



THE FAT SUMMIT

Separating Fat From Fiction

Transcript:

**Interview with Joel Fuhrman, MD.
drfuhrman.com**

**Interview by Mark Hyman, MD
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Dr. Hyman: Hey, everybody. This is Dr. Mark Hyman. Welcome to the Fat Summit, where we separate fat from fiction. I'm here with my good friend, Dr. Joel Fuhrman, who is a real pioneering doctor who has really brought us to the edge of our thinking about food. He really is one of the first guys to talk about food as medicine, which is my favorite topic.

And he has actually shown through his books and his work that we can reverse chronic disease using the power of food. And one of the most important concepts that he brings to us is something called the "nutrient-to-calorie ratio." And it's actually a concept that we talked about in my first book in 2003 when it was published. It's this whole idea that you should eat foods that have a lot of nutrients and not as many calories. And I think it's just a simple way of thinking about anything you're eating. It's powerful.

He has written amazing books, "Eat to Live." He has written books on reversing diabetes, and he's a well-known doctor on TV. I've seen him on the Dr. Oz Show, the Today Show, Kelly and Michael. He's done his PBS shows just like me. He's sort of, we're just kind of growing in the same pathway and it's great to see people actually pushing this message, that food is really medicine and that you can actually heal people.

So, I want to get into the whole topic of fat. Now I know you're mostly plant based, not all plant based. But you believe that we should have most of our food as plants, which is actually what I think too. I call it being a "pegan." Mostly paleo-vegan, but it's like 75% to 80% of your diet is plant foods and then the rest is a little bit of healthy, clean animal protein.

And I think one of the things that I want you to talk about when we start first, because I think this really is a challenging piece of the conversation and I just want to get right into it at the beginning, which is this whole nutrient-to-calorie ratio. So, where it sort of makes sense is in processed food, but in terms of fat, we all know that fat has more calories than carbs. So the theory has been that, if you eat less fat you're going to lose more weight and it has less calories to eat more carbs.

So, what is your view on that? And how does that fit into the whole nutrient-calorie ratio? Because I think it's challenging thinking for people.

Dr. Fuhrman: Right. So one thing that I always teach people is that $H = N/C$.

Dr. Hyman: Oh, my God. It's so much math!

Dr. Fuhrman: Just think N/C or N divided by C .

Dr. Hyman: Yeah.

Dr. Fuhrman: And that just means we're looking to eat a diet with a high nutrient-per-calorie density, right? So we want our diet to be relatively low in calories so we're not overweight.

Dr. Hyman: Right.

Dr. Fuhrman: We want to be an ideal weight for the rest of our lives. So the key here is can we get an adequate amount of micronutrients without an excessive amount of macro nutrients?

And I'm suggesting that an excess of macro nutrients, which means calories, an excess of fat, or an excess of carbohydrate, an excess of protein, an excess of any three macro nutrients are particularly damaging to your long term health. And what people have focused on the last ten years, and what's focused on in press, and books, and nutrition, is this optimal ratio of fat, carbohydrate, and protein, where some people are advocating high fat. Others are advocating low fat.

And I am saying to you that the ratio of fat to protein to carbohydrates is not the critical thing we should be concerned about.

Dr. Hyman: Right, right.

Dr. Fuhrman: That's overemphasis, because you can be on a diet that healthy with a high fat ratio or a high fat percent, and you could be on a diet that's relatively healthy with a lower fat percent.

The key fact here is whether you're getting a better than adequate, or we could say "optimal" amount of micronutrients in both the amount and a diversity. In addition to that we're talking about comprehensive nutrient adequacy, which means not missing any particular micronutrients that humans need, having a broad exposure to all human required micronutrients, as well as peaking and getting a high amount of the ones that are high in phytochemicals and antioxidants, in a relatively low calorie environment.

Dr. Hyman: Right.

Dr. Fuhrman: So those are key issues here. For example, I've added up maybe 35 different nutritional parameters in almost every food and allow people to see the micro nutrient levels in plant foods, recognizing that colorful plants have

maybe 20 to 60 times as much nutrients as oils, and animal products, and processed foods.

Americans are now eating 50% of calories from processed foods. That means white flour.

Dr. Hyman: Yeah, it's scary.

Dr. Fuhrman: And sugar, and Coca Cola, and donuts, and cookies, and rice cakes, and breakfast bars. That's 55%. And Americans eat 30% of calories from animal products. When you add the 30% plus the 55%...

Dr. Hyman: It's garbage.

Dr. Fuhrman: ...it means what's left over is somewhere around 5% to 7% of calories from unrefined plant foods, which we both agree should form the major impact of calories in our diet.

Dr. Hyman: Yeah, absolutely.

Dr. Fuhrman: It should come from unrefined plant foods, the major impact. And Americans are so far away from that.

Dr. Hyman: Yeah, and it's the biggest driver of disease. You know? That's what we found, right? And it's amazing how health transformed so quickly when you just follow that simple concept. It's like what Michael Pollan said, "Eat food, not too much, mostly plants." It sort of gets to the heart of it.

The thing that you mentioned is micronutrients and then phytonutrients. I don't want to skip over that because those are two powerful concepts. One is, you know there's the fat, protein, and carbs, which are macro nutrients.

Dr. Fuhrman: Right.

Dr. Hyman: But then there's the micronutrients, or the vitamins and minerals. And then there's all this other stuff, which we didn't really know was in plant foods, which is called "phytonutrients," that are these healing compounds like curcumin, and resveratrol, and glucosinolates, and sulforaphane, and catechins, that are in all these plant foods, that have powerful medicinal properties. And they're not even considered essential nutrients, but maybe they are. Maybe we've evolved with them and they're actually essential for us to be healthy.

Dr. Fuhrman: You know I personally consider phytochemicals and antioxidants that are not vitamins and minerals, the ones you're mentioning, I consider them micronutrients in the way I speak a lot. Because they don't contain calories and they may not be classically considered in that list that scientists discovered, those essential nutrients that humans need. But now we know that they are relatively essential. Without an adequate amount and adequate diversity of these phytonutrients, we do not have a normally functioning immune system.

Dr. Hyman: So tell me more about how this works. Because what you're basically saying, is it's not just about reaching some level of these nutrients in your blood. It's actually about the information they have and what they do to your body. Right? It's the instructions that they give to your cells, to your metabolism, to your brain, to everything. How does that work? How do these compounds work like that?

