know, there's so much, there's probably so many cardiologists and internists worldwide that have changed their practice and upgraded because of Dr. Sinatra.

So his legacy will live on his grounding earth thing work. A great book by that title uh is a Legacy that Will Live On. And I have to say he makes some of the best marinara and extra virgin olive oil because he went back to his Italian roots and a familial relationship to the famous frank Sinatra.

I'm not sure how close a relationship, but there was uh they were related and uh at least for the meantime there is a viable both supplement business and uh food business that represents his passion. I mean the man could tackle so many things.

So I want to thank the Sinatra family for letting us, you know, just spend these few minutes and uh touch on, you know, a great loss but still a great legacy.

And from that lets catapult uh it's so important at the summit that we point out that, you know, when I read this book for the first time, maybe a dozen years ago I said wow, biochemistry, biochemistry by mitochondria. This man is not just pulling things out, he's talking about what we learned in medical school and forgot, but he's brought it back and studied it. So let me just talk about the, you know, prevent heart disease, reverse heart disease naturally.

Summit and metabolic cardiology, which you are a pioneer and an expert on. And I just saw yesterday and follow up a 43 year old man in Detroit significantly overweight. He's struggling with that.

He's made improvements. He's at £300. He was well over that. Had shortness of breath about two years ago presented to local hospitals. Was in congestive heart failure at an early age, Shortly determined he did not have a heart attack.

His heart arteries were clean as a whistle. So we didn't have to worry about stents bypass and that whole pathway. But his Echocardiogram, his basic and fundamental test showed his strength of his heart severely abnormal

ejection fraction of 2025% alcohol wasn't in the picture of cocaine, wasn't in the picture. Sleep apnea was diagnosed and treated.

Blood pressure was not a predominant problem. So as you and I would call this a unknown cardiomyopathy, idiopathic dilated cardiomyopathy. But a weak heart for those listening that aren't with a medical degree which is mostly he had a really weak heart and his life was at risk.

And the traditional approach is a list of life style of recommendations sometimes, but prescription drugs. But this man shows up in your hypertension institute, let's just play for a minute. It's Nashville.

Um And he's on his prescription medications, you have some notes from the university. Um But nobody's applied this kind of approach just once you talked a little bit what you would do um understanding the path of physiology of heart failure mitochondria powerhouse, 80 P. And you know, all this legacy of dr Sinatra that you implement and do so well. So what would you tell this man that we we have the ability and anything you can run with this? – Well this is a very good case and it illustrates numerous cases that you and I both had over the years and I'll just start with That. I've seen many patients like this with the S as low as 15% who are on maximal medical therapy by traditional cardiologists.

And you always want to do you know the appropriate medications that have been proven to work in systolic congestive heart fair which will assume this gentleman was owned.

But what is left out is the nutrition for the heart. And that's what Steve proposed many years ago is think of the heart like your car. If you don't give it energy to run it's not going to run well.

So the energy for the heart is A. T. P. And A T. P. Is made in your mitochondria. And if you don't have the ingredients that is the nutrition the micronutrients, the macronutrients to provide the production of a TP.

The heart is basically starved of the energy it needs to make a teepee. Therefore it is a failing organ. And until you do that You can throw all of the prescription drugs you want to with these patients and they will not get better many of them end up on a transplant list or they die at an early age.

So just to set the stage for this, I will say that I would say close to 80% of the people that I have treated with low ejection fractions from whatever the cause, whether it's cardiomyopathy, whether it's some other related issue or corny heart disease, I've got most of them tremendously better with sometimes as high as 40 45 5% over a year or two and off the transplant list with a normal life.

So what do you need to do? Well, there's about five or six things that Steve and I worked on over the years. He started all this with the recommendations.

He and I added a few things. We came up with an incredible program that is effective. So the first is very high doses of coenzyme Q 10 and you have to use a very good quality that's highly absorbed.

The key is not so much the dose as to get the blood level above three and that's where you need to go for a congestive cardiomyopathy, secondly, you'll add some carnitine.

