

A sunburst graphic with numerous thin, light gray lines radiating from a central point behind the text.

Healthy Moms Podcast

BY **Wellness Mama**[®]
simple answers for healthier families

Episode 63: How to Choose a Healthy Wine with
Todd White

Katie: Hi, welcome to the Healthy Moms podcast. I'm Katie from wellnessmama.com. This episode is brought to you by two companies that I absolutely love and whose products I use all the time. The first is Kettle & Fire Bone Broth, which is the only USDA-certified grass-fed bone broth made with organic ingredients, and their broth is made with bones from grass-fed, pasture-raised, antibiotic and hormone-free cows, and it's also delicious. The best part is, it's nonperishable so, it's available in many stores but it can also be shipped anywhere in the US without refrigeration, which makes shipping less expensive and more environmentally friendly.

The second company is Thrive Market, which is a hybrid of Whole Foods, Amazon and Costco. And what I mean by that is it has a membership fee like Costco to let you into the low prices, then it has...its online like Amazon and it carries natural products like whole foods. And if you live in a real food desert like I do where it's hard to find many specialty items, Thrive Market may be your answer. So check both of those out in the show notes for today's episode, and without further ado on to today's episode.

Hi, and welcome to the Healthy Moms podcast. I'm Katie from wellnessmama.com and I'm really excited about today's guest. So Thomas Jefferson once said that, "Good wine is a necessity for me," and as a mom of six I certainly understand his sentiment. In fact, in honor of today's guest I have a glass of wine next to me, while we're recording this podcast. Todd White is a self-described biohacker who practices meditation, Wim Hof breathing, cold thermogenesis, a ketogenic diet and intermittent fasting. He's a speaker and author about the ketogenic lifestyle. He lives in the heart of Napa Valley wine country and he's here today to talk about wine, and more specifically the differences in the types of wine and how to get the benefits without the downsides. Todd has been an entrepreneur for a really long time and after 15 years in the wine business, he's now focused on educating and helping people make better choices about food and nutrition and consuming alcohol.

And to that end he is the founder of Dry Farms Wine which besides being my favorite type of wine, they are low carb, they're paleo, they're keto-friendly, and they're diabetic-friendly because they're low sugar. They have no impact on blood glucose or ketone production and they're also the only lab tested, all-natural health-quantified wine merchant in the world. They essentially biohack wine. So they're quantifying organic and natural farming practices as well as low intervention natural winemaking. And if you don't know what all that means we're definitely gonna get into it in this episode.

But Todd's passion is unlocking the best way to enjoy alcohol, and especially how to get all the benefits and moderate consumption and avoiding the negative outcomes. And his wines are pretty much a favorite of a lot of the experts in the health field from Dave Asprey, to Mark Sussen, to Rob Wolfe, and Abel James, and I'm also a big fan. So Todd welcome, thank you so much for being here.

Todd: Katie, this is just so exciting. I'm happy to hear you have a glass of our wine next to you. That sounds like a fun time. It's a little earlier here in California, but well, just excited to spend time with you today. I've been a huge fan of your work and we've just been... just a great admirer. So thank you so much for having me on.

Katie: Thank you for being here. And likewise, it's an honor to talk to you and especially because I feel like wine is a perfect topic for a lot of the moms listening, because if they're like me, I love wine and my husband

and I would drink wine at night pretty often and I would sometimes get a headache. Which was really frustrating because you hear about the supposed benefits of wine, but then how do you balance that when you're getting a headache from it. So that's why I'm so excited to have you here today and I'd love if you could start off explaining how you got into this wine business in the first place.

Todd Well, I got in the wine business way back when I moved to Napa Valley. We don't any longer drink or sell domestic wines, and we'll talk about why. But originally when I moved to the Napa Valley like most of everyone who moves here, and that was like 17 years ago, you end up dabbling in the wine business in one way or another. And my winemaking endeavors in Napa were largely a hobby business. But how I got had to Dry Farm Wines business, which is just about 18 months ago, was that I was trying to solve a personal problem, so scratching my own itch.

I have been lifelong wine lover and drinker and I drink wine every day only at dinner. We don't really drink during the daytime but we drink a bottle every night. It's part of our lifestyle, and I'll talk about what that experience is like for us in a moment. But I began practicing a ketogenic diet. I, like many of your listeners have been one form of nutritional programming or another really starting back in the 1980's with practicing atkins and then maintained over the years pretty much of low carb-ish, paleo-ish kind of diet.

But a few years ago, about three years ago, I decided to experiment with the ketogenic diet and at that time I did it because of the same reason most people do it. I experimented with it for weight loss. I had extra... what I thought at the time was I just couldn't get rid of that last five or ten pounds, and so I started experimenting with ketogenic diet and lifestyle. And what happened was that not only did I lose the five or 10 pounds, I actually lost 20 pounds... I didn't really realize that I had to lose. I was already in pretty good shape. ...and then maintained a ketogenic lifestyle not for weight loss, I no longer have any weight to lose and haven't lost weight in a long, long time, but I maintained it for the cognitive benefits and for mental performance.

So anyhow, I'd just found I could not drink standard wines anymore and this was a really terrible thing. They were making me sick, I didn't feel well. They were really compromising my performance particularly the mornings. And I was finding that I was actually getting drunk off of them easier and so I stopped drinking for a while in a period I call "suffering through sobriety." I live in the Napa Valley and I live in a culture of friends and people who drink wine regularly and I've found it to be... I didn't really want to stop drinking.

But I contacted the smartest person I knew in the wine business who is also a scientist and we started talking about it and I started experimenting with wines, and one of the things that I noticed was if I dosed down the alcohol, as a beginning point, I found that I felt better. So as I talked to my friend about it, who was the smartest person I knew in the wine world, and he's like, "Have you drunk any of these low-alcohol wines out of Europe?" And I was like, "No, I've never heard anything about it." He's said, "Well, they're like 11% and 12% and they're naturally made." And I was like, "No, I don't know anything about it." So I started experiment thing and those experiments went over about a six month period. I started experimenting with buying these wines just at retail, and they're very hard to find but in San Francisco you can find them, and in New York, and LA, and there's a handful of markets where they're available at certain retailers. They're going to be boutique wine shops and we'll talk about how to find these wines in your local market if they're available. For most of your listeners they're simply not available at retail.

So anyway, I started buying some of these wines at retail and drinking them, and I found I was pouring about half of them down the sink because they were just not drinkable. But then the ones that I did like, I really liked, and I found that they changed my life radically. So I was able to drink again, no hangover, no adverse effects, no headaches. One of the other things that really happens when you dose down alcohol, and you've probably noticed this, is that you don't have any sleep issues. So one of the things that alcohol does, because it's primary compromise to your body is that it dehydrates you. So the more alcohol that you consume, the more dehydrated you become.