Dr. Fuhrman: Well they work very differently from one another. Some of these compounds, the phytochemicals, especially the isothiocyanates, they're called "ITCs." They come from cruciferous vegetables.

Dr. Hyman: Yeah, my favorite.

Dr. Fuhrman: Right. And these ITCs they are formed best when the food is not cooked, because if you heat the food and then eat it, you could destroy the enzyme called "myrosinase," that forms the ITCs when you're chewing a food. So what I'm saying is that the ITCs are not in the food until you first chew it and break down the cell wall. Then they're formed when you eat the food. If you cook the food first, or you...

I used to tell people...

Dr. Hyman: So you don't cook your broccoli? You don't cook your broccoli?

Dr. Fuhrman: Well you could, but I'll tell you what to do. But when I first wrote "Eat to Live", I think in 2003, I used to tell people, "Take the kale and put it in the soup, and when it gets cooked, take it out and blend it into the soup so it creams into the soup." Now I tell them to blend it while it's raw in the blender, so a chemical reaction occurs, like a little chemistry set, and the ITCs are formed.

Then you can take the raw kale slurry and put it into the soup to cook with the other vegetables, because the ITCs are not destroyed by the heat, but the heat would have destroyed, inhibited their formation.

Dr. Hyman: Wow. That's interesting. That's a take home tip. So blend your vegetables and then put them in your soup.

Dr. Fuhrman: Well blend the cruciferous vegetables, because the other vegetables, like zucchini, and tomato, and carrots are not going to be destroyed by the heat. But the myrosinase enzyme, and the enzyme called "alliinase" in onion, that forms the organo sulfide compounds and anti-cancer effects in onion, is also heat sensitive. So it's the scallion, and the leek, and the collard greens, or the broccoli rabe, or the kale, those foods you should blend when they're raw and then add them to the soup.

Now, that's why I advocate people put some red cabbage, or arugula, or watercress on their salad every day, because you're chewing them raw. And then, if you're eating some cooked broccoli and Brussels sprouts, the fact that you had some raw cabbage, or raw watercress, or mustard seed, the fact that you had some myrosinase source in that meal means that you'll get better nutrient benefit from the cooked foods you're eating because the myrosinase from the raw food you ate in the same meal can be utilized to form ITCs from the cooked vegetables you ate. Did you follow that?

Dr. Hyman: I did! That's amazing! Basically what you're saying is if you have certain vegetables like the broccoli, and the kale, you blend them, and the onions, you blend them first, then put them in your food. And then if you eat them with other, actually, classes of these like arugula or watercress that it actually will also help activate these enzymes so you can extract these beneficial compounds that are anti-cancer and detoxifying. Right?

Dr. Fuhrman: Right.

Dr. Hyman: Did I get it right?

Dr. Fuhrman: That's correct.

Dr. Hyman: Did I pass the test?

Dr. Fuhrman: Yeah.

Dr. Hyman: That was good. So now let's talk about fat again. There's a lot of calorie density in fat, but it also may have beneficial properties, like olive oil has all these polyphenols and omega-3 fats regulate inflammation. They're a little different from the micro nutrient concepts that you are talking about. How do you see that in the world of food and nutrition that you live in?

Dr. Fuhrman: Right. Now you know that I advocate a relatively higher fat diet than a lot of the low fat vegans that are out there. Right?

Dr. Hyman: Yeah.

Dr. Fuhrman: That a lot of people are advocating. And I don't recommend a diet that low in fat because you need the additional fat for the absorption of the micronutrients and the phytochemicals.

Dr. Hyman: Yeah.

Dr. Fuhrman: And we know when the low fat vegan diets are studied, with people who are trying to keep their fat below 10%, the most data we have on that is the Adventist Health Studies, it shows that those vegans eating diet that low in fat do not live as long as those using more nuts and seeds in their diet. Because the nuts and seeds themselves have beneficial effects in what nuts and seeds contain. Because they're very high in phytosterols and polyphenols, and very high in tocopherols.

Dr. Hyman: Minerals, yeah.

Dr. Fuhrman: Minerals, and lignans, and enterolignans. But they also facilitate that fat intake, also facilitates the absorption of the phytochemicals from the vegetables as well. So you have a double whammy of benefits. However, keep in mind that Americans are presently eating about 400 calories a day from oil, because that oil is processed food. I consider it almost like eating white flour compared to a wheat berry, because it's extracted from the food you eat.

Dr. Hyman: So you would rather have olives than olive oil, right?

Dr. Fuhrman: Exactly. And the food with the highest content of ALA, no other food has a much ALA as walnuts do.

Dr. Hyman: Yeah.

Dr. Fuhrman: And we look at nut-consuming populations; we find that nut-consuming populations live the longest and have the best protection against dementia. You're talking about Alzheimer's and dementia.

Dr. Hyman: Dementia and diabetes too, right?

Dr. Fuhrman: We're talking about, yeah, neuro-protective effects on the brain. Even if you look at studies on olive oil, like the PREDIMED study...

Dr. Hyman: Yeah, but that was 500 calories a day of olive oil there, right?

Dr. Fuhrman: Yes. And they found that when people ate less processed carbohydrate, less pasta, or less butter, and more olive oil, their cardiovascular risk improved. But when those people got more of those fat calories from nuts and seeds instead of oils, their heart attack rates halved again. So I'm saying that, even though olive oil and other plant oils might be healthier to eat than processed carbohydrates and butter, they're still not as beneficial as eating the whole nut or seed. Because the whole nut or seed just gives you extra benefits than the oil.

Dr. Hyman: More stuff, right. More stuff in it.

Dr. Fuhrman: More stuff in it that's beneficial for you.

Dr. Hyman: Yeah.

Dr. Fuhrman: And it also keeps the glycemic effect of your diet low because they're low glycemic foods. They also supply you with protein that the oil doesn't.

Dr. Hyman: Yeah. So how do you explain like, there's this whole... You touched on it a little bit. But there's like the low fat vegans and the high fat vegans. I mentioned them in some of the earlier Fat Summit interviews, that Dr. David Jenkins did a study where he looked at high fat vegans and low fat vegans. And the high fat vegans who were having more avocados, nuts, and seeds, olive oil they actually lost more weight and had better lipid profiles or cholesterol profiles than the ones who were low fat.