Carnitine is important to transport free fatty acids into the myocardial. And the thing that's important to remember here is the heart uses free fatty acids for 60% of its energy production, about 30% is from glucose.

The other 10% are from ketones. So in a failing heart when you give a certain type of free fatty acid the carbon length determines whether it gets into the heart.

And so carnitine is like a truck it transports the free fatty acids into the heart. So you get that energy. Another important nutrient is Tarin. Tarin is incredible. It's amino acid that supports all types of cardiovascular health reduces inflammation.

And the combination of those three together are very basic and then we also add magnesium which is involved in about probably 400 different pathways uh cardiac muscle. those those are the things that I think tend to work the best or some other things you can use.

You perhaps have some things that you would add to that we have to start you know kind of slowly because this is a lot of supplements to take. We try to do it in powder form in a smoothie. The other one that's that's very important is D ribose. Now let me explain what the ribose is.

I mentioned to you that the heart uses about 30% of its energy from glucose. D ribose sort of bypasses some of those glucose pathways metabolically gets in and makes A. T. P. Very very quickly.

A lot of clinical trials to support the ribose and congestive heart failure. But most of these nutrients have to be given at least two maybe three times a day to keep that sustainable level in the heart. So I generally recommend all the things we've talked about. We give them in a T. I. D.

Regimens three times today as a smoothie. If you can't do it it's a smoothie then there's a lot of pills to take and people don't generally comply. Well that's the program – And you know that started as the awesome foursome.

But now we've got 1/5 because you did mention five supplements. So I don't have a quick little Diddy Dr. Sinatra is credited with awesome foursome and it's just such a nice way to summarize but we're up to five.

So let me just uh unpack what you said with a few questions, everyone in case listeners don't know Dr. Houston and I as cardiac specialists we use the abbreviation E. F. Or ejection fraction which is the standard measure of heart strength. This young man I described had a very low heart strength and congestive heart failure. So that's what EF is number two.

You use the word micronutrients. So this gentleman shows up in your office brings a pretty good Ream of standard University lab tests. But you and I know there are special tasks called micronutrient panels.

Heavy metal panels. Let's assume, he said thyroid studies and vitamin D. Levels. I would never assume that for sure. But let's assume the standard medicine did that. Would you run a spectra cell micronutrient a vibrant micronutrient looking for even more deficiencies beyond this kind of general five programmers that optional in your approach. – I think it's probably mandatory Joel because a lot of the medications that are given for congestive heart fair deplete micronutrients, particularly diuretics, beta blockers. So you have to check this panel because a lot of those micro nutrients are very low and that's contributing to the congestive heart failure. There's as you mentioned, two great companies that measure this spectra cell and vibrant labs, they're different but they both give you quality information.

And sometimes if you identify a micronutrient deficiency and you replace it that in and of itself is gonna have a very important impact on the efficacious support of the other nutrients you're giving – And I'll point out one and I know you know you're the you're the world expert but if this history had included heavy alcohol intake, which it did not in this young man, you certainly wouldn't want to at least consider measuring or supplementing with thiamin vitamin B one because of the extreme beri beri deficiency.

But many alcoholics are going to be low in that you know that vitamin as well. So it's an easy, you know, you mentioned CO Q. 10 blood levels and I sometimes feel when I send my results off to the standard cardiologist they scratch your head as I'm doing right now for us the reasons unaware that you can get a blood level for CO Q.

10, it's your local hospital will do it or it can request can be labcorp can be any of the labs and you mentioned a blood level over three. So let's just take that one a bit.

Are you probably going to reach for ubiquity hall in a congestive heart failure patient over just standard CO Q 10. And what kind of dose you know range might you use to get that blood level over three? – It's interesting that most of the clinical trials that are published use just regular CO Q 10 and not the reduced form.

So I think you could go either way. A lot of people prefer the reduced form because you know it's gonna work. It's gonna have to be changed in its format to get into heart and do what it's supposed to mitochondria.

I did leave out one thing about CO Q 10 and I'll get back to your question. There's a new type of CO Q 10 that we're now using universally. It's from new Zealand called mitt OQ.

