



1029: Liver Support: What Works, What Doesn't, and Why (Solo Episode)

Child: Welcome to my mommy's podcast!

This episode is brought to you by BIOptimizers, and I love this company. And specifically today I wanna talk about one of the favorite things that they make, which is called Masszymes. So let's be real. We all kind of start this part of the year saying, we're going to eat cleaner, train harder, feel lighter.

But it's not just what we eat and what we do, it's what we absorb. And if our digestion is sluggish, the body just can't keep up. And this is why I love Masszymes all year, but especially this time of year because it's a simple digestive ritual that's made a huge difference for me. It's loaded with 18 enzymes, including four times more protease than top competitors, to help us break down dietary protein, carbs, and fats efficiently.

And I've shared before, I've done a whole episode on enzymes and how this was really, really impactful for me personally. But this means that we get better nutrient absorption, less bloating, and more real energy from the food we're already eating. I'm also a big fan of nutrient loading and really maximizing that in our food too.

And enzymes help us get the maximal benefit from this. It's this hardworking, yet smooth enzyme blend, and it's been a favorite of mine for years, and a customer favorite for over 20 years. It's a ritual that your stomach will thank you for anecdotally. I feel like I really don't get sick now that I have made these a regular part of my routine.

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So start 2026 with a stronger gut, more energy, and better digestion.

This episode is sponsored by BON CHARGE, and I love so many of their products from their red light face mask to their sauna blankets and everything in between. They focus on high-end wellness tech, and if you're interested in how light can help you, which I talk a lot about, BON CHARGE has so much to offer.

Studies have found that specific red light frequencies can help reduce fine lines and wrinkles when used at the correct brightness and strengths. And some products don't get

these correct. The frequencies of red and near infrared light stimulate cellular activity at a mitochondrial level, which I talk a lot about on this podcast.

This can create better energy efficiency in a given location of the body. For instance, red light on your face gives more cellular energy for biological processes. This can help to decelerate the signs of aging and lead to firmer, plumper skin. So the long-term results you can see when using an LED mask over time are things like, reduction in the appearance of fine lines, reduction in the appearance of wrinkles, reduction in under eye bags, firmer skin, tighter skin, reduction in signs of aging, scar fading, plumper looking skin, reduction in visibility of blemishes, and visibly clearer looking skin.

I'm always a fan of getting natural light from outdoors, but for people who are wanting to kind of tackle the aging process head on, this is in a way to kind of give your body some extra benefit from these specific wavelengths of light.

The safe, non-invasive beauty treatment is going to be around for a while, and for a good reason given the results people are seeing. If you wanna check out the BON CHARGE Red Light Face mask, and all of their products, you can go to <https://boncharge.com/wellnessmama> and use the code wellnessmama for 20% off.

Katie: Hello and welcome to the Wellness Mama podcast. I'm Katie from wellnessmama.com, and this episode is going to be a personal deep dive into a topic I get a lot of requests from actually from you guys which is the topic of liver health, liver support, liver detox, which is a nuance I'm gonna get into in this episode.

And really talking about from my experience and research what seems to work, what doesn't, and really understanding that detox part because I feel like this, from my understanding, is often kind of misunderstood, and that proper understanding of it allows us to work with our body in a much more beautiful and effective way.

So this is definitely a broad and nuanced topic that I'm going to attempt to cover without taking too much of your time or getting too deep in the science, but I am gonna share the relevant things that I think are important to foundationally understand in knowing how to best support our liver. I also wanna reframe this because the liver is not a thing that needs to be detoxed per se.

It's not a thing that we need to do something too, but something that we can highly effectively work with. In our health and healing in so many things because the liver is absolutely amazing and vital. It's a 24/7 incredible biochemical factory, and it's considered our primary detox organ, so obviously it's very important.

No crash cleanses or forced detoxes required. In fact, I would say these can be actually counterproductive and in some cases can do more harm than good. The liver already knows how to detox perfectly. That's its job. So the question is, how can we help it when we understand how to. The liver knows what it's doing.

It also handles a lot, especially in the modern world. We know that statistically things like non-alcoholic fatty liver disease are on the rise, and this can have wide reaching health effects. So it is important to understand, to support and to work with our liver. Though I feel like many of the things floating around might not actually effectively do this.

So I am going to share what I've learned about how to show our liver some love and support it naturally and gently. And if you, of course, have anything going on specific to your liver, definitely an area to work with an expert. There's some incredible practitioners and doctors out there who specialize in this.