And I think my experience as a doctor seeing patients -- and I know you see patients -- is that the people who stay on low fat vegan diets initially may do better, getting off the American crappy diet. But then over time, they seem to have the dwindle. They're more fatigued. Their cognitive issues aren't as good. They have menstrual dysregulation if they're female. And I wonder what your experience is with that. I mean, you have avocados, and olive oil, and nuts and seeds, and coconut; people just do better.

Dr. Fuhrman: Well if I could say something. I just completed a study that was just published in the American Journal of Lifestyle Medicine. It was published on the Internet on October 15th, 2015.

Dr. Hyman: Oh, I've got to read that.

Dr. Fuhrman: It was a study that included a large number of people who were on a relatively higher fat, vegan diet, or near vegan diet. Those with animal products kept their animal product consumption less than 10% of total calories. I showed that the average person, and we had more than 75 participants that lost more than 50 pounds and they kept the weight off...

The average cholesterol dropped; they had a tremendous lowering in cholesterol. The average blood pressure -- listen to this -- out of I think there were 445 participants in the blood pressure arms and over 200 that were on no medications at the beginning.

Dr. Hyman: Wow.

Dr. Fuhrman: But in both the medications that were reduced, the group that had the medications reduced and the group that were never started on medications, their systolic blood pressure dropped 26 millimeters mercury on the average.

Dr. Hyman: Unbelievable.

Dr. Fuhrman: Which is higher than any...

Dr. Hyman: Any drug. By the way, it's better than most drugs.

Dr. Fuhrman: Better than any drug, right. Because the drug is supposedly about 10 or 11%. The Dash study...

Dr. Hyman: So just pause there for a minute. So what you said basically is food is more powerful at lowering blood pressure than medication. I just want people to get that message!

Dr. Fuhrman: Yeah, absolutely.

Dr. Hyman: That's a big deal.

Dr. Fuhrman: It's more powerful than medication. Also, people don't understand, when you lower your blood pressure with medication, you lower your systolic blood pressure. But to get that systolic blood pressure favorable, you often have to push the diastolic too low. And its diastolic blood pressure that has to recall. We want the pulse pressure to be relatively close together. We want the blood vessels to be elastic, to extend in systole and to contract in diastole, so that the blood flow to the heart gets back to the heart adequately.

And what happens is blood pressure medications wind up putting the systolic... To put the systolic blood pressure favorable, have to push the diastolic blood pressure to levels that are generally too low, and inhibits diastolic refilling, and that's when the coronary arteries refill with blood. That can promote cardiac arrhythmia, sudden cardiac death, and a whole bunch of problems for people with blood pressure medication.

I just don't think...

Dr. Hyman: And by the way, what you also did was you cut out all the sugar and refined carbs, which actually drives insulin resistance or pre-diabetes, which is actually the cause of most high blood pressure, by the way.

Dr. Fuhrman: That's right. We're talking about the studies on saturated fat, whether we get into that. Or whether we do or don't, the point here is what is the replacement nutrient? In other words, we're talking here about that when you substitute highly processed, highly glycemic carbohydrates, it's worse than saturated fats.

Dr. Hyman: It's worse, right.

Dr. Fuhrman: But that doesn't exonerate saturated fat. Because when you take out the saturated fat kinds of foods and you put in something like walnuts or sesame seeds, you get further benefits.

Dr. Hyman: Yeah. Let's get into this because this is a great topic now. So, your study sounds amazing. It sounds like the outcomes were dramatic and I don't know if it was a controlled study...

Dr. Fuhrman: And I showed eight separate cases of dramatic reversal, advanced heart disease. In other words, we showed the blockages, and the significant plaque, and significant cardiovascular illness being reversed, not just prevented. I just wanted to say that.

Dr. Hyman: That's amazing, Joel. So do you have a sense of what the percent fat was in that diet?

Dr. Fuhrman: I think the percent fat averages between 20 and 40 or 20 and 50, in that general range, of saturated fat, of total fat. I also want to say I helped support a study and was involved in the planning of it, but I wasn't one of the original researchers, where we studied the essential fatty acid levels on 165 vegans that were not supplementing their diet with EPA or DHA.

Dr. Hyman: Yeah, and...

Dr. Fuhrman: Now 67% are insufficient EPA and DHA, and about 27% were significantly deficient, so that, if they were followed through life to later life, the levels were low enough to be consistent with brain shrinkage with aging.

Dr. Hyman: Yeah.

Dr. Fuhrman: So, I'm actually a very conservative guy. I think that we shouldn't take chances with people's long term health. We shouldn't give them too much of things or too little of things. We should try to give them the right amount and not have excess or deficiencies.

Dr. Hyman: You're kind of like me. You're in the middle. You're just like common sense, no extreme, like just look at the science and see what it says. But I want to reinforce what you just said. What you said was that vegans who don't take fish oil, which is preformed EPA and DHA, actually get brain shrinkage and get deficiencies of omega-3 fats that are severe. And these are the only -- well there's actually two essentially fats -- but these are among the only essential fats in the diet. And yet, if you don't have that, your body can't function properly.

Dr. Fuhrman: Well let me kind of clarify that a little bit, because don't forget you can get EPA and DHA from algae oil. It doesn't have to come from fish. Nowadays they make them from algae, so vegans can still get it from a vegan source.

Dr. Hyman: The DHA. Can you get EPA from a vegan source?

Dr. Fuhrman: Yes, yes.

Dr. Hyman: Okay.

Dr. Fuhrman: So they're available today, both, for vegans in a vegan form, just like vitamin D-3 is available vegan today.

Dr. Hyman: Yeah, right.

Dr. Fuhrman: And also, they're not called "essential fatty acids," because the body can make its own EPA and DHA from the ALA precursor.

Dr. Hyman: Right, ALA, right.

Dr. Fuhrman: Yeah, so that's when you eat walnuts and flax seeds.

Dr. Hyman: But very little gets converted.

Dr. Fuhrman: That's the thing, very little. But what I found from the study, which was really of interest, is that some vegans did convert enough! Because even though I said 67% were deficient, there was a group of like 20% who had plenty.