Advanced Nutrient Testing and Supplement Strategy

The reason this is important is regular CO Q 10 may not get into the mitochondria as well as you might expect whereas mitt OQ which is basically CO Q 10 but the concentration delivery system of the heart is a thousandfold greater than regular CO Q 10. There's a lot of reasons for that inability to get in there. But also the other thing we use is a compound called a NATO G. A not O. G. G.

Is made by a nutrition company that allows for endogenous production of CO Q 10 in the mitochondria through a very complicated pathway. So we really now are up to seven nutrients. I always admit OQ.

And an auto G. G. As part of that Co Q. 10 supplement. So if you give CO Q. 10 and I usually now as you probably do go with you know which is reduced form, you're gonna have to get pretty high doses probably in the neighborhood of 4 to 600 mg a day to achieve that level. But then you just check it and make sure you stay above that. The mido Q.

Is 20 mg a day and the Dogg is a fixed dose. I think it's 1 50 or 300 mg per day. – I'm smiling because I'm in a not a G fan now both for my statin patients and increasingly for the same situation we're talking about and that's probably in fact I think we're going to have an interview on that topic during the summit to go in deep into that topic. Minuto que if you go with my Tokyu that really you can't use the blood level right? I don't you're looking at uh concentration in the heart and you're not gonna be able to measure in the blood.

– Exactly. So as you just gotta do it on faith with the 20 mg and you know a lot of people might say that's a high dose of OQ dollar CO Q. 10 600 mg. But you and I know there's literature out there in some neurologic conditions using well over 1000 mg a day safely.

And I just want to make one other comment. You and I know this that there is a randomized study in congestive heart failure like the patient. I reported the sim B. O. Q. Trial and there's so many years in medicine particularly with supplements. We don't have that highest level of science but we do with coenzyme Q 10. And there were clinical benefits yet it's so often missing in the standard clinical practice in a patient like this.

So you know it's evidence based uh and we're pushing the envelope a little bit maybe with the doses. What about just quickly carnitine? L carnitine? What dose might you start in a young man like this with a low ejection fraction. – So L carnitine as opposed to a Seattle L carnitine very different compound. You have to use l carnitine.

You can get in a powdered form otherwise you're taking somewhere between 4 to 6 g a day. So if you do the resident we propose it will be two g of powdered l carnitine three times a day to maintain that level. And what that is doing is allowed to transport fatty acids with the carbon length of 12 and over.

Which often cannot get into the mitochondria without the carrier which is carnitine – Taurine dose. You might start this gentleman on he's a big guy. But – I'd go with two g three times a day.

So that's six g a day total. – That's a taurine does for sure. And then magnesium, you have a favorite pixelated version. – I use I tend to use magnesium mallet because that's part of the mitochondria is the malic acid. And I like to get the high doses fairly high, assuming there's no rental dysfunction and you have to check that.

But if you give a calculated mallet, uh 1000 mg total per day. But again dividing up maybe 500 mg twice a day. But you need to check red cell magnesium because the serum levels are very misleading and push it up to the the limit of normal for red cell magnesium and that may require a higher dose.

– Or G I tolerance. And you know, diarrhea from high dose magnesium circle back to lab testing, I briefly mentioned the word heavy metal and of course there is some literature that some patients like this could be accumulating metals like arsenic, cadmium, mercury, lead and at least suspicious.

It's involved this gentleman happens to work in an automotive plant actually. So there's at least some possibilities around environmental toxins a bit more than other jobs, desk jobs. You know what it is?

If you wanted to address that. Are you doing hair? Are you doing a provoked urine? Are you doing a simple blood panel just to screen? – Generally start with a combination of blood in urine panels without provocation. If it comes back high then I pretty well have an answer. But I think if you have a historical context that suggests heavy metal exposure you may have to do provocation testing because as you know heavy metals are prolific in cardiovascular medicine.

They are mitochondrial toxins. So whether it's mercury, lead arsenic or some other compound you want to do a good history check a blood in urine and then maybe a provoked test to identify them and then them if necessary.