I'm gonna be sharing from a more general and science backed perspective. As always, nothing I share on this podcast is medical advice or actually advice at all. I don't tell people to do things. I'm sharing my own research and experimentation and what I have found helpful. I encourage you to do your own research, to question everything, even, and especially me and to find what works for you.

And I love if you want to share those things. I think we learn the best in community and I learn certainly as much or more from you in community than I could ever share on this podcast. So I'd love to hear from you. Anything I share is simply, like I said, from my own experience and a starting point for your own research, learning and experimentation.

It's never shared for prescription or comparison. So I've gotten a lot of questions about liver "quote" detox. In fact, this is surprisingly one of my most common questions, and I love this because it means that there's a lot of awareness about how important the liver is and a lot of wanting to figure out how to support it.

And I want to offer a reframe here because like I said, I don't think the liver is a thing we need to do things to. I think it is a thing we can work with to get some incredible results. And that understanding, that little bit of a distinction, can make a huge difference because I get where people are coming from.

These questions around liver detox come from understanding the importance of the liver and its role in things like detox. And a lot of times I hear people talk about experiencing things like fatigue, digestive issues, bloating, skin flares, which is an important one because there is a liver and skin connection.

And when our body's natural detox pathways get overloaded, we sometimes can see that in the skin as well as it has hormone impacts. So people can see like hormone issues when the liver is struggling as well. But like I said, the body knows how to detox. It is beautifully designed for this. It's just facing a lot more in the modern world than perhaps it has in the past, and can benefit from some extra support sometimes.

So when we're experiencing some of these things, I view them, like I've said before, like symptoms are incredible messengers as an amazing opportunity to get curious to ask why and to explore what we can shift within, either things our body needs and might not be getting or might be getting too much of to be able to handle and how we can then give it what it needs.

So as a preview in this episode, I'm going to briefly walk through what the liver does, some signs that it might be struggling. From my understanding and personal experience, what are some evidence backed ways to support this process? A practical kind of reset plan specific to the liver and a brief diving into traditional Chinese medicine and German new medicine perspectives on the liver. This is less talked about in clinical settings but other systems talk a lot about the emotional impact of things related to the liver and kind of the interplay that goes on there. So more on that later on.

But to start off, let's talk about what the liver actually does. It is an absolute powerhouse and it does a whole lot. So I'm not gonna be able to cover, of course, everything that it does but I'm gonna cover some of the big categories. One being that it's a metabolic hub, so supporting the liver is also supporting our metabolism.

And like I said, we're seeing a rise in things like non-alcoholic fatty liver disease, which is when there are fat deposits on the liver, which could be really problematic. We used to only see this more so in people who were struggling with high consumption of alcohol, now we're seeing it even in children and in, across the population, even in people who don't drink.

So to me, this is definitely an opportunity to get curious and explore what are some of the things that have changed that might be connected to this rise in something that's considered pretty serious and can have really far reaching health effects, and that we're seeing a really pretty big uptick in in a short period of time.

Because as a metabolic cup, the liver is involved with carbohydrate, fat, and protein metabolism, so almost everything we eat. It also is related to glycogen storage and release, which means it's tied to our energy that we feel, but also even to our cellular energy and the energy the body has to run its normal functions.

So even just as a metabolic hub, the liver is a big deal. And if it's not functioning well, we can see some struggles in metabolism. A lot of people report that when their liver was struggling, they had trouble, for instance, releasing extra body fat or making changes in their metabolism. And this can be a great sign that your liver's asking for some kind of extra TLC.

The liver of course, is also deeply involved in detoxification as the body's primary detox organ. Of course, we have many detox pathways and the whole body is involved in our detox, natural detox systems. But the liver is, especially, in my mind, especially fascinating.

Because liver is involved kind of across the board in categorically everything related to detox. So it's related. It's involved in phase one or Cytochrome P450 detox. It transforms compounds within the liver. Phase two conjugation makes them water soluble. Which there's a lot that goes into here, some big words, but glucuronidation, sulfation, methylation, acetylation, amino acid conjugation, and glutathione production.

So a lot that happens there. It's also connected to bile production, the emulsification of fats, carrying around bilirubin, dealing with cholesterol, which might be a whole topic for another podcast because I think there's a whole lot of misconceptions when it comes to cholesterol as well, and conjugated toxins via stool.

The liver's also involved in how hormones are handled within the body. So the liver's involved in estrogen metabolism, so people who see high estrogen, which is something that's often talked about in the context of things like PCOS. Although this is now becoming a much more widespread problem, I suspect partially because of our exposure to plastic compounds. But the liver is involved in metabolizing estrogens. It's involved in thyroid hormones. So this is why I actually started looking at it deeply. It was when my thyroid labs were off and I was told I had Hashimoto's and I was trying to really dive into why this was the case and what I could shift that would help my body to recover and to start making hormones effectively.