Dr. Hyman: Yeah, yeah. Well that's...

Dr. Fuhrman: So there's a very... In other words, the point is there's dramatic differences from person to person.

Dr. Hyman: Yeah, we're all genetically different, right.

Dr. Fuhrman: We're genetically different, and those differences weren't accounted for by the amount of walnuts, and flax seeds, and ALA that they were consuming. They were accounted by genetic differences and conversion enzymes.

Dr. Hyman: That's right. Right. The delta-6 desaturase enzymes. Yeah, there's those enzymes that actually regulate all your biochemistry and they're genetically determined.

Dr. Fuhrman: And they're genetically with a wide variety of effects.

Dr. Hyman: Okay, so that's amazing. We're going to provide a link to that study as part of this summit. I want everybody to have a chance to read that because that sounds amazing. I also want to ask you now about what we sort of dipped into a little bit.

It's this whole controversy about saturated fat and omega-6 oils. Because there's a lot of stuff coming out in the literature that seems to be exonerating saturated fat, at least showing that it doesn't seem to be linked to -- in any of the large, randomized trials, or observational studies -- to heart disease, or total fat for that matter.

There's also a controversy about omega-6 oils. On one hand people say they're beneficial. And on the other hand, some scientists say they're actually harmful. So you've got Harvard scientists say they're good and the NIH scientists say they're bad. And guys like you and me, we're in the middle. I'm trying to figure

out what's the truth and I would love to hear your perspective on first the saturated fat controversy, and second, on the omega-6 oil. And I want you to touch on the coconut oil issue because it's a plant saturated fat, and if there's any distinctions there.

Dr. Fuhrman: All right. Well, first of all, I don't really...

Dr. Hyman: And that can take us another hour! But just let's get going and do it!

Dr. Fuhrman: I don't think that those are not really -- how should I say it -- they're not controversies for me because I don't get into this idea of what's okay for people to eat and not okay. Because I have a niche, a specialty, and my specialty is to design a diet style to maximally enhance longevity, to push the envelope of longevity and have the population that eats this diet have no heart disease at all, right?

Dr. Hyman: Yeah.

Dr. Fuhrman: Have zero risk of heart disease. Wipe out heart disease. Wipe out dementia. And have cancer rates be very low. So let's live to be 100 years old.

Dr. Hyman: And diabetes.

Dr. Fuhrman: Yeah, so none of those diseases! All the studies you're talking about showed some small differences in dietary intake, which resulted in some small lessening or raising of heart attack risk and markers of heart disease. And all those populations still had a high amount of heart disease!

Dr. Hyman: Right!

Dr. Fuhrman: The diets they were all following weren't ideal!

Dr. Hyman: Right, right.

Dr. Fuhrman: So I'm saying to people that I don't care if you're eating low saturated fat animal products or high saturated fat animal products, if you're eating a lot of animal products in your diet, it's still not going to be healthy for you because you're still not going to be eating enough vegetables. You can only put so many calories in your day's bowl of calories that you can fit in your body, right?

Dr. Hyman: I mean, the thing is, yeah, I talk about by volume. So the fat and the protein is more calorie dense, whereas vegetables is less calories dense. You can eat huge amounts of those and fill up. By volume the meat and fat will be small, but by calories it's going to be higher, right?

Dr. Fuhrman: That's right, so we want to keep that... So the point I'm making is if the average American is consuming 400 to 500 milligrams of oil a day...

Dr. Hyman: Calories.

Dr. Fuhrman: ...that's way too many empty calories. It's not a healthy diet. I don't care if the oil is better than eating processed carbohydrates. It's still not an ideal diet! People don't eat straight saturated fat out of a straw! What are we talking about here? Are we talking about marbled red meat? Are we talking about butter? Are we talking about egg yolk? What are we talking about here? The point is that we're talking about animal products.

Dr. Hyman: Coconut?

Dr. Fuhrman: And I'm saying...

Dr. Hyman: Coconut oil.

Dr. Fuhrman: Yeah but, leave coconut out for just a second. Because what I'm saying is that it's not just the saturated fat in the animal product that drives the problem. It's also too much animal protein, which drives IGF-1 too high. It's also the carnitine. It's also the arachidonic acid. It's the cooking of the meats. It's the heterocyclic amines from barbecuing them. There's a lot of factors, so I want people to use animal products as condiments in smaller amounts to begin with.

Dr. Hyman: Yeah, I call it "condimeat."

Dr. Fuhrman: Okay. So whether it's the high amount of saturated... Whether it's white meat chicken, or whether it's the dark, whether it's the higher, it's not the issue. The issue is keep your animal product consumption low and eat more vegetables. Because the studies didn't exonerate saturated fat. They just showed when people ate more or less of it, it didn't change that much, except for when people ate more...

Dr. Hyman: Carbs.

Dr. Fuhrman: ...more carbs in their place, we got worse results. More heart attack rate.

Dr. Hyman: Yes.

Dr. Fuhrman: Higher heart attacks than either the white sugar, and the white flour, and soy, and white rice.

Dr. Hyman: Yes, the deadly combination. The sweet and the fat.

Dr. Fuhrman: Yeah, deadly combination. And that's right. Fat is worse when you combine it with...

Dr. Hyman: Sweets.

Dr. Fuhrman: And so is animal products worse. They're worse for you when you combine it with the highly refined carbohydrates. It makes them worse actually, because you have the insulin with the IGF-1 work together in a negative way.

Dr. Hyman: Yeah.

Dr. Fuhrman: Now getting back to coconut and coconut oil here.

Dr. Hyman: Well I just want to stop there for a minute because you made a really important point. A lot of the studies that are done are looking at diets and comparing diet to diet within a generally crappy diet matrix.

Dr. Fuhrman: Exactly.

Dr. Hyman: So they're already eating a crappy diet and you tweak this and that. They're still getting heart disease. And your point is brilliant, which is that, "Gee you know, what is it comparing it to?" Right?

Dr. Fuhrman: Right.

Dr. Hyman: Is it comparing saturated fat in the context of an overall healthy diet with mostly plant foods, and phytonutrient density, and micro nutrient density? Or is it like in the rest of the complex, crappy, American diet? That's an amazing point, so I just wanted to underscore that.