And this frequently then creates this... and also the higher sugars also contribute to this where you're waking up at 2:00 or 3:00 o'clock in the morning. And so I found that, that was a common problem for wine drinkers or drinkers in general, it certainly was a common problem for me but that all went away. So it was like this magical discovery of, "Oh, wow., I can drink wine again and really have this better than ever experience with it." And it's friendlier with food, because alcohol itself is not friendly with food, so when you lower the alcohol, the wine becomes more food-friendly. It's lighter, it's cleaner, it just pairs better with food. I'm sure... You're in the taste business, you can taste how it's just clean and fresh. You know what I'm saying?

Katie: Absolutely, that was the first thing that really struck me when I tried it. It was that some wines I feel like leaves almost like a chalky film on your teeth and I just have a weird mouth-feel, and yours don't. It was a drastic difference that I did notice right away.

Todd: That mouth-feel that you're talking about is actually... that's one of the manipulations. Like the wines that we sell and drink are known as natural wines, and natural wines mean exactly what it says. It just means it's 100% natural product, no additives, no additions, no manipulations. It's just honest, real, clean wine. That is not what commercial ones taste like. When I say commercial wines, I don't care whether you pay \$150 a bottle or \$15 a bottle, the only difference is you're going to get more chemicals, the less you pay.

"Chemicals," you say, "What do you mean chemicals?" Well isn't all wine natural? When I refer to natural wines. Natural wines, and your listeners can search for this online, natural wines are a very specific type of winemaking protocol, and you would think, "Well, aren't all wines natural? Aren't they just fermented grape juice?" Well, in fact they're not. Here's the problem. Commercial wines, and that includes everything at retail... Commercial wines, meaning all wines that are not made naturally. And to give you an idea of how microscopic the production of natural wines are globally, there are hundreds of thousands of wine labels and winemakers around the world. There are less than 500 in the world who make these wines and they're primarily in Europe, and we're now the largest buyer and reseller of natural wines in the world.

So it's pretty amazing and fun, but let's talk about what makes a wine natural and how we biohack wine. Because we take it one step further than just buying natural wines. We then lab test every single wine that we sell prior to. That's the final step in the acceptance into our portfolio, is that we do independent extensive lab testing for purity and sugar and alcohol and mycrotoxins, and a whole cadre of tests, and we can talk about that in a moment.

So, natural wines begin with... and we'll talk about commercial wines in a second ...but natural wines begin with 100% chemical-free farming, and that chemical-free farming is either organic or biodynamic. Biodynamic is a prescriptive form of advanced organic farming. It's the purest farming method on the planet. Your listeners can do an internet search on biodynamic farming. It's a prescriptive protocol developed in 1925 by an Austrian named Rudolph Steiner, but there's plenty of information on the Internet on that. But, it's the purest, cleanest most prescriptive form of organic farming. So it begins with chemical free farming.

The next step is that... this is very important and we don't know the full health impacts of this because there's no real studies on it ...but all of our wines are fermented with native yeast. Now what that means is that all commercial wines are fermented with genetically modified commercial yeast. And again, we don't really know what this means from a health and wellness point of view because there's just no studies around it, but we believe it's part of what's making people feel bad. So these genetically modified commercial yeast, that is how commercial wines are made. And the reason they don't use the wild native yeast...

See, on the skin of a grape, is already native yeast that are wild and indigenous to the vineyard where that grape was grown. In fact, if you pulled some ripe grapes off of a vine and you just threw them in a bucket, they would begin to ferment. When the skins crack and the sugar from the fruit juice comes in contact with the yeast, you will begin making alcohol immediately. That's how you make wine in a press. And let me just explain how wine's made real quickly and why they're sugar free or why they're not sugar free because one of the most common questions that we get is, How can a wine be sugar free? Doesn't the grape have sugar in it? And it does, but here's how wine is made.

Commercial wines, the very first thing that a winemaker does is use sulphur dioxide to kill the native yeast and then they inoculate it with a commercial genetically-modified yeast. Now the reason they do that is because it's cheaper, easier and less risky, and less work for the winemaker. The commercial yeast are developed to be easier to work with. So a native yeast, which is on the skin of the grape, is more temperamental and more difficult to work with and needs to be coddled. And commercial winemakers in the pursuit of profit and in the pursuit of making wine faster and easier, not healthier or better, use these genetically-modified yeast.

So when wine is made, juice is pressed from the fruit and that juice is then inoculated. In natural wines, it's inoculated instantly with the native yeast that's already present on the fruit. So what happens is, the yeast eats the sugar and the byproduct of that is ethyl-alcohol and carbon dioxide. So that's how you make wine. If the fermentation, and this is a winemaking style, if the fermentation is allowed to complete by the winemaker, then the yeast will eat all of the sugar and then, once all the sugar has been eaten, the yeast will die. And that's how you get a sugar free wine.

What's happening in commercial wines because of the American palette and now the global pallet, which has an obsession with sweetness, what's happening is that the winemaker is again using sulphur dioxide to kill the yeast prior to it completing its fermentation. What happens then is it leaves behind what's known in the industry as "residual sugar." So wines don't have added sugar in them, what's happening is that the winemaker is killing the yeast prior to the complete fermentation, and therefore that's the reason that wines have gotten sweeter and are full of sugar.

Wines categorically can range in sugar from zero, which are our wines. And we do independent lab testing to make sure that they're sugar-free because I'm sugar-free and I believe that sugar is public health enemy number one. And as a ketogenic, I'm certainly sugar-free. So one of the tests that we perform is to make sure that the wines in fact are fully fermented and sugar-free. Just because a wine is naturally made does not mean that it's sugar-free. We have to do independent lab testing to verify that.

So anyway, that's how sugar gets in wine. Wines are categorically ranged from sugar-free to as much as 300 grams per liter for dessert wines. And to give your listeners a reference point, Coca-Cola contains about 108 grams per liter of sugar. So wines can be very sweet. Commercial wines that you're buying off the shelf are gonna range somewhere between 5 and 50 grams per liter typically of sugar. And again because of our nutritional goals, we are sugar-free.

Finally, once the wine is fermented, there are no adjustments or additives added to the wine. You're like, "Additives, what are those about?" Well, here's the reason your audience doesn't know much about additives in wine. The wine industry has spent tens of millions of dollars, in coordination with your government and their fine advice, to keep nutritional and contents label off of wine. You may have noticed that there's no contents or nutritional label on wine, right?

Katie: Yeah, exactly.

Todd: It's the only major food group where there's not a contents or nutritional label. Now why is that? It's because the industry, the wine industry conspiring with the government and the FDA has kept these labels off of wine and fought vigorously to keep contents label off of wine. I'll tell you why they're keeping the contents label off of it. Because there are 76 additives approved by the FDA for the use in winemaking. So if there was a contents label on a bottle of wine, it would look not unlike packaged foods look today, which you would have about 10 or 15 additives there that you couldn't pronounce or have never heard of. The wine industry doesn't want you to know that. The wine industry wants you to believe that this is a natural healthy product, when in fact it's filled with additives and poisons and this is what's making people feel bad, and that's the reason you have such a different outcome.