Liver's also related to cortisol, which has gotten a lot of talk online lately. We know things like that cortisol and melatonin kind of don't exist at the same time. Cortisol is of course a stress hormone. When it is elevated, it can kind of create downline problems with a lot of our hormones. And in the modern world, we tend to kind of be set up for cortisol to be either dysregulated or high or low at the wrong times.

The liver also balances bile acid signaling. Which I'll get to more later. But it really is involved in a whole cascade of things. It's also involved in immunology and our immune response specifically through things called cuffer cells and hepatic immune tolerance. I

won't get super deep on this today because this is definitely a very, very nuanced and specialized topic that I am by no means qualified to explain and I don't deeply understand.

I really looked at liver more through the detox and hormone perspectives because that was what was relevant to me. And I'll also later on go deeper into this, but I wanted to mention because the liver is such a powerhouse and it does so much, it does have some pretty specific needs that are not necessarily easily gotten in the modern world and it needs certain inputs and it can become overloaded with an excess of certain inputs.

So some things that it needs, and I'll get into the nuance of these later, are things like amino acids, sulfur in the right amounts, choline, which I'm a huge fan of, and might do a whole podcast on as well, because I think this one is often overlooked. B vitamins, various ones and various amounts.

Minerals, which you've heard me talk about before, but specific to the liver, magnesium, zinc, and selenium are really helpful. And then antioxidants because of its involvement in the glutathione system. I do also think antioxidants are their own interesting category as well because they can sometimes be counterproductive.

We've heard a lot about antioxidants. There's a lot of products related to antioxidants and I feel like they're kind of misunderstood or often kind of we don't do what we think we're doing when we're overloading antioxidants, but that's a topic for another day as well.

Now some signs and communication from the liver that it might need some extra support or that the liver and biliary system might be struggling.

So some signs that the liver or biliary system might be struggling and I feel like the great thing here is that the liver is a pretty good communicator. So often we will get some signals from our body that something's going on here and that often this communication can tell us some specific things that we can do to help support the liver.

These are also because the liver is so involved in so many things in the body. A lot of these symptoms are non-specific, but very common. So they don't necessarily always relate to something going on in the liver. And if, especially if there's more than one of them going on, it can often be a communication from the liver that it might like some help.

So some of these non-specific, but common symptoms are things like, brain fog, fatigue, bloating, or nausea, especially after fatty meals. Pale or gray, colored stools, dark urine, itching of the skin, upper quadrant discomfort, so upper right side kind of under the rib pain, easy bruising, skin changes, especially acne and eczema can relate to liver having things going on or PMS and heavy cycles related to that estrogen component.

And stubborn triglycerides that don't change. And of course those can all be multifaceted and multi causal and have lots of things related to them, but that kind of that constellation of non-specific symptoms can sometimes point to something going on with the liver. I also personally feel that it's always kind of to our advantage to understand and support the liver or at least avoid the things that can really tax the liver.

And that just understanding this gives us a way to listen to that communication with our body. Of course, because the liver is so important, if it's really struggling, that would be a red flag that you would want to get checked very quickly. Again, this is not medical advice. However, personally, if I experienced things like jaundice or yellowing of the skin and eyes, severe abdominal pain or fever, rapid swelling, GI bleeding, obviously anything severe always get evaluated immediately.

Medical emergencies are not times to try gentle kind of gentle approach. I'm talking more about when we have minor things going on that might be a signal that the liver could use some support and what we can do at that point. Or if we don't even necessarily have any particular symptoms and just want to be aware of how to best support our liver and our body's natural detox pathways.

There are some labs that can also give insight into liver health. And again, this is an area where I would recommend working with a practitioner. I am always the Guinea pig, so I do labs decently regularly and have learned for myself kind of what to look at when it comes to these. But I am by no means a practitioner, and I'm not giving advice on this, just the ones I have looked at when it comes to liver health are ALT, AST, GGT, ALP and then total indirect bilirubin as well as because of the triglyceride connection, fasting lipids, A1C and insulin, which are also markers of metabolic stress.

And I will say personally, when I was probably 12 years ago, really in the thick of Hashimoto's and thyroid things, and I had a lot of inflammation in my body, I saw a lot of dysregulation in some of these labs, my metabolic markers were not good. My triglycerides were higher than I wanted them to be. My HbA1C was not as low as I wanted it to be, nor was my fasting blood sugar or my metabolic markers, my insulin. So these were things I tracked pretty carefully for a lot of years while I was in the healing phase as well as, of course, my thyroid labs were off when I was working on resolving thyroid things.