Dr. Fuhrman: Exactly, that's right. And it's also the idea that, if we're looking to wipe out heart disease completely, we're not looking to improve the diet. We

want to go to what's ideal. That we're going to wipe out heart disease in 99% of the people, then we have to eat a diet that's really a bit -- how should I say it -- a tremendous difference in the way Americans are eating now.

Dr. Hyman: Yeah, it's in a radical difference.

Dr. Fuhrman: A radical difference!

Dr. Hyman: It's a radical difference. I agree. I think you know, you and I are kind of used to eating like this so it's normal now, and we're going to get into what you eat. But people are so far from it, it's just unbelievable how bad it is out there in the world. We're just pushed all these products, and all these manufactured products, and you know, it's a toxic food environment. It's very hard to make the right choices for people but it's possible.

You and I have both seen it. We've done it ourselves, and we're both very busy. We've seen it in our patients and we've seen it in large populations. If people have the right information they understand and they know what to do, and they have the skills...and there's a lot of skills you need: cooking, shopping, knowing.

Dr. Fuhrman: Right.

Dr. Hyman: You need knowledge. Like reading and writing, you need to know how to do it in order to do it. Once you learn it, it's easy. But it's a skill, so I just want to give people a little hope by that.

Dr. Fuhrman: I teach this. I say the same thing. I say that we should be teaching people reading, writing, arithmetic, and nutritional science, right from grade school through junior high, through high schools and colleges. Because the most critical thing we have to learn to control our health, and our lifespan, and our health span, is nutrition.

People know nothing about it. They are just bombarded with false information all over the place, and they don't have a foundation in science here.

Dr. Hyman: No, that's great.

Dr. Fuhrman: It's very important!

Dr. Hyman: Your work is so great in helping that. I really appreciate it so much. Tell us about the coconut story now.

Dr. Fuhrman: Well...

Dr. Hyman: Because it's like the latest thing, right? It's the latest thing. Everybody is eating coconut and putting coconut in everything.

Dr. Fuhrman: I know. You know what it is? There are literally more than a hundred well done studies on nuts and seeds reducing risk of heart disease and cancer. So we know that adding more nuts and seeds, that you're major source of fat in your diet should come from whole nuts and seeds.

And we're talking about the lignans found in sesame seeds, and flax seeds, and chia seeds are so important, and so powerfully protective against breast cancer and prostate cancer.

Dr. Hyman: That's my breakfast by the way. I have a seed and nut shake. I basically put chia seeds, flax seeds. I put in pumpkin seeds. I put in walnuts. I put in almonds and I just blend it up with some berries, and it's awesome!

Dr. Fuhrman: That's what I do. I have wild blueberries, and flax seeds, and chia seeds, maybe a little bit of oats and nuts for breakfast too. So I'm saying these foods have such powerful protection. You don't get those powerful -- and there's no studies that show you get those powerful -- protective effects from eating coconut oil.

Now certainly coconut is more of a wholesome food. You can't eat as much coconut because it's high in fiber and you're not going to eat as many calories. But let's not forget that all oil is 120 calories per tablespoon. And how many calories from oil are you talking about in a person's diet?

I'm suggesting that a person should use every type of oil very sparingly, if at all. And then we're talking about, if you want to use a teaspoon here and there of a healthier oil, like coconut oil or olive oil, and use a little bit to flavor a dish occasionally. Make some broccoli and put a little oil on it with garlic to make it taste better as a treat.

But I'm not going to be under the assumption that taking tablespoons of oil in my diet is going to be good for me, because I'm diluting the nutritional density of my diet, and I'm essentially taking in empty calories. There's no nutritional... There's no -- how should we say it -- overwhelming nutritional benefits of micronutrients, fiber, polyphenols, tocopherols.

If you analyze coconut oil, you get zero. You get the same analysis of white sugar. There's nothing in it except the fat. But just because it's not as bad as butter doesn't mean...

Dr. Hyman: But there is like lauric acid, with monolaurin, which is an immunologic booster, so there are things that are in there that can be helpful, right? It's not completely devoid of beneficial properties. And olive oil has all these polyphenols that show health benefits, so some of these better oils actually do seem to have phytonutrients in them that actually regulate your body in a positive way.

Dr. Fuhrman: But the levels are very, very low. The benefits of those beneficial compounds are very, very low and not anywhere near as high as the original food had.

Dr. Hyman: Of course.

Dr. Fuhrman: Because it was processed into an oil and a lot of those beneficial compounds are bio bound to the fiber that you removed when you processed the walnut into the walnut oil, or the coconut...

Dr. Hyman: So you're saying eat the coconut, not the coconut oil.

Dr. Fuhrman: Yep.

Dr. Hyman: Eat the apple, not the apple juice. Eat the olive, not the olive oil. That's what you're saying.

Dr. Fuhrman: I'm saying, that's right, that these are processed foods and we should keep in mind that processed foods don't give us the full benefits of the whole natural foods. And the whole natural foods take up more space in our stomach. You can't put a lot of calories in at one time. You get full before you can get fat.

Dr. Hyman: Right.

Dr. Fuhrman: And it's impossible to become overweight. When you can show me no overweight people around, but the point is that they're already overeating calories. They're already overeating oil, and by switching one oil to another, they're still not going to like... The majority of people are not going to get thin enough.

Dr. Hyman: Yeah. But you're not worried about the saturated fat in the coconut oil as an issue. You don't think it's an issue. Because people...

Dr. Fuhrman: It's not an issue because I would want the amount of oil in your diet to be so low in general, to be so low that if the diet... Cashews have saturated fat in them too. The little bit of saturated fat...

Dr. Hyman: So you don't mean "fat." You mean "oils," is what you're saying.

Dr. Fuhrman: Yes. I'm saying that the...

Dr. Hyman: What I want people to understand the distinction between fat, which can be from an avocado, and oils, which is like avocado oil. That's what you're saying.

Dr. Fuhrman: Exactly. So I'm suggesting that. I do eat avocado. I love avocado, and I do think it's a healthy food to eat too.

Dr. Hyman: Yeah. This is great. Now what about...

Dr. Fuhrman: And by the way, I do personally eat some coconut too. I don't avoid eating coconut. I just make the dish with coconut, not with the oil, and I use oil very sparingly, if at all.