There are two primary reasons why you have a significantly different outcome drinking our wines, natural wines, than commercial wines. It's because these additives are not present and the winemaking techniques are very different because they're not manipulated. They're not over-extracted, they don't have excessive contact with the skin for red wines, which is how red wines get their color. The alcohol in our wines is also much lower than commercial wines. So it's all of these factors together, we don't know which one of them. There's no studies on that. We don't know which one of these are contributing the most to why you feel bad. We just know when we remove all these elements, then you have a different outcome. So these 76 additives that are approved by the FDA, your audience doesn't know about these additives because again, the government conspiring with the wine industry is keeping that dirty dark secret away from consumers, because they've all agreed together to keep labeling off of wine, which is kinda crazy.

But let me talk about the 76 additives for a second because this is really important to know. Of the 76 additives approved for the use in winemaking... and there's some pretty nasty heavy metals, ammonia phosphate, defoaming agents, all kinds of craziness. Of the 76, exactly half, or 38 of them, include the acronym GRAS. This is all online. You can find this online under FDA-approved wine additives. Half, or 38 of them include GRAS which stands for "Generally Regarded As Safe." Now that does two things. That's the FDA saying, "We don't really know what this means, we don't really know what it is, but it's generally regarded as safe." But the other critical thing that the GRAS acronym does under federal law is that it removes that additive from any federal oversight. So the moment it gets a GRAS ruling, that additive is also now being exempt from any kind of federal reporting. So there's just... This is crazy. Just craziness.

So when I stopped drinking that, when I figured all this out and did all this work and then we sort of biohacked wine and sort of deconstruct this whole process, then we were able to bring to the market these amazing healthy wines which... Primarily we don't sell any domestic wines. There are no wines produced in the United States that meet all of our criteria, so most of our wines come from Europe. I know one of your favorite wines is from Sicily, actually. And then we have a few wines from South Africa, New Zealand and Chile, but primarily most of them are from Europe. So that's part of what makes a wine natural, and then some of the problems with commercial wines.

Katie: Yeah, that amazed me when I started researching it after finding you because until then I thought well, wine is wine, that's grapes and yeast and it's pretty simple, and like you said, it's really not all that simple. To help people understand just how important it is to know about these additives... So you talked about sugar and you talked about commercial yeast, can we talk about a few of the others because when I started researching this, the only one I was really aware of is that they might add sulphites to wine.

It's kind of scary and amazing the things that they can add to wine. Everything from these coloring agents like MegaPurple I think was one, to even animal products. And I would think a lot of vegans may not realize that there are animal products in a lot of wine because they use them in different parts of the production. So can we talk about some of the others, more specifically mainly the colorings and things like egg whites that I believe are used, or even dairy products?

Todd: Well, in addition to some pretty nasty chemicals like ammonia phosphates, heavy metals like copper. Copper is commonly used in winemaking, very commonly used to remove a bacteria that can be naturally removed, but copper is typically the treatment used for it. But also you've got fish bladders, you have egg whites. So to vegans this is of particular concern. In fact, this year... and this fining... most of our wines are unfiltered and unfining. Fining is this process that brings a high degree of clarity to wine. See consumers believe that limpidity, the clarity of a wine, is an indication of its quality. Well, I would tell you in fact this is just the opposite.

When a wine has texture, and a slight degree... When it's not been filtered... I don't know if you've seen, some of our wines they're not really cloudy, but they're not just simply as clear as commercial wines. Have you noticed that in any of the wines that you've had?

Katie: Yeah, especially in a couple of the white wines.

Todd: So they can have what we call texture and weight. So when a wine is sterile-filtered, this is what happens with commercial wines, or they're fined. And this is, they use fish bladders and egg whites for fining, and sterile filterization is the mechanical process. But what they're doing is actually robbing the wine of its texture and soul, and I'll give you an example. When you make a French Press Coffee as opposed to a drip, that French Press has some granular...there's texture. It just has little particles in it that'll just give it a different texture than a drip coffee. So it's the same thing in wine. When you filter out all of these, you remove the texture and the soul and life of the wine. This is the same thing when you talk about sulphites.

This is the same thing where these massive doses of sulfur dioxide...and I'll talk about sulfites in just a moment...but sulphur dioxide, which is what creates sulphites in wine. Sulphites are also naturally occurring in wine so all wines have some sulphite because they just occur naturally in the winemaking process. Where the problem comes in, and one of the things we test for and we don't permit, is these high doses of sulphur dioxide as a steriliser and a preservative. So what's happening in commercial wines, and again I don't care whether you pay \$150 or \$250 or \$15 a bottle, it's the same process. You're getting these massive doses of sulfur dioxide. The US limit is 300 parts per million. We do lab testing on all of our wines. Sulphites can be naturally occurring up to 75 parts per million. We do not accept any wines in our portfolio that exceed 75 parts per million.

But what the sulphur dioxide does... Most people think it's sulphites that are making them feel bad, there's just no real science around that. What's making most people feel bad are biogenetic amines like tyramine and histamine, we can talk about that in a moment. So what's happening in the addition of these chemicals, like sulphur dioxide, is that they're oftentimes robbing the wine of its soul. You can taste...not only do our wines taste cleaner, but they taste more natural. There's a soulfulness about them. Have you noticed that in some of the wines?

Katie: Yeah, absolutely. I feel like it's almost like... I brew Kombucha and there are different flavors it can take on based on if I make it versus when someone else makes it. Like there's a very natural taste to it but it's also very clean tasting, if that makes any sense.

Todd: Yes, so it's a natural product. It's just like when you eat whole raw natural food from the earth, from the clean farm, from living soils. Living soil has an amazing amount to do with how food tastes. Most soils have been killed and are dead and have been poisoned, but when you eat food or drink a product... Let's just talk about what most people know, it's just when you eat... One of the awesome things about living in California is that we have amazing, abundant access to some of the best grown vegetables in the world that are organically farmed and just are clean living soils. That food tastes different. It looks different. You can look at it, it looks different, it tastes different. There's just something that's really very vivid, and it's just more flavorful. It has more layers of flavor. And this is the same thing for these natural wines, they just taste wholesome.

They're very different from commercial wines, they've not been sterilized, they have not been killed. And to your point, when you mention Kombucha, some of these wines even have a secondary post-bottle fermentation. Sometimes you'll get even this little kind of a little aliveness to them. They're just very interesting and textured

and layered. The reason that those wines are alive, you've got these flavors that haven't been sterilized and filtered out.

What we started talking about originally is sterile filtering, fining and fining agents. Most of our wines are not fined or filtered at all. There's a handful that had some light filtering, and I don't believe any are fined, but actually the point of mentioning that is we are about to publish on each of our wines whether or not they contain any animal products, meaning egg whites or most commonly fish bladders. That's not a question that we have... That's not something we're currently screening for, but for the vegans in our world, most of them had no idea that the possibility of this even exists. But we are going to be publishing those results.