Now all of these things are in good ranges, and I think supporting my liver was a helpful piece here. I also have talked before about very specific things I think that helped. I also have done a solo episode on enzymes and how I think those played a role and I think those can be kind of generally supported for the liver in a downstream, non-direct way.

But addressing my liver health helped and I had a lot of kinda, like I said, dysregulation in those labs, especially when I was in a very inflamed state and so taking a very gentle approach not overloading my body, doing all the things I could to send it safety signals, to let its detox pathways work without stressing my system was very helpful for me personally in that time.

I have done this, and this is very nuanced and very controversial. I have done podcast about iron before, especially ferritin and iron, and how overload can be problematic, including to the liver, so too much iron can injure the liver. Of course, not having enough of anything we need in the body can also be problematic.

But I've had guests like Morley Robbins talk about how there's more at play than just iron. So low iron doesn't just necessarily mean that we need more iron. It might signal that there's a breakdown somewhere in a processes in the body that we need to address and not just give the body more iron. And he talks about minerals, about copper and its interplay with iron.

And if this, I know this is the thing that many women, we'll sometimes see on labs, is issues with iron or ferritin, and I recommend doing your own research and kind of delving into some of those resources if that's something specific to you. Also, just to rule things out, if there's liver stuff going on, there are lab tests and easy screenings for hepatitis and or you can do things like ultrasound or a scan for non-alcoholic fatty liver disease.

So like I said, this is rising on a population level. I had markers that pointed to this when I was in an inflamed state. I no longer have those markers. Similarly, I at different times had ultrasounds of both my liver and my thyroid and that those showed issues in the past and now both don't. So I do think, like I said before, the body is infinitely and amazingly capable of healing when we give it the right inputs, not a thing anyone does to us.

The body heals when it's given what it needs. But I saw those things change specifically in my own life. Okay, now I wanna go to, into detox myths versus reality. Because seemingly when it comes to liver health, there's maybe a lot of myths. Some of them probably related to marketing of products but I do think because liver is so important, it's something we want to understand deeply, be gentle with and certainly befriend and nourish in the best way possible.

So I think one of the big myths here is that we need to do extreme cleanses to kind of cleanse our liver. The liver's already a cleansing organ. It knows how to do that, and it can struggle when it gets backed up or it doesn't have enough of something it needs to do its job.

So rather than taking harsh things that are designed to quote, cleanse, or detox the liver, it's more about understanding the building blocks the liver needs to naturally do what it already does best because the liver's constantly detoxing. So it needs raw materials that support its natural processes and it needs less incoming burden.

And I think this is a big one in modern society, both between things in our lifestyle, in our diet, in our stress levels, in our even emotions. According to the Chinese medicine and German new medicine perspective, the liver deals with a lot. So if we can reduce the burden of things that the liver is dealing with, that alone sometimes can give the liver the ability to catch up and to start detoxing effectively.

And then if we can understand and give it through food or through, sometimes when helpful, supplementation, the building blocks it needs, it knows exactly what to do. There's also a myth related to sweat and toxin removal related to the liver. Sweat is amazing. It's part of our detox pathway. I highly recommend it.

I've talked a lot about before sauna and how much a fan of that I am, and I've done podcast and blog posts about that. Definitely not saying don't sweat or that sweat isn't helpful for toxin removal, but specific to the liver, it's just a different pathway. For the liver the primary routes we're gonna see, exit of the body and detoxification, are through stool and urine. So other things are eliminated through sweat. It's very important. But when it comes to the liver specifically, we're looking more at our urine and our stool. So sauna is great for, as the Finnish sauna study shows us for cardiometabolic health, it does support detox pathways and overall elimination.

It is something we can overdo if those pathways are compromised, but it's not a substitute for what the liver does for phase two, for phase two nutrients or for proper bile flow within the body. So just saunaing alone is not gonna support the liver in the way some of the other things we can do might. I also hear a lot of talk about binders in the context of detox and related to the liver and to detoxing.

And I do think these have a place. However, I actually personally use a lot of caution with binders and I think these are tools for very specific context and I would only use them under very specific context. Personally, I don't think they replace fundamentals and especially when it comes to the liver, I think if the fundamentals aren't being addressed, they actually can kind of either mask the problem or contribute to the problem. So I don't think binders alone actually are liver support at all. And I just wanted to address that. The good news is there's a lot of evidence backed strategies and nutrition and inputs that we can do specific to liver health.