– Yeah. Absolutely. I've not seen a nice study of correlation to remove metals and ejection fraction improvement. There's lots of other clinical areas where there's suggestion I may have missed that in the literature, wrote a paper on that topic recently with out finding successfully but it certainly would make sense to try and detoxify a person with heavy metals accent.

One non supplement we didn't mention and I want to know if you're using it at all is P. Q. Q. Mitochondrial support supplement. That has nowhere near the amount of data that coenzyme Q 10 has but still has an understanding if you ever reached for it and we were already up to seven or eight by now our patient is gagging on there three times a day smoothie and we have to be cognizant of that.

But what are your thoughts on P. Q. Q. – I like P. P. Q. And it is in the CO. Q. 10 family but it has some different unique twist to it that I think are of value in maintaining good mitochondrial health. So and it's only one tablet a day.

So it's it's not that onerous for pill taking and Joel. There's one other one I just came to mind. I just found out about this literally three weeks ago and I'm starting to look at some research on it but I want to mention it to you And your audience. It's puritan a yeah you're familiar with. Yeah. Yeah basically it's a related to auto Fiji photography where you want to say it of the Mitochondria is a little different take on how to keep your mitochondrial biogenesis intact.

And it does come from pomegranate. The problem is if your microbiome is not suitable you only convert about 30% of it. So you can actually get this stuff now in a an appeal form.

It's expensive. That's the only drawback and I don't I don't know a lot of long term data in in points for CHF for CHD. It's mostly just in vivo studies related to mitochondrial health.

So something to think about maybe later on if we can do some clinical trials with it. – Yeah it needs a trial there's some good trial and athletic performance, oxygen uptake? A couple muscle biopsy showing it really does accelerate mitochondrial health but adapting it to a patient like this is really a unique idea.

I've not thought of that now. I can remember sitting in classroom because I was the student, you were the teacher and we talked about, you know, limited data but maybe a role for amantadine.

Better known to the audience as Pepcid. At least one provocative randomized study or at least it may not. It may have been an observational study. Inexpensive drug kind of got a lot of press during the recent pandemic for having some immune benefits. But if you ever added uh you know this gentleman that added size is probably having some reflux and heartburn anyways, common in the obese. But if you use that in your practice at all in a cardio Mopti. – I have not yet.

And the only reason is that the data is pretty rare and insufficient. And also the downside of inhibiting acid as you know, for malabsorption issues but also there's now context related to corny heart disease and rental problems with

those drugs. So I use them really for other indications but I'm not using it routinely.

– And another one I remember you lecturing me on. So I actually paid attention. I want you to know that you know at least one study and there's one study enough to become a practice pattern. Probably not.

But I think there's a study out of china with burberry. Mean for people with low ejection fraction burberry in being an alkaloid supplement capsule or powder that's I mean you've reached for her again.

Just not enough data to put that on the list. – Not quite enough data yet. Burberry is great for a lot of other things. As you know, it's blood sugar control. It's a pCS canine like agent for lipids.

So in those ticks you might use it. But for chf now I haven't been using it, – You know, another area that's germane to this gentleman's presentation.

Your practice my practices. You know, it used to be an act of God to get somebody to see a sleep doctor, get a sleep study in an office building, particularly a complicated basin like this.

But now the era home sleep studies has made our ability to diagnose altered sleep in a £300 patient with congestive heart failure, you could almost, you know bet you know a significant amount that he's gonna have altered sleep and maybe benefit from a formal sleep evaluation. What are you doing at the Hypertension institute? Whether there's a clue like snoring apnea, gasping, daytime fatigue or just this clinical scenario that's so high likely for sleep disorders. – Well sometimes you don't get a good history unless the significant other is in the office with the patient.

Sleep Apnea, Recovery, and Closing Reflections

If you don't have the history, you kind of use the clinical setting. So, anybody with hypertension congestive heart failure, obesity diabetes and a few other things. I'll just go ahead and order a watch pat.

It's easy to do and do it at home, It's one day it's very accurate and then get them hooked up with a good pulmonologist for O. S. A. Treatment. – Right? And we are going to be discussing sleep with Dr. Kirk parsley, an expert in a former Navy seal. Having a fun interview.