So other additives, most commonly is the sulphur dioxide, which is the sulphites. And again, I said I would touch on sulphites from an all wines that are naturally occurring. We have a restriction on allowing sulphites in wine, but many people believe that sulphites are what make them feel bad. And for people who have legitimate sulphites allergies, they're walking around with an EpiPen in their pocket because sulphites are contained in all kind of foods, not just wine. In fact the only reason that the "contains sulphites" on the wine label exists, happened in very modern times, about 30 years ago, when a teatotaling senator from South Carolina who didn't drink and lobbied vigorously against anybody drinking, got a law through Congress that forced this labeling of contained sulphites on to wine bottles. Even though the sulphites contained in most wines pale in comparison to many other food types. But anyway he just as a scare tactic had this put on wine labels and it's been there ever since.

But again, most people are feeling bad from wines, we believe, not from sulphites. There's no science to support that really unless you have an allergy of sulphites. I'll tell you one of the reasons people know from a common sense point of view, is that most folks say, "I get red wine hangovers. I feel worse from red wine than white wine." Well, categorically white wines are higher in sulphites than red wines. So there's just nothing to support really a whole lot of health issues unless you have an allergy, which is not most people. Less than 1% of people have a sulphite allergy. What's causing them to feel bad are these additives, these extended manipulations and maceration on the wines, coloring agents like mega purple, which is the leading additive that adds color. So when people get... it's very common and I know your audience will appreciate this.

It's very common to get these purple teeth from drinking red wine, you won't get that from natural wines. Those are coming from color agents and over extended macerations where wines are left to soak on their skin for extended periods of time in order to get a darker, richer, color, because Americans perceive that the darker a red wine is, the better it's quality. There's no basis to that, that's just a perception. So commercial wines are using these color agents to get wine super... And what it does, the coloration results in that chalky kind of taste, that's a color agent. You won't taste any of that in natural wines because they don't contain any of those things.

But there are other... Sawdust, wood, all kinds of exertion as wood products are being used in winemaking. Even pallets and even dust. It's just craziness all the things that are approved. There's 76 of these additives that are approved for the use in winemaking, so it's a pretty nasty endeavor.

Katie: Yeah, that amazed me and especially the food dyes because, like you said, they're not labeled so I had no idea that they existed in wine, and that was what I felt like was the missing puzzle piece for me. Because, like others, I always assumed that it was the sulphites that were bad and finding out that red wine actually had less made it make less sense to me until I found out about the food dyes because we have avoid food dyes in our house, they make my kids have headaches and go crazy and be hyperactive. So I've realized, if I wouldn't let my kids have it, why the heck would I drink wine that has these mega doses of dyes and of course it gives me a headache, and that just really helped it make sense to me.

Todd: Yeah, the wine industry has been very successful in keeping this under wraps in coordination with their friends at the FDA. They've been very successful in keeping this secret. In fact I talk about it on podcast All Over The Planet, all the time. And our Food and Wine magazine actually did a story a month before last on wine additives. New York Times did a story a couple weeks ago on wine additives and on natural wines. There was a big natural wine fair in New York and The New York Times covered it. So we're starting to see some mainstream press in discussion around this, but it's only for people like your listeners and for other health influencers and their listeners and followers who are learning about this, and it's the reason that we have been very successful in helping people drink a natural wine. Let me talk about also the wine industry, now that we've touched on that, for just a moment, because this is really important and interesting information for people who care about their health, and about the health of the people that they love.

This is pretty extraordinary but what's happened in the wine business, is exactly the same thing that's happened in agribusiness all across our country and now the world. So again, we're not trying to make wine healthier or better, we're trying to make it cheaper and faster, and that's what's happened in the wine industry. And the same thing that's happened in the rest of agri-business, consolidation. So this is really important, because most of us are now eating food product made by two or three of the top agribusinesses in the country. Unless you're buying local from a local source, you're eating food that's produced by just a handful of people in the world.

Well, the same thing has happened in the wine business. So to give you an illustration of that, 52% of all the wine made in the United States is made by just three giant conglomerates. So over half of the wine made in the United States made by just three companies. Now, they don't want you to know that, so they hide behind thousands of labels and thousands of brands while they're running multi-billion dollar conglomerate factories. They want you to believe that you're drinking from a farmhouse or a chateau. That's in fact not true. What you're drinking from are these massive factories, what we call tank farms, where you can see these tanks, these fermentation and storage tanks, for as long as you can see.

To further illustrate, 70% of all the wines in the United States are made by just the top 30 companies. So this is a massive problem with how the industry has consolidated, and you cannot... One of the problems with the use of these additives and chemicals in winemaking and in farming on grapevines...and I want to talk about irrigation in a moment because that's a whole another problem...but the problem with these mass consolidations and making this wine in these factories, it is impossible to make wine in any meaningful quantity which is the reason we work with all of these super small producers in Europe, family farms. When you start making wine in any meaningful quantity, you must use these chemicals in order to manufacture it, because it's just too difficult to control all of the things that can go wrong in winemaking that can spoil the wine and cost the winery a lot of money. So you have to use these chemicals in order to control and manipulate these massive factory processes.

With this consolidation, the same thing that's happened in the food world has happened in the wine world and we as health consumers are not benefiting from that.

Katie: I like how you made the comparison to food because after learning about all of this, I kind of view it as, there's that saying going around like, "Eat organic food, or as your great grandparents called it food," and I feel like it's like, "Drink organic wine, or as your great grandparents called it, just wine." Because that's how it was made. That's what used to happen.

Todd: Yeah, this is a problem of the last 50 years, the same thing that's happened in our food supply. This is a 50, 60, 70 year old problem. Before that all wines were naturally made. They were also un-irrigated. Let me talk about that for a moment because it's really, really important.

So up until 1973, there was no irrigation in the United States for grape farming. So grapes have been surviving over 10,000 years, grape vines without irrigation, and the United States leads the world in the irrigation of grape vines, and in fact nearly...I wouldn't say 100% because there's a handful of dry farm vineyards left in California, but a handful...but you could virtually call it 100% of all vineyards in the United States are irrigated. Anybody who lives near a vineyard, you can just drive by and you'll see black drip hoses just over the truck of every vineyard that you see.

There's a number of reasons why irrigation is a problem. Irrigation is illegal in most of Europe. And the reason it's illegal in Europe is because Europeans, who've been making wine for thousands of years, Europeans know what we know. The moment you irrigate a grape vine, you fundamentally change and alter the physiology of that vine and how it ripens fruit in particular. The other thing is that also we believe now that irrigation may be the cause of what we're seeing in California and trace amounts of glyphosate which is Roundup, in independent studies that have been done in the last year both on organic farms and non-organic grape farms in California in three different Appalachians, glyphosate was found in the fruit of both organic, and non-organic farms.

And the reason that we believe that now it speculated that the Roundup of glyphosate is getting in the fruit through irrigation. The reason that that continues make a lot of sense to me is because the way Roundup is applied in a vineyard, doesn't really create an opportunity for massive overspray which is how it would get on the neighboring organic vineyard because Roundup is applied very close to the ground under a grape vine. It's not like wheat where it gets sprayed from above. It's applied very, very low to the ground. And so there's not really much of an opportunity for any meaningful overspray to the neighboring organic vineyard which is how you would think that the glyphosate got into the organic fruit. So it's largely speculated by experts that now that that contamination on the organic fruit is coming from irrigation.