And this is what I really wanna concentrate the bulk of our time today on because I think that we can get a tremendous payoff when we understand this and just become a little more aware of it. It doesn't even take tremendous effort. Sometimes small shifts here can give the liver tremendous help. So, some of the things that have been studied to be in a supportive role for the liver are protein, which of course I've talked about before.

But specific to the liver, getting adequate protein supports some of these processes I've mentioned. The amounts vary based on the study, but I've seen anywhere from 1.4 to 1.8 grams per kilogram a day of natural protein sources, clean protein sources, to supply glycine, cystine, taurine, and other amino acids for conjugation. I find I've talked about this before as well, but eating about 40 grams of protein from natural food sources at breakfast has been really helpful for this, for me. And I also try to always include a few at least egg yolks, preferably raw, which if you want detailed science on all of this Justine Cellular Nutrition on Instagram does a lot of great videos that really go into the science and the explanation of some of these things.

I'm a big fan of her work, but I try to, for both the fat-soluble vitamins and the choline and the protein, try to get 40 grams of protein plus some egg yolks at breakfast every single day when possible. Another one that relates to the liver from a dietary perspective is cruciferous vegetables like broccoli, kale, cabbage, et cetera.

Because these contain sulforaphane and indole derivatives that support phase two detox. So you, if you tolerate cruciferous vegetables, some people don't do well with these, especially if detox pathways are compromised, but you can add a couple of cups a day of soft cooked or lightly steamed.

There's also a supplement called BrocElite which I've done a podcast about before that is the only stabilized form of sulforaphane that I have found in supplement form. And when I didn't do well with cruciferous vegetables as I was healing, likely because of compromised detox pathways, I found that supplement helpful.

I also personally don't eat large amounts of kale and spinach or any raw cruciferous vegetables. Just personally, I feel better without those, and there's some evidence that especially raw, but especially kale and spinach do contain large amounts of oxalates, which can be problematic for some people and in big enough amounts are problematic for pretty much everybody.

The alliums category of foods, which would be like garlic and onions and sulfur rich foods like eggs also feed the sulfation pathway. So this is a reason I added egg yolks to my breakfast. And Dr. Terry Wahls who reversed her own MS also talked about this category as a big part of her daily diet for specific reasons as well.

Due to the metabolic and hormone things I talked about, fiber can be supportive of the liver as well because it can help bind and work with the process of bile and estrogen metabolites, can support the gut liver access. This one also can, it's very personalized. If someone has different gut issues going on, they might not tolerate fiber well. You can get fiber from things like legumes, from chia seeds, from vegetables of course, and from low sugar fruits.

This is one that if I noticed, if I didn't have enough fiber in my diet, I had to start slowly. I think I had some gut stuff going on when I was also working through the thyroid issues and the liver issues, and so I had to start slowly here or I would get some kind of gastrointestinal distress, but assuming they're tolerated, cruciferous vegetables can be helpful here as well as can alliums and fiber.

One category I'm a big, big fan of, and like I said, I'll do a whole podcast on this soon, is choline and phospholipids. I think these are often overlooked and really, really helpful. In fact, this was a huge missing piece for me because when I was dealing with the thyroid stuff I wasn't eating eggs because I didn't tolerate them well at the time, and they showed up on food sensitivity tests and tended to make me itch, which I now have a lot of theories as to why.

But I was avoiding eggs entirely. And at the time I was not getting any choline from a like dietary or supplement. And when I started taking choline, it was life-changing. It felt like a light went on in my brain, my body felt better. I noticed an immediate difference in my energy levels. And so that's one I'm a big fan of.

And like I said, I'll go much more into depth in that in a future episode. Food sources of this would be raw egg yolks, liver, salmon, lecithin. The choline is great for supporting VLDL export and preventing the fat accumulation that comes with non-alcoholic fatty liver disease. And this one was a huge one for me.

It is when I actually supplement as well, and I'll talk more about that later in this episode. But it's one of the few supplements that makes my regular rotation that I feel really, really good from. Very happily for me personally, maybe not if you're not a fan, but coffee, seemingly, there's evidence to support that it can help the liver as well.

The research seems to look at two to four cups a day being associated with lower liver enzyme elevations and lower risk of fibrosis or cirrhosis. Obviously this would be coffee without loads of additives or creamers. And also related, but not the same, things like coffee enemas are often suggested for liver support.

This is more controversial. I have written about coffee enemas and I can include a link to that blog post. So you can read about that if you are interested. Like I said, that one's a little

bit more controversial. There's more evidence on orally consuming coffee, though I am actually personally a fan of coffee enemas and I do them every so often. I feel like they are a little bit of a support for the body's natural elimination pathways.