Dr. Hyman: So getting back to the data on the omega-6 oils, because you know, guys like Walter Willett are smart and they're like, "These things are great and we should just be consuming lots of them, from refined vegetable oils."

Dr. Fuhrman: Yeah.

Dr. Hyman: And there's the guys at NIH are like, "No, no, these actually increase inflammation, oxidative stress." What's your take on all this literature?

Dr. Fuhrman: That they're arguing over the wrong syllable here. They're still fighting about what oil to use and I'm saying, "Don't use any!"

Dr. Hyman: That's actually right.

Dr. Fuhrman: There is a little bit of differences of benefits between one oil and another, and you're going to debate whether one oil is better than another and how much you should use. I'm saying that oil is not an ideal food; it's not a health food.

Dr. Hyman: But I'm guessing you might use olive oil in your cooking, but you probably don't use refined vegetable oils.

Dr. Fuhrman: Yes, because a virgin olive oil has less chance to produce peroxidases and free radicals, so the higher saturated fat oils actually. Because olive oil is 14% saturated fat. You want a little bit of saturated fat in the cooking oil to prevent oxidation and free radical formation. So yeah, if I was going to use...

If I'm going to use olive oil, I'll maybe occasionally put something on a salad, or maybe I'll put a little bit of olive oil, a teaspoon on my hands, and I'll rub down the broccoli with the garlic before I steam it.

Dr. Hyman: Oh, I'm hungry! You're going on food. I've got to eat dinner now!

Dr. Fuhrman: So I'm just using it to add flavor to a particular dish and the amount of oil I'm using is almost insignificant. I'm not going to use it, thinking it's a health food, and pour it all over my food in high amounts, because I want to have room to eat the fat calories. I want to have room to eat...

I'll make my salad dressing mostly from nuts and seeds. I'll put sesame seeds, and walnuts, and almonds into a blender with some tomato sauce, Balsamic vinegar, and a fig, and I'll blend it up, or I'll put it... I'll make all kinds of incredible salad dressings from actually blending the nuts and the seeds, as opposed to putting oil into it.

Dr. Hyman: Joel, what you just talked about is awesome, because what you're talking about is making friends with your food, playing with your food, working with your food, learning how to cook. You're a doctor. I'm a doctor. And we both cook.

People can't get through this life without learning how to cook and actually be healthy, unless they have a live-in chef, or they have a partner who loves to cook and cooks all their meals for them. Because learning how to manage your diet through taking care of food in your life is an essential life skill. It's so critical.

And, I loved hearing you talk about it, because clearly, you get in the kitchen. You get your hands dirty. You're rubbing in the garlic and the olive oil on the broccoli! That's just so beautiful and it's just so missing from the rest of our society. I mean, I see generations now of Americans who do not know how to cook, and it's really what's driving so much of this problem.

What we're talking about is so simple. It's so basic. But it actually means getting to know your grocery store, and your food, and your kitchen, and what to do with it. And how to have basic tools in your kitchen. It's so simple but it's so foreign to so many people. It feels like speaking a language, or learning to do something that you don't know how to do, but it's actually something that's critical for your health.

Dr. Fuhrman: Right. That's why I have this acronym called "G-BOMBS."

Dr. Hyman: What's that? What's that?

Dr. Fuhrman: G-BOMBS?

Dr. Hyman: It doesn't sound good.

Dr. Fuhrman: It stands for G-B-O-M-B-S. "G" stands for "greens," "beans," "onions," "mushrooms," "berries," and "seeds."

Dr. Hyman: Ah!

Dr. Fuhrman: Greens, beans, onions, mushrooms, berries and seeds. I've taken out that acronym so people can quickly remember and keep in their minds these categories of foods that have powerful anti-cancer effects, they should include in their diet on a daily or regular basis.

Dr. Hyman: That's so great.

Dr. Fuhrman: So you have greens every day. Did you have your beans today? Did you have some seeds in your diet today? Did you have some onion? Did you have some mushroom? You know. Did you have some berries in your diet today?

Dr. Hyman: Yeah, yeah, it's so good.

Dr. Fuhrman: So it gets people to keep right in the forefront of their mind what they're supposed to be eating every day.

Dr. Hyman: That's so great. Like when I go to the grocery store, I think of it as my "farmacy." And that's F-A-R-M-A-C-Y. I literally go through and I'm like, "What are the phytonutrients in this?" And I know that, so I kind of can cheat. Like most people don't know all of this stuff that we know, but it's actually amazing when you go through a store and you go, "I know what's in this plant. I

know what's in this plant." It's like hunting and gathering for your medicine in the grocery store. It actually becomes fun.

Dr. Fuhrman: You know, I agree with you, that eating healthfully and doing this, we're protecting our health. We're helping the health of other people too. And it's fun to do this. It's fun to learn how to make healthy food taste great too. Because you feel good about your eating it.

You feel good that it tastes good too. And your taste buds adapt and eventually you like eating this way, and you get both the emotional and the intellectual satisfaction, as well as the pleasure from eating. So it marries it together in a way that makes it the most fun way to eat.

Dr. Hyman: Yeah. The other thing I loved that you said earlier was that you are not a fanatic about the percentage of this or that macronutrient in the diet. You just focus on whole foods and calorie-- nutrient dense foods.

Dr. Fuhrman: Nutrient dense foods, yes.

Dr. Hyman: And that in your study, you said you had people from 20 to 50% fat, so you were seeing a wide range of variety in the diet that allowed people to have different kind of diets but actually still have the same benefits, which I thought was interesting.

Dr. Fuhrman: That's correct. And I say that the idea that you need to cut fat out of the diet, or hold fat below 10% of calories to cause heart disease to reverse, is not true. Because I've been utilizing a nutritarian diet to reverse heart disease for 25 years, with thousands and thousands of patients. My patients get rid of it.

They get off their blood pressure medications. They get off their diabetic medications, their chest pains. They avoid bypass surgery and angioplasty. Their heart disease melts away, and they do it eating nuts and seeds. They just of course do it in the context of a very healthy diet.

Dr. Hyman: Right. So what do you see happens to the cholesterol? Because this whole cholesterol issue is such a big thing. People are taking statins like crazy. It's promoted like the next best thing to sliced bread. Everybody should be taking one. And you and I have seen a lot of patients on these drugs and then we change their diet, and like, what do you see happening?