Just to touch on the irrigation thing for a moment, when you irrigate a grape vine, here's what happens. First of all the root structure on an irrigated great vine is about three or four feet in diameter and deep. The root structure on an unirrigated grape vine at maturity can run 40, 50 or 60 feet deep as this vine struggles against nature and struggles against its neighbors in the search for water and nutrients. That struggle creates a more dynamic character to the fruit. And common sense will also tell you...and this is why Americans irrigate...common sense will also tell you that when you irrigate a plant, when you irrigate a grape vine, that the

water density in the berry is going to be higher, and when you put water in the berry, it causes the character of the fruit to be diminished.

Now that's important for a couple of reasons and I know we're going down a wormhole here, but I think this is really interesting for people to understand that this is real. So when you put water in fruit, why do you do that? Because you make it weigh more. So why do we irrigate in the United States in domestic wines? Because the yield is higher and the fruit weighs more, and because the fruit is sold by the ton, that's why we irrigate. So it's more profitable, and it's easier, it's a whole lot less work, and it's more profitable to irrigate. Again we're back to this common thread of we're trying to make wines cheaper, faster, and easier, not better, healthier or higher quality.

So when an irrigated grape vine finally...this is the most important point... When the fruit ripens on a grape vine, the physiology of that ripening process is deeply impacted by irrigation when you pump the fruit full of water, and this is the reason that the Europeans don't irrigate. It's because the character of the taste of the fruit fundamentally changes. But more importantly, when it's filled with water, the fruit has to reach higher sugar levels in order to develop proper flavoring to be picked and to make wine. The reason that's really important is because the higher the sugar content in the fruit at the time of picking, determines ultimately the amount of alcohol that will result in that wine, and other high sugar byproducts like glycerol. So you might notice glycerol... again, when wine is made, you inoculate yeast to the sugar. The more sugar that is there, means that the yeast has more work to do meaning that it creates more alcohol in the end. That's the reason you're seeing commercial wines at 14.5%, to 16.5%, to 17.5% alcohol.

And I might add, it's also super-interesting to note that the alcohol stated on the bottle by law is not required to be accurate. This is just another misleading convenience for the wine industry in conspiracy with the government to mislead you and be dishonest with you. Same thing that they're doing about not putting contents label. So by law, what's stated on the bottle can be as much as 1.5% different than what's stated, and what they're doing is they're rounding down what's stated. So if it says 16%, it could be seventeen and a half percent, or if it says 14%, it could be 15.5%, and you don't have any way of knowing that. This made a lot of good sense when the government and the wine industry first came up with this scheme in the 1940s, post prohibition.

The reason that they allowed wine manufacturers at that time to mis-state or to have what's called "stated alcohol..." it's not required to be accurate, it's just stated, it's as an approximation. The reason that was allowed at that time is because during that time, lab results which we were in a different technological era, lab results could differ from lab to lab when they tested for alcohol. So the wine industry allow for there to be a stated amount with some variance. Well, that was long ago fixed, and today, when you measure alcohol, it will be exactly and perfectly accurate from lab to lab. We could correct the stated alcohol problem anywhere along the way, but the wine industry didn't want to do that. The wine industry wanted to still have this fudge-factor to mislead consumers.

And we're seeing this across this kind of conspiracy between agribusiness and the government and the FDA, it's not just restricted to the wine industry. But wine industry... In its pursuit of romance and marketing, the wine industry has done a particularly clever job of keeping all this away from the consumer. Well, until I came along. So, anyway, there's a lot to know.

Katie: Yeah I love the explanation of all of that and you make so much sense.

Katie: Do you love the taste and the benefits of bone broth but don't love how time-consuming it is to make? With the time you spend sourcing the best ingredients and then savoring it for hours on end on a stove, Kettle & Fire solves that problem with their bone broth. So they use only bones from 100% grass-fed, pasture-raised cattle that are never given hormones and antibiotics. It's also unique because they focus on bones that are especially high in collagen which is one of the healthiest things you can put in your body. Another great thing about them, is they use really eco-friendly minimal packaging, and their bone broth is nonperishable. So unlike many bone broths on the market, it ships without the need for refrigeration, which is also much more eco-friendly.

It is available in many stores so definitely check your local area, but if it's not, like it isn't for me, you can order it online and have it shipped to your door, which is what I do. So to check it out and to find out more about why their bone broth is so wonderful, go to kettleandfire.com/wellnessmama.

If you're like me, and you live in an area where it's sometimes hard to find any kind of specialty ingredients, especially if you're talking about organic ingredients, gluten-free foods or allergy-friendly foods, I highly recommend that you check out Thrive Market. So Thrive is like a combination of Costco, Amazon and Whole Foods and here's why I say that.

So like Costco, they have a yearly membership fee and this lets you access all of their special pricing and deals. Like Amazon, they're online and they also have very fast shipping and it's usually free with most orders. And then, like Whole Foods, they carry high quality foods and specialty ingredients, and especially focus on GMO-free and organic foods. So it's really been helpful to me and I know that you're going to love it too. You can also get a free jar of coconut oil with your first order. So check them out. Go to thrivemarket.com/wellnessmama.

Katie: Another thing that you mentioned in passing that I want to go a little deeper on is mycotoxins, and I know from reading a lot of Dave Asprey work, he talks about this a lot. But there are also a lot of critics out there who say that they're not really harmful at all and it's all on people's heads, and that it's pseudo-science. So I want to talk about mycotoxins and why they are important and why you guys don't allow them in your wines.

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Todd: Well, I follow Dave's work, and Dave endorses our wine. I've been following Dave's work for a long time. I'm gonna have to plead ignorance on mycotoxin expert science. So here's what here's what I know, they are thought to be dangerous. Dave certainly rallies against it. There's certainly a lot of people rally against it. I'm not an expert in mycotoxins, but here's one I am an expert in, mycotoxins in wine.

In the EU, in Europe and most all of the world screening for mycotoxins like ocratoxin A are required for many food products including wine and coffee, and coffee is Dave Asprey's thing, wine is our thing. So the allowable trace amounts of ocratoxin A, which is the big target in food products. The allowable limits in the EU although

we've never seen any amount of testing in our wines, but the allowable limits in the EU are two parts per billion for wine and 10 parts per billion for coffee.

Now there is no testing required for mycotoxins in the United States. So no domestic wine has ever been tested for a mycotoxin in the United States because testing is not required. Every wine in the EU is required to be screened. Now, here's the reason that we... and this is Dave's whole point as well about coffee, is that there's also no global and no American standard and no requirement to test coffee for okra toxin A either. And that's kind of part of his thing with bulletproof coffee is that his coffees have been tested for mycotoxins and mold. So the reason... again I'm not an expert on mycotoxins but any time we can remove an element of risk, we think that's a good idea and here's the only time.