There's some obvious lifestyle factors that also relate to the liver, one would be limiting or avoiding alcohol. That's where we used to see fatty liver disease. In fact, that's why we now have a non-alcoholic fatty liver disease is because we know that alcohol is a stressor around the liver, especially in large amounts.

What's lesser known is that large amounts of fructose, especially added fructose and sugary beverages, can have a similar effect on the liver, and I feel like these are worth avoiding whenever possible. As well as there's some evidence that ultra processed foods and manmade fats can stress the liver as well, and might be contributory factors to the rise in non-alcoholic fatty liver disease.

These tend to drive stenosis and oxidative stress as well. I have a lot of theories on how the many ways some of these things affect the body. I feel like if you are willing, avoiding ultra processed foods categorically benefits the body in many ways. I personally avoid vegetable oils and manmade fats for the same reason and focus on natural fats.

And especially add in really nutrient dense superfoods like egg yolks and animal fats for this particular reason. There's also, as a category, we hear a lot about omega 3's. I'm not a fan of supplementing those, but I am a fan of getting them from dietary sources like fatty fish. And I eat sardines a few times a week, partially because it's a very inexpensive protein that's also a great source of selenium and omega 3's.

But this is one that can, is in literature shown to help triglycerides and help with the liver fat component. And especially when we avoid excessive industrial seed oils as well. There's also a whole category of lifestyle factors that seemingly are connected to supporting the liver and the good news is a lot of these things are either inexpensive or free and have other cascading benefits to the body as well.

One that's a category a little bit more nuanced, but we know that weight management and improving insulin sensitivity can benefit the liver. Even a 5 to 10% reduction in body weight can reduce liver fat in non-alcoholic fatty liver disease.

And thankfully the body does of course know how important liver is and seems to prioritize and get rid of that fat quickly when it is supported in doing so. Small habits like movement, post meal, even a 10 to 20 minute walk or resistance training a few times a week, supports mitochondria, supports lymphatic function, turns out is also good for the liver as well.

A big category that I think people don't talk enough about, and that's often ignored, but for me created statistically valid lab changes was becoming more aware of my circadian rhythm and making this a priority. Great thing is this is free. It just requires some understanding and a little bit of habit shift.

The big categories here are getting sunrise, morning sunlight every single day, and this one I feel like is so overlooked, I say this a lot, if you haven't tried it I highly encourage you to give it a try for 30 days and see how you feel. But just getting your eyeballs outside, not through window, not through glasses or contacts outside as soon as possible, after waking up and at sunset or sunrise every single day can make a drastic difference. And when I was healing and had very low energy, I would sometimes set my alarm for sunrise and just very groggy, walk outside and lay in a lounge chair outside to get that morning natural light. And this one is free.

I feel like a lot of us don't do it. We're willing to take expensive supplements and do all these expensive therapies when one of the best therapies is available to all of us for free every morning. For me personally, I also found from a circadian perspective that an earlier eating window made a big difference, and this has been surprisingly controversial when I've talked about this in the past.

Even if I didn't eat in a restricted window, but I just ate earlier in the day, I noticed a difference and I noticed the most difference when I ate within an earlier eating window of about eight hours every day. So like at 8 or 9:00 AM to 4 or 5:00 PM window, that included getting super nutrient dense, breakfast with 40 grams of protein, tons of micronutrients and tons of healthy fats, and then eating throughout the day, but stopping around sunset.

I know that's hard people, of course, there's outlying situations. If you live in a place where there's only two hours of sunlight per day, that's not gonna work for you in the same way. Obviously use common sense here, but I notice a big difference when I did that and stopped eating a few hours before bed, stopped eating when it was dark outside, and ate enough and more earlier in the day, I noticed a big difference.

Similarly, just minimizing or eliminating late night food and alcohol can make a huge difference on circadian rhythm and on liver health. The liver has a clock. All of our organs actually do. The livers is loud, so when we support our circadian rhythm, we directly support the liver, and it can make changes fast when we start supporting it.

Hydration and minerals. I talk about them a lot. They're important for a lot of things. They're also important for the liver because proper hydration and especially proper mineral consumption support bile flow and kidney excretion and kind of by correlation also support

the liver. Even mild dehydration or mild mineral deficiency can seemingly have a big impact here.

So these are pretty inexpensive to address, especially just hydration. I do a lot of things very specific to this every day, and I've talked about that I'm gonna do a whole series on minerals in these solo podcasts, but personally, I make sure to consume enough but not too much water, and that includes sources of sodium, which I've done podcasts about.