Dr. Fuhrman: Well on the average we see cholesterol drop. I very often see the LDL cholesterol drop more than 50 points. And in the study that was published in the Medical Journal of Metabolism on the high nut, plant-based diet, they saw LDL cholesterol drop 33% in just six weeks' time. So I generally see cholesterol drop radically. But I teach people, "Stop focusing on that number, because that's one of scores of different parameters that determine your good health."

Dr. Hyman: Right.

Dr. Fuhrman: "And what I really want to see you have is I want to see you have a normal blood pressure with no medications!" Because you're not protected if you're needing medications to lower it. I want to see a normal glucose hemoglobin. I want to see normal body fat percent with no medications. If you're using medications to lower it, you're not protected. And I want to see a cholesterol level that's favorable with no medication! If you're requiring medication to correct it, you're probably at high risk!

Dr. Hyman: Yeah.

Dr. Fuhrman: These medications, I call them "permission." The prescription pad I call a "permission slip." Because people look at their number and they think it's okay to eat this way because they're covering up the symptoms with the... I also tell people it's like bringing your car to the mechanic with the oil light flashing on the dashboard. He reaches in there with a wire cutter and snips the wire so you can't see it flashing.

You're just covering things up with drugs! You didn't get yourself well. To get well means you remove these risk factors with a healthy diet, and that's when you know you're all right.

Dr. Hyman: Yeah. Well that's an important point. You're saying if you take these drugs to get the numbers to look good, it actually may not be really solving the problem, and maybe have an incremental benefit, but not real benefit.

Dr. Fuhrman: That's correct. I have to say your risk of having a heart attack is basically proportional to the number of medications you're on. The more medications you're on. It's not whether your blood pressure or cholesterol is controlled. It's the number of medications you need to control that determines your risk. If you need medications to control it, you're already at risk. Healthy people shouldn't need medications to control those things!

Dr. Hyman: Well you and I have both seen so many people who are on piles of medications, for heart disease, for diabetes. We change their diet. We get them moving a little bit, give them a few supplements, and literally, all that stuff goes away. They get off their medications. And the numbers actually off their medication are better than when they were on the medication. Right?

Dr. Fuhrman: Right. Yeah, but don't forget. If they have a high antioxidant score in their tissues, if their body is fueled with nutrients, if they restore the elasticity of their blood vessels, and their body fat percent has gone down, those are all important. And their exercise tolerance is up. All these things are important. It's not just your cholesterol level.

Dr. Hyman: Yeah, right.

Dr. Fuhrman: Total health means you have to have all these aspects of good health, so you can't cover up an unhealthy diet with medications and just look at the numbers. Because the analysis of your diet is an important risk factor. How healthy of a diet you're eating, regardless of what your numbers and your blood were going to show.

Dr. Hyman: So what do you say about guys like Caldwell B. Esselstyn? Who are just like, "Be a vegan and super low fat." And he has shown you can reverse heart disease. Is that wrong? Or did he miss something? Or does it work, but maybe not work as well as this approach?

Dr. Fuhrman: No, I think it works very well. I think Dr. Esselstyn's approach works well. It's similar to Dr. Ornish's approach. But I think that trying to think a person with heart disease is afraid to eat a walnut is doing something that's needless.

Dr. Hyman: Right.

Dr. Fuhrman: They're restricting them needlessly, number one. And number two, they're increasing their risk. They're increasing their risk of other related life diseases. Like they might be getting an increased risk of brain shrinkage because of that fatty acid deficiency we talked about.

Dr. Hyman: Your brain is 60% fat and it's mostly omega-3 fats, right?

Dr. Fuhrman: Right, and it does shrink with aging if you don't have those fats present. And once they are shrunk you can't put it back again. You can't just look at a study and say, "Well given them the fats didn't benefit them," because it's not going to grow back once it shrinks. It's too late.

Dr. Hyman: Right, right.

Dr. Fuhrman: And the other issue is that the question is, "Is there a possibility that some of these people on these ultra-low fat diets to reduce heart disease are increasing their risk of cardiac arrhythmias? Are they increasing their risk of sudden cardiac death? Because every person on those diets don't get totally well. Some don't do well. And if some did not do very well, those that didn't do excellently may do better, and may not have those risks on a diet that is more fat-stable and more fat-balanced.

Dr. Hyman: Right. Well there was that large...

Dr. Fuhrman: And I had those cases, which I put in the study that was published, cases of the people who did do poorly on the extremely low fat diet. When you improve the fatty acid profile of their diet, they did better and their heart disease did better too. Less irregular heartbeats, more stable results, things like that.

Dr. Hyman: Right. Well you know, that large study done in Italy, the GISSI trial, showed that by supplementing with fish oil they dramatically reduced the arrhythmias and sudden cardiac deaths in people who already had had heart attacks. So it was a really dramatic study, where by actually supplementing with fish oil, they were able to stabilize the heart, prevent arrhythmias and death, just by adding the extra fat. So I think that's a very important point. I know Dean very well and he's also now recommending people take omega-3 facts.

Dr. Fuhrman: That's correct. My concern is that people don't take... I don't want people to be deficient in omega-3 fats, but I don't want them to take excessive amounts either. Because if we look at all the studies, we see problems on both ends.

Dr. Hyman: Yeah.

Dr. Fuhrman: Deficiency cause a problem, and taking extra, huge amounts can cause a problem as well.

Dr. Hyman: That's American thinking, right? If a little bit is good, a lot is better. It's got to be more like Goldilocks. Not too hot, not too cold, just the right amount!

Dr. Fuhrman: And you know, these people who have these predetermined biases and their own viewpoints they want to project, they can pull a study to

show that omega-3 in fats increases risk of prostate cancer, increased the risk of arrhythmia. And then we could pull a study that showed that a deficiency increased the risk as well.

Dr. Hyman: Right.

Dr. Fuhrman: The point is that on both extremes you could pull studies to promote any kind of thing you want to promote, but we have to, with an open mind, investigate all of the literature and come to an area of recommendations that's reasonable, logical, and safe.

Dr. Hyman: Yeah. I love that quote from Winston Churchill that men occasionally stumble over the facts and then hurry off as if nothing had happened! You know? I think we have to pay attention, and I think you and I both look at the literature. We try to make sense of it. And it ends up being common sense, right?