This is interesting I found this is a little bit entertaining as I do much of the conspiracy between the government and the wine and food manufacturers in the US is that the only time a domestic wine gets screened for mycotoxins is when it's exported. So if you're an American wine producer and you want to distribute your wines in Europe or most of the rest of the world, then you must get those wines screened in the US and submit those lab tests as a part of your export approval. So the only time that they get screened is if you happen to export outside the United States. But the government's plenty happy with letting you drink mycotoxin stateside if you're drinking domestic wines. That's not to say that all wines have mycotoxins in them, I'm just saying we don't know because they're not screened.

Katie: That's really frustrating because you see that with food too, that many manufacturers will make different versions of foods here than they would in Europe based on what's banned there and what we allow here and it's really frustrating to see those differences.

Todd: I love the bumper sticker, "If you're not outraged, you're not paying attention." But the thing is what do we do? We're all outraged but at the same time we're just so busy. And it seems so hopeless that I guess the best course of action is what you're doing and what I'm doing and hopefully what your listeners are doing which is taking the course of how you eat and drink and the course of how you expose yourself to toxins in your own hands and try to find information and pursue products and do the best you can to keep your children healthy and do the best you can to keep your family healthy away from all of these influences that have become the commercial modern life of exploiting profit at the cost of my health.

Katie: Exactly.

Todd: We all feel frustrated about it and outraged at times but at the same time, sometimes it does feel hopeless. Like, what can we do other than try to take responsibility for us, our health and families health and particularly our children?

Katie: Exactly and honestly that's the whole goal for me with blogging because... Like reading the statistics, I actually started researching that's when I had my first child and realizing basically what the future holds for our

kids if we don't change things as far as there are higher rates of cancer and auto-immune disease and diabetes and heart disease and realizing that I definitely can't change it on my own.

But I do have hope that if families do across the board that between the purchasing power...since that's what big corporations care about is the money...between the purchasing power that we have and the fact that we're shaping the next generation, I do have hope that we can eventually change it. Like we said it's frustrating to see it right now until those changes happen.

Todd: It's tough, but thanks to people like you and together we're doing our part to bring change to people who care about these things. I'm a person who cares deeply about impacting the health and lives of others, and that's the reason we're involved in not only this business, but in ketogenic work, and anti-sugar, and meditation and all the initiatives that we work on and promote because we believe it makes a difference in the health and wellness of others.

Katie: Absolutely and I want to circle back at the end and talk about those a little bit more in-depth. But first, we've talked about everything wrong with most wines and what differentiates you guys especially, but let's talk about the benefits of wine. Assuming that you're choosing a good quality natural wine, what are some of the benefits that we can attribute to wine. You said that you drink every night, why is that, and what benefits have you seen?

Todd: Well, that's a great question. Thank you for... I often talk about that earlier in the podcast about the benefits of drinking wine and about the benefits of moderate consumption of alcohol. So there's a whole bunch of studies, tons and tons of studies out there showing there is significant health benefits, cardiovascular, neurological benefits, and it's been particularly attributed to red wines. And the reason red wines get carved out as a matter of particular benefit is because there are over a thousand polyphenols like Resveratrol is the most famous one contained in red wines. The polyphenols are thought to have any oxidant benefit as well as benefit to the gut micro biome, benefit to our neurological state. So there are many published studies, there are just a ton of them about the benefits of drinking moderate amounts of alcohol. There are also studies...

In fairness, I would say two things about what I just said. One, there are studies showing that the benefits have been replicated in the consumption of moderate amounts of any kind of alcohol. The problem with the problem with getting moderate doses of alcohol from spirits is that most people don't have a drink, spirits being 45% alcohol, our wines being 10% to 11% or 12% alcohol. The problem with the 45% dose is that most people don't have a single drink or a single glass of wine, they have several. So the dosage level just simply gets too high, that's the reason even though I understand the argument for drinking tequila as an example which is a favorite spirits drink of the paleo crowd, I understand the argument for drinking tequila because it's a triple... it's a distilled clean, gluten free plant based product. The problem, is it's 45% alcohol, and so we're simply getting too high of a dose of alcohol particularly after the second or third one. And typically also spirits are oftentimes mixed with some pretty nasty mixtures which packed with sugar.

But that being said the benefits of alcohol, in addition to its medical benefits, the benefits are really... Here's what it does for us that's so magical and this is particularly true of wine because winds consumed with food. So

I always recommend if people are going to drink, they need to eat. This is going to mitigate the effects of alcohol. Because what we're looking for, the feeling we want from alcohol... Let me just touch on one other point about alcohol. Alcohol is toxic. I'm in the alcohol business, I sell wine, but let's be perfectly clear, alcohol is a toxin. So is oxygen and water in the wrong dose.

That's the reason it's super important we get the dose correct, and the best way to get the dose correct is to begin with an underlying lower-alcohol product like a lower-alcohol wine. So here's what alcohol does do from a community point of view, and I think this is its most useful purpose. There's a ton of studies out there showing moderate alcohol is good for our cardiovascular and neurological state. But that being said, that's not why I drink it. I drink it because I enjoy it. I like the taste of it, I like how it complements food, and most importantly, I like what it does to the community around me at the dinner table with other adults, new friends and old friends alike. What it does is it raises euphoria. The rise of euphoria brings an enhancement to creative expression like storytelling, creative expression. And it gives cognitive connection to that community as long as the dose is correct, that's really important. We'll about that again in a moment.

You've got this cognitive connection, this creative expression and for this reason no great story ever started over a salad. Great stories began around a bottle of wine, and so we have this enhanced mother of creative expression. That's the reason I love that proverb that "No great story started over a salad." So that being said, what we have then... And importantly, I'm sure you've followed Brené Brown's work, whose vulnerability talk on Ted has garnered more than 32 million views. Brené talks a lot about vulnerability and how we build trust and bond and have community with other people.

Wine helps with this. So we have a lowering down of our vulnerability when we do a little bit. When we have, this is particularly true with new and old friends, when we become more vulnerable, we become more emotionally accessible and we create bond and trust with people. This engenders the expression of love, and love is the single most important thing that we can do for each other, is to spread more love, and wine help does that. That to me is the magic of what really creates that community around the dinner table with your friends and loved ones. It just makes us a little bit more accessible. It just makes us a little bit more open to spreading that love. For me, that's really the magic of wine.

Katie: Yeah, I would agree with that and my husband and I for that reason, a couple times a week at least we'll have what we call an at-home date night because it's hard to go out with the kids. But just after the kids are in bed, we just sit around and talk and catch up over a glass of wine, and those are definitely moments that I cherish absolutely. Another term that you've used a couple times, and I just wanna make sure we define for anyone who isn't familiar with it is, "biohacking." So you said that you biohack wine, can you define what that means?

Todd: Yes. Biohacking to me... Again, your listeners can do an internet search for "biohacking," it's a relatively well known term. Here's how I define it. Biohacking is the art and science of how we use our behavior to influence our biology and neurology to optimize living. What's all that mean? Well, diet is a biohack. Ketogenic diet, any kind of diet that has... sugar-free diet, low carb, those are biohacks because we're influencing both our biology and our neurology through diet. Food is drug. Another biohack would be meditation. When we have a regular meditation practice, we're biohacking our neurology because we're slowing down that mind chatter and

we're really... There are tons of studies and the most famous one out from Harvard about 18 months ago showing that in increasing grey matter and you can see actual brain and growth from meditation practice. So this is where we're using a biohacking practice, to influence our neurology.