Many of us are actually not getting enough of magnesium, potassium, zinc, and then in smaller amounts, other minerals as well. We also wanna make sure we're aware of our gut liver axis and that we are regularly eliminating having regular stools one to two times a day. Things like constipation are a flag we wanna look at because that can be stressful to the liver and we can do things to help like movement, magnesium, changing up our diet, probiotics and fermented food.

Lots of things can help digestion, but we wanna make sure we are effectively eliminating every day. And in the same way, we wanna make sure we're understanding and addressing bile flow and gallbladder support as well, because these things work in unison. The liver and the gallbladder are very related.

So some very basic things that come into play here are getting adequate fat in our meals, which triggers CCK and bile release. Very low fat diets, especially for extended periods of time, can stagnate our bile and kind of slow down these detox pathways we're talking about. Things like bitters can also be helpful before or during meals, which can be in supplemental form or from foods like arugula, radicchio, dandelion, lemon, et cetera.

And then there's a whole category of nutrients that come into play with gallbladder, liver, and bile support. There's varied research on this, but the ones that come up often are things like taurine, glycine, choline, which again, the whole episode on that coming soon, artichoke leaf. These are all specific to bile composition and flow.

One caution here, if you have known gallbladder issues or symptoms, you don't wanna add in big amounts of these until you have gotten medical advice related to that, because you might move things around and cause some problems. There's also a category of supplements with evidence for plausible mechanisms of liver support.

I think these are all best done after addressing the foundational fundamentals. I've talked about the circadian rhythm, hydration, minerals, the basics. But thankfully there are a lot of supplements that we can use when needed and that I've experimented with some, to help support the liver as well.

I'll link to one that kinda has a lot of these things I'm gonna talk about in the show notes, which is a liver formula from Organifi, and I cycle that occasionally. Some of the recurring compound supplements, nutrients that I see in the literature and that I hear from a lot of people that have helped them with, specific to liver, are n-acetylcysteine or NAC.

Which I took in a dose of, I think I varied between 6 and 1200 milligrams per day. But this is a glutathione precursor and it supports redox status, podcast on redox coming soon. I also, I dunno if it will have aired by the time you hear this one, but I did a fascinating podcast with Justine Stenger that I will link to if it's aired that really touches on Redox.

I think this is a misunderstood thing in the body and can be very helpful. Glycine is another one. I now take actually usually a couple grams of this per day. It also supports sleep and I find it helpful. But it's a conjugation and glutathione cofactor, so this amino acid can be directly supportive of the liver as well, as well as taurine.

Dose varies in the studies, I've seen anywhere from 5 to 1500 milligrams a day, which helps with bile acid conjugation and membrane stabilization. Of course with any of these, do your own research and work with a practitioner if you have anything going on with your health. These are just ones that I experimented with personally.

Phosphatidylcholine is hands down one of my favorite supplements and one of the few I take very often. And I take usually a couple grams a day and I find this is really helpful. I, like I said, I noticed my brain felt like it turned on when I started getting choline after not getting it for years. But it's also studied for membrane and VLDL export support as well as like it since it supports our phospholipid membranes, kind of far reaching benefits to everywhere in the body. From an herbal perspective, milk thistle is probably the most talked about herb for the liver. There's mixed data on this. Seemingly it can help enzyme normalization and antioxidants effects and give some support to the liver.

It's not what I started with. I did experiment with it some. Curcumin is also sometimes mentioned in liver studies usually with meals for its anti-inflammatory effect. However, this one does have potential drug interactions, so check with the practitioner if you take any medicine. The other one I often see mentioned is berberine.

I suspect this one is helpful because it helps with insulin resistance and metabolic syndrome. And like I said, the liver is connected there. It also can interact with medications though. What to be careful about. I'm a big fan of vitamin A, but high dose supplemental vitamin A can be no bueno for the liver and for lots of things.

So I prefer to get vitamin A from food sources in normal dietary amounts personally. Also concentrated green tea extract can be stressful or harmful to the liver. Brewed green tea is considered typically fine, but there's a hepatotoxicity risk to concentrated green tea.

Personally I have not ever taken acetaminophen because it's well known potential stressor to the liver.

Seemingly if someone has something specific liver going on, this would be another thing to be pretty careful with. And a lot of people actually get admitted to the hospital yearly, and some people even die from acetaminophen toxicity. So that's one from a liver perspective I've just always avoided.

And then of course, like I said, alcohol has an impact on the liver. So this is one that, especially if you feel like your liver is struggling, can be great to minimize or avoid.