But the watch pad is a really user friendly watch like device you use one night now it's disposable, it's comfortable, it's inexpensive read by board certified sleep specialist and it makes diagnosing severe sleep problems you know much easier and very meaningful.

And it turned out this gentleman ultimately did have a watch pat and ultimately got diagnosed and uses CPAP nightly because that is an enormous stress on the heart and the brain to have undiagnosed and untreated sleep apnea.

We've got a bit of a supply chain problem getting CPAP equipment to people in my area and I'm pretty sure that's a national issue. I hope we see that resolve soon.

Alright. And you know the good news is I'm presenting this patient I saw him yesterday and follow up but his ejection fraction has risen from the 20% range. He's in the mid to high 30's Because of that he's been able to avoid a defibrillator. If his ejection fraction had stayed 20%, there would have been a recommendation for permanent implanted mechanical electrical device in case he suffered a sudden cardiac arrest but it's risen to the degree over a few months that now – That's very encouraging. You got it done in such a short time.

You have to be patient with a lot of these folks because they don't always respond as quickly as your patient. But and as a general rule of thumb almost all of mine have responded uh to the program. – Unfortunately the standard pharmacology of congestive heart failure support has expanded widely.

In fact it's just like we talked about seven or eight supplements that may support the Energetic of the heart. There's

seven or eight now prescription drug classes to consider choosing from and you can't possibly use them all in one patient.

They'd have a blood pressure of 50 but it's very hopeful how we've progressed. And again it's all on the foundation of you know pioneering work, you've done pioneering work that we call metabolic cardiology.

I have a certificate in my waiting room for the patients to see that I'm certified in metabolic cardiology. I'm even more proud of that when we talk about the legacy of Dr. Sinatra. Always been proud of it.

It's just a term that's not used much to actually analyze the biochemistry of the heart or other organs and intervened in a way that you know, it was very cerebral and very academic and certainly very clinically important.

Any final – for your audience. I just remember very well when you came to module 16 A. B. C. And D. With A. Four M. And we became very good friends and have remained good friends since then and your practice is just blooming now with your new integrative cardiology program.

Whereas you used to be doing a lot of interventional studies. So I think you you've loved what you've done and you're happy with it. And I applaud you for not only what you did for yourself, what you're doing for your patients as well. – My my hospital is not so happy that I have the trademark prevent not stent because I used to be thinking or at least one of the princes. And now I really try and encourage people to you know consider alternatives if it's medically safe.

And we have more and more support I will say. And I don't know if you caught this dock Houston but out of you know on the topic um Do you rush to stents and bypass or can you attempt metabolic cardiology? Standard medical approaches in Barcelona Spain at the most recent European society of cardiology meeting the biggest cardiology meeting in the world. They did a randomized study of people with low ejection fraction significant coronary artery blockages on good medical therapy, stable. Go onto stent or be watched on optimal medical therapy. And when the presentation was made there was again for stable people on medical therapy. No advantage to moving on to interventional treatments and stenting now it's a very select group.

They weren't in the coronary care unit having recurring. Pain. But once again we've seen standard pharmacologic approach and certainly you and I are convinced that this metabolic cardiology approach can support the heart while we intervene with lifestyle changes, weight loss program sleep support. And only in a really relatively small slice my old career of being a stent specialist, do you really need to call upon?

So it's good to see that, you know, and I would encourage anybody. You know what your doctor doesn't tell you about heart disease. I mean, there's just so much and this is already a few years old.

So pick up the truth about heart disease, which is a brand new, masterful book. Little sci fi maybe for the general public. But go for it. Try and make your way through it.

I did page after page after page. So we wish you well. Thank you for joining us. Thank you to the Sinatra family for letting us honor the memory of Steven. Thank you you know, for all the work you did with him. And we'll make sure we carry his legacy forward as we grind through another day of patient care. Day after day, – Let's do let's remember Steve and what he contributed to what we're doing in medicine in general. – Alright, thanks. Thanks.

Alright. – Take care