Dr. Fuhrman: Right.

Dr. Hyman: It's just common sense. It's just a balanced diet of real, whole foods and not getting crazy about anything. That's why I sort of make a joke about being a pegan, because it's sort of making fun of the whole vegan, paleo extremism in food. And it makes people nuts.

The truth is, if you eat real, good quality food, even if it's like good quality animal protein, or good quality coconut, or good quality plants, or whatever it is, if you're just doing it, you're not going to be able to kill yourself by doing that. You're going to actually help yourself most of the time by eating those foods in the right balance.

I love your condiment concept for meat, because it's exactly how I think about it. It's actually where you can do just like a volume kind of measurement. You just look at your plate; most of your plate should just be vegetables. I have two or three sides of vegetables every night at dinner. I make most of my plate vegetables and I bet you do the same.

So why don't you take us through a day of Dr. Fuhrman's diet? What do you have for breakfast, lunch, and dinner?

Dr. Fuhrman: Well I mentioned earlier I have a similar breakfast to you. I have possibly a little bit of steel-cut oats. But mostly I have a little bit of a raw, familiar-type cereal with just a little bit, and I put in a lot of walnuts, flax seeds, chia seeds, wild blueberries, some kind of berry or something.

Sometimes that lasts me for lunch and sometimes it doesn't, depending on how much exercise I did the day before, or whether I'm playing tennis. Based on how much activity. Sometimes I get to 12 or 1 o'clock, and sometimes I'm hungry because I didn't eat enough because I was so physically active I want to eat lunch at 11 o'clock. I'll just eat another meal.

And then I'll usually eat a giant salad with a nut-based dressing. So my dressing might be made with a tomato sauce base, an unsalted tomato sauce mixed with nuts, and seeds, and vinegar, and maybe a little raisin or something, with a big salad with maybe avocado in there. And dried kale and some shredded cabbage and lettuce, and some raw carrots. So I'll have a big vegetable salad.

And I will usually have also a vegetable bean soup, maybe with some crackers. I made a homemade, dehydrated, raw cracker with flax seed and cornmeal or something, with a pea lentil soup or a bean soup that I made with a carrot-to-mato juice base or something. So we usually make a big pot of soup, or a chili, or something like that.

Dr. Hyman: Yeah, yeah.

Dr. Fuhrman: So I have something hearty because I'm going to... Whether I'm exercising in the afternoon, or whatever, I don't want to be eating all day long, so I have a big enough lunch and maybe have a piece of fruit for dessert. Maybe an orange or some kind of fruit after that.

Dr. Hyman: Then dinner?

Dr. Fuhrman: Then dinner I'll have usually some kind of mixed vegetable dish, like a wok Chinese vegetable dish, or some vegetable casserole with some kind of thing. Or like snow pea pods or some raw food. A bok choy, mushroom, onion dish, maybe some squashes, and maybe some wild rice and mushroom, or something like that.

Dr. Hyman: And wild rice is actually a seed, right?

Dr. Fuhrman: Right. It's not a rice. Lately I've been trying to stay away from brown rice and not eat brown rice because of the contamination, the arsenic scare in brown rice. Because they put the fertilizer; there's arsenic in it and the skin, the brown rice outside takes up the arsenic too readily so I'm not using too much brown rice any more. But the wild rice is good too.

So I usually have a diet that's mostly all plants and then if I'm using an animal on occasion, I'm not going to sit there and have it a major portion. I'll be using it in a soup, in a small amount to flavor something, or in a wok vegetable dish as a flavoring, or something as a flavoring or condiment. So it's a relatively, very small portion of my diet. I usually go...

Dr. Hyman: What about eggs?

Dr. Fuhrman: You know, in generally speaking I don't eat animal products more than maybe a couple of times a month, and on special occasions or something. I mostly stay mostly vegan. I have nothing against eggs, but I just don't eat animal products that much. I think it's favorable to keep my IGF-1 as low as possible, especially when you're in this middle age range, you know.

Dr. Hyman: Yeah, you don't want to get cancer. No, me neither.

Dr. Fuhrman: I'm on this like -- what's the word -- longevity kick of trying to keep IGF-1 low.

Dr. Hyman: That's good!

Dr. Fuhrman: And to keep my animal product consumption low.

Dr. Hyman: That's good.

Dr. Fuhrman: I did the science to support that.

Dr. Hyman: Yep.

Dr. Fuhrman: So I probably eat less animal products than a lot of my patients.

Dr. Hyman: So dairy does that, and so does sugar, right?

Dr. Fuhrman: Yes, exactly. Dairy acts on IGF-1 more than other animal products do.

Dr. Hyman: Yeah, exactly. So this is great, Joel. Your work is amazing. Thank you for introducing the world to this concept of the nutrient-calorie ratio and density. It's just such a simple idea that has such profound impact. And changing the world with your books: "Eat to Live", "Eat to Live Cookbook," "Reversing Diabetes", and on and on. What's your latest fun project you're doing?

Dr. Fuhrman: Well I'm working on two major studies right now. I just had this one study published, which is really exciting. And I'm working on a breast cancer project with Northern Arizona University. We're looking at thousands of women in a breast cancer project. And I have a new book coming out in March of 2016, called "The End of Heart Disease."

Dr. Hyman: Love that!

Dr. Fuhrman: That has the heart study in it and it shows all the negative effects of all the medications, and the surgeries, and the procedures.

Dr. Hyman: Oh, my gosh.

Dr. Fuhrman: And the problem with statin drugs, so it really goes into tremendous depths about what's wrong with conventional care of heart disease, and then given this option of how to get well through nutritional means.

Dr. Hyman: Well everybody should read that book. It is possible to end heart disease. You and I have seen it. It sounds crazy then we say it because it's such a kind of crazy notion, that we're able to do it. And yet, why isn't this being done in scale? It's because it requires people to really change their diet. It requires the food system to change and really to rethink our whole approach to health.

But I really appreciate you, Joel, and thank you. And your website is...

Dr. Fuhrman: DrFuhrman.com.

Dr. Hyman: DrFuhrman.com. Go there. Check it out. Sign up for his newsletter. Get his books. He's awesome. And thank for joining the Fat Summit, Joel.

Dr. Fuhrman: Okay. Thank you. That was terrific. Thank you.