So a practical kind of four week liver friendly reset action plan. If you wanna kinda add in a lot of these factors and experiment and see what works for you, this is kind of I tried to put some of the things that I tried over time into one place in a way that made them easily actionable and that you could kind of gauge what was working for you.

So week one, kind of first line of defense would be things like avoiding alcohol and sugary drinks, adding in more protein to kind of hit protein targets. Adding in cruciferous vegetables and taking a walk after the two largest meals of the day. So not anything super intensive, not adding any supplements or anything that first week, but just kind of doing those foundational basics.

In week two, If you feel good from those changes, someone could experiment with adding in coffee or for me, I was already drinking coffee. The first kinda supplements I experimented with were NAC and glycine, adding more fiber to my diet in that week, and then bitters with meals.

Week three if those things are feeling good, other things I experimented with were adding in omega 3s from sardines and lots of phosphatidylcholine. That one, like I said, has made a huge difference for me and really tightening my sleep and eating windows, getting morning light and adding in a little bit more movement. And then week four is when I added in other supplements specific to liver support like taurine and like the liver support formula.

During that time, I personally was tracking my energy, how I felt post meals, my bowel habits, my skin, my menstrual cycle, and then also my waistline and how tight my rings were for kind of an idea of what might be going on. I also personally did lab testing at the beginning of this whole process for me, and then also every few months to see what was changing.

Brief note also on special context and safety with the understanding that I am not a practitioner or giving medical advice, but obviously it bears saying that if you have any kind of medical issue going on to get specific support for that. Anyone who's pregnant or

breastfeeding should be very careful about adding anything in and check with a midwife or doctor first, especially in the category of detox, typically not something you would wanna do during those times other than supporting the body's natural detox pathways.

Certain medications and supplements can interact negatively with liver disease. So those would be things you'd wanna check with if you have known liver disease or take any medications. And then we know that acetaminophen and alcohol especially together can be very problematic. I'm careful with those even on their own, and I personally have avoided both of those for quite a long time.

Now, to, as we get close to wrapping up, I also wanna briefly touch on the traditional Chinese medicine and German new medicine perspective on this. This is not studied in a clinical sense, and this may not resonate with some of you, however, I saw some interesting correlations here for me personally and wanted to at least mention them.

So traditional Chinese medicine, for them, the liver corresponds to what they call the wood element and the flow of chi. The emotion they associate with liver issues is anger and frustration. And the things that often are recommended in traditional Chinese medicine, from what I've read to support the liver, include movement, breath work, they have acupressure points specific to this, and sour and bitter flavors, which bitters are recommended in the clinical context as well. So I wouldn't say these replace medical care, of course, but I did find, for me, especially, it was interesting, the anger and frustration connection that was resonant for me personally.

German new medicine, which I haven't done a podcast on, but I, other than I did do one with my friend Lauryn Lax, and that one's fascinating. But German new medicine looks at the association of emotional conflicts and physical issues, and in this perspective, they proposed that liver symptoms can relate to specific biological complex like survival and starvation complex.

So kind of things we can't digest or process or unmet survival needs. So these aren't, of course, studied in conventional medicine, but I do feel like for some people this could resonate psychologically and would be worth delving into as well. Briefly, my story, because this has already gotten longer than I thought it would.

When I was working on reversing autoimmunity, liver health was also a thing I addressed, and I think it was helpful in things like getting estrogen in healthy ranges, helping with metabolism, thyroid hormones, over time. And the categories I addressed first were my nutrient levels, so protein, choline, cruciferous vegetables, et cetera.

Circadian rhythm, categorically I think was drastically helpful. Movement and targeted supplements specific to what was going on with me over time. Especially when it comes to

the liver, I, like I said, it knows what to do, but if it's been struggling for a long time, it seems like layering and patience come into play.

My biggest wins came from consistent fundamentals and a few well chosen supplements over anything drastic or big. And just to summarize and kind of give a key takeaway here, as I said in the beginning, I don't think that the liver is a thing we need to detox from the outside. I think it's a thing we need to befriend and understand so that we can support what it already does better than anything from the outside ever can.

So supporting the system that already is detoxing us, give it the raw materials it's asking for, reduce its toxic burden and inputs that it doesn't need, keep, make sure our bile and our bowels are moving and that we are moving, and because it's involved in circadian rhythm and hormones, focus on those as well.

The good news is starting with food and lifestyle and sometimes targeted supplements can make a big difference pretty quickly because the liver is so important and because it responds so fast. So if you have tried any of these things, if you will try any of these things, I would love to hear from you and what's worked, what didn't work, what you've tried, what you haven't tried.

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