So it's the art and science. Because here's the problem with much of this, is that there's no real science around many biohacking techniques, and if I wait until the science validates what I already feel and know, it's going to be too late for me to experience the benefit. What I mean by that is that by the time we get control group studies, I already know the biohacks that I practice including meditation, ketogenic diet, cold thermogenesis, Wim Hof breathing, the list is quite long. I'm a bit of a fanatic though about this thing because I want to optimize the living experience in every way possible that is comfortable for me, and I like to challenge myself and push myself to experience these things.

But when I say the art and science, sometimes the science is not clear, but here's what I know about the practice or the art of the practice. To feel is to understand, so when I start practicing a bio hack, I will feel different. In that feeling, you will know whether or not that practice is right for you. And not every practice is right for everybody. Intermittent fasting doesn't work for some women as an example. It misaligns their hormones and doesn't work for them. Ketogenic diet doesn't work for everyone. So to feel is to understand. If it works for you, and you feel an enhancement from it, then you'll know that it's working for you. If it doesn't, and it's not working for you, then you stop doing it. So biohacking is how we use our behavior to influence our biology and our neurology. Does that make sense?

Katie: Perfect sense. And also just to touch on a couple of other points you've mentioned several times now. So these biohacks that you practice, meditation, I'm guessing most people have a pretty good grasp of at least what that is. Talk about Wim Hof, the Iceman himself, and what his breathing is, and also cold thermogenesis, because those may be new terms to people.

Todd: Wim Hof holds 22 world records for really cold exposure and breath holds. Then he also holds the world record for submersion ice swimming under ice. He likes swimming under ice. Kinda crazy records. He holds the world record for submersion in ice in a tank. So Wim Hof has also shown... they're doing a study on him right now at Harvard and also at Stanford. But a recent study that was published by the University of Amsterdam...he's from the Netherlands, although he speaks and works a lot in the US now, and I have trained with him twice and done his video course. I initially did his video course, but I've trained with him personally twice now. So Wim advocates for a hyper-breathing technique and breath hold that he has shown has an impact on your immune system and activates your parasympathetic nervous system and your central nervous system through both breath work and cold exposure.

The breath work is kind a hyper-breathing that goes for about 15 minutes that I start every morning with just before I do meditation. And what I say about meditation and breath fitness, is that for breath fitness, if the mind is the kite, the breath is the wind. And so we have a meaningful impact on how we feel. Even if you just take a moment and focus on your breathing during the day, you can find that you can calm yourself by controlling your breath. Breathing is autonomic so we don't really consciously think about breath, but when we start doing breath fitness and breath training, just like all of life with breath work...and the reason that breath work is hard and intense is because it's resistance training for your lungs and for your body. What I mean by resistance

training is, we know that through all the fitness, and all of life for that matter, we gain the most through resistance training. Weight lifting is resistance training. So when we put our body in that resistance state, we grow from it.

The same thing happens in life when we fail. Failure is where we learn. We don't learn much from success. Success is a bunch of shiny objects and distraction. We learn from pain and failure, that's resistance. The same thing with breath work. When we do breath work, we're creating resistance, resistance training. We're forcing our body to train in this way, expanding our lung capacity, expanding our oxygen input early in the morning to start our day off like that. So this is a reason that it works very effectively. Second to that... Wim really trains two things, the breath work, and then also cold training or cold thermogenesis.

Cold training in its simplest form are cold showers. From there it's ice baths or cold exposure. I recently, 10 days ago, did a lakeside run in Chicago on Lake Michigan in the snow in 20 degrees with just a pair of running shorts and some shoes on for like 45 minutes in what is probably my most extreme exposure to cold. But here's for your listeners to think about the power of cold exposure. There are many immune system enhancements, mitochondria enhancement, but the most important one...it's also been shown to have positive effects on the symptoms of depression...but the most important one and the simplest one to test for yourself is get in a cold shower...I'm not talking about starting warm and finishing cold. I'm talking about stand, turn the shower on cold and stand up under it for a minute with cold exposure on your face and the base of your neck, your primal brain stem. Just a minute in cold water and step out of it.

And you'll just start laughing. And part of you will be like, "That's crazy, I can't believe I just did that." But in part what you're having is this rush of positive neurochemicals. So when you get this cold exposure... You know when you get in a cold shower, it's a sort of bracing. It wakes up your central nervous system. And I start every day with a cold shower. So it's just like... And I have well water here so the water gets seriously cold. For many of us who's in the northeast and parts of the country where it gets cold, the water is cold. For people in Florida, the water never really gets cold.

Certain parts of Southern California, the water never really gets cold if you're doing in the shower, but if you're in many parts of the country, the water for sure is cold. So anyway that's breath work and cold training. What I would say, or what I often tell people, is that meditation is the greatest biohack of all time in all of history. I think it's the single most important practice an adult can add to their life. And breath fitness is the most underrated, so almost no one practices it. Even among biohackers, it's rarely practiced, so I think it's the most underrated. But that's my learnings from Wim Hof. Hopefully that explains a little bit to your listeners.

Katie: Yeah that explained it perfectly. And then lastly, just to touch on the keto diet for a second because I am 100% in agreement with you that sugar is public enemy number one, and just to make sure everybody is familiar with the keto diet. Maybe they've heard of it especially for those with epilepsy sometimes will follow a ketogenic diet, but why have you chosen this for yourself?

Todd: Well, let me just... For your listeners who... Because ketogenic is now the second most searched diet term on the Internet. It is exploding in social media. There are many athletes and celebrities who have now

adapted a ketogenic lifestyle. Let me first of all, just to clarify what a ketogenic diet is and what the state of ketosis means, so that your listeners I give them a little bit, a down the wormhole just to explain so they understand what it is.

The ketogenic diet is specific nutritional programming that significantly limits the amount of carbohydrate consumed, and most particularly sugar consumed, and refined carbohydrates. A ketogenic diet, typically is less than 50 grams of carbohydrate a day, and in my case I eat less than 20 grams per day, and those always come in the way of salads and leafy greens and other vegetables. So the ketogenic diet, when you restrict your body of glucose, then absent glucose being available to banish your fuel source, which is how most people operate, they operate by burning glucose, absent glucose in your body which you can restrict glucose in your body through two methods, fasting which has no glucose being added or no glycemic foods or through this ketogenic diet which is a low dose of glycemic foods or carbohydrate. And it's also high fat. So about 75% of my diet is fat primarily from coconut oil, and olive oil, avocado oil and some nut oils and beef tallow, I do eat some animal occasionally.

When you restrict glucose by restricting carbohydrates, your body doesn't have any glucose to burn as fuel and so your liver converts fatty acids into ketone bodies which show up in your blood as beta-hydroxybutyrate which is a form of energy that your brain burns in lieu of glucose. Now why we make ketones and why the ketonic state exist in the first place is because from an evolutionary point of view, we would not have been able to survive as a species had it not been for the state of ketosis and here is why. For a sapiens, who'd been walking around for two and a half million years, for almost all of that period...and as you are aware agricultural revolution or grains didn't come into our diet until about 10,000 years ago.

So for the rest of the two and a half million years before farming became, we were hunter gatherers, and we didn't always eat and we certainly didn't have access to fruits or other high sugar food products. So for most of our evolution, we've been living in intermittent fasted states with very limited access to food and as a result we were in ketosis for much of the time. And here's the reason ketosis is important. If your brain didn't get access to a fuel source, your brain uses about 45% of all your energy. If your brain couldn't get access to a fuel source like ketones and absent glucose, you would die in about seven days. Your brain would just shut down and the rest of your body would shut down with it..

But, as a result of ketosis, you can live in a fasted state for approximately 70 days, you'd have to have access to water of course. But you can live for 70 to 80 days without eating just based on your own body fat and what's stored on you. If you didn't have ketosis, if your liver wasn't converting fat to energy, in the way of ketone bodies you'd die after about seven days. So here's the thing. We store, as glucose burners, I don't store any glucose, or very little glucose at all, we store about 1800 calories of glucose at any given time in our body... This is for glucose burners, people who eat a regular diet, who are not ketogenic, ...store about 1800 calories of glucose, and that's stored in the muscles and the liver and a little bit in the brain.

Once that 1800 calories is burned off, then we have to refuel up. That's the reason people get these energy swings like they say, "Oh, I have low blood sugar, I need to eat." That's your brain telling your body that, "I need some more glucose." And so as a fat burner, I don't burn glucose as my energy source, I burn fat. As a fat burner, I'm carrying around 50 to 60,000 calories of stored fat.

This is the reason that the ketogenic diet has become very popular for endurance athletes and for performance. Because in the old days...let's say marathon runners...in the old days, they would have to continue to fuel up during the race to keep from bonking out or hitting the wall. That's because you're running out of glucose. So that's a reason they would eat carbohydrate and most particularly these gels and sugar-based products during a race so that they didn't bonk out or hit the wall when they ran out of glucose.

But as a fat burner, you never run out of energy. I also do 24 hour intermittent fasting so I only eat once a day, I only eat at night. I haven't eaten since last night, and it's about 1:00 or 1:30 in the afternoon here in California, and as you can probably tell, I have no shortage of energy.

Katie: Definitely.

Todd: Yes. So I'm burning fat. It's a metabolic state. The easiest way to explain is it's a fat adapted metabolic state where you program nutritionally, your body and brain to run on fat as its primary fuel source as opposed to glucose.

And among the benefits, and why I do it, to wrap this up. Among the benefits are amazing mental clarity and acuity and cognitive performance. So the reason, as I mentioned earlier in the show. The reason most people begin a ketogenic diet as I did was to break through a weight loss plateau, and I had never seen anyone on a ketogenic diet that didn't shred out. So it requires some discipline and some prep. There's nothing unpleasant about it. I eat lot of fat, it's delicious. I eat butter and olive oil and everything.

Now the quality of fats really matters. I would say to your listeners, if you want to experiment with a ketogenic diet, there's plenty of information on the Internet about it, plenty of books about it. But you need to eat high quality fats. So you're gonna have to spend a little bit more money on avocado oil, you'd have to buy top grade coconut oil. You're going to eat more fats and the problem with fats is they don't taste very good if they're not high quality.

If they're high quality, they're delicious. It's a luxurious way to eat. You just all the fat you want. People talk about bacon most commonly. I don't personally eat a lot of bacon but I like it. It just doesn't come in my life too often. But it's just a high fat, low carb, moderate protein, that's the difference from the paleo-diet. It's a very moderate protein diet, because if you eat too much protein, it will convert to glycogen to glucose. So you have to have moderate protein, very moderate carbohydrate and high fat. It's an amazing way to live, but as I said I don't want nor can I lose any further weight. I've been the same weight for a long time now. The reason I eat ketogenic diet, and the reason that I'm an evangelist for it, is because of the cognitive performance. Flow states, memory. There's massive improvement in memory. Just overall health.

Finally, I know you know the work of Dr. Dominic D'Agostino who's a friend and also endorses our wines as keto-friendly. He's the leading ketogenic researcher in the country, I often speak with him. There's an amazing amount of research from Dr. D'Agostino as well as Thomas Seyfried at the University of Boston, Jeff Boerhlic

at the University of Connecticut, are some of the leading ketogenic researchers in the country. Amazing amount of research showing that ketogenic is both preventative of cancer and more importantly has been shown to be very successful in the treatment of many cancers.

It also has been shown repeatedly, and I personally know a bunch of people who've come off of their diabetic medications with the adoption of... Type 2 Diabetics... with the adoption of a ketogenic diet. Who've stopped taking insulin and stopped taking other Type 2 Diabetic drugs just from adapting a ketogenic lifestyle. So it's just an amazing thing, I'll never go back to... I'll remain ketogenically programmed forever. I'll also never go back to eating more than once a day. I just found intermittent fasting for me has been one of the most terrific performance enhancers of all time. It's a great biohack. Did that help out with ketogenic?

Katie: Absolutely. I think we could do a whole other episode on it and I'd love to even have Dan on to talk about it as well. And I'll just say it, to echo what you said, "Stick to the high quality fats. If you don't understand what that means, there was a great podcast episode that I did with Dr. Kate Shanahan about why you never want to eat vegetable oils ever. So if you are on the fence, go back and listen to that one.

But I want to wrap up by making sure people can find you, because probably a lot of people are wanting to try your wines now that they've heard why they're so different, and you guys are giving away a Penny bottle of wine with any purchase right now, the link I have to that is wellnessmama.com/go/wine. But I believe you're also on Social Media as well right...? For people to find you?

Todd: Yeah, and we also have another link set up for you to get a Penny bottle if they miss that link or they end up at dryfarmwines.com/wellnessmama will get you a penny bottle. Also we're DryFarmWines on all social media. And if anybody has any questions or wants to contact me, it's todd@dryfarmwines.com.

Katie: Awesome, I'll make sure that I include all those links in the show notes for anyone who wants to find them, and also links to some of the references that we've talked about: to Wim, and to Dan, and to some of those guys as well. Todd, thank you so much for being here. This has been incredibly informative and I thought I knew a lot about wine going into it and I'm sure a lot of listeners feel the same way.

Todd: Awesome. Listen, I really appreciate. I know we went a little long today, I appreciate your listeners hang in there and hopefully it's been valuable information. I'm grateful to be included. I want to push as much love out in the world. I love all of you. Thank you so much for your support and I encourage you to tell everyone you know that you love them, and I'm grateful to be included today. Thank you Katie.

Katie: Thank you Todd, and we'll have to do a round two one day.

Todd: I look forward to it.

Katie: Sounds great. Thanks to all of you for listening and I will see you next time on the Healthy Moms podcast.

Thank you so much for listening to this episode of The Healthy Moms podcast, to get the bonus from the episode as well as a content library of free health resources, join the community at wellnessmama.com/podcast.