



Gut health and chronic fatigue

Guest: Ben Brown

Disclaimer: The contents of this interview are for informational purposes only and are not intended to be a substitute for professional medical advice, diagnosis, or treatment. This interview does not provide medical advice, diagnosis, or treatment. Always seek the advice of your physician or other qualified health provider with any questions you may have regarding a medical condition.

Sarah Jackson - [00:00:15]

Welcome to this interview. My name is Sarah Jackson and I'm the director of nutrition at the Optimum Health Clinic. I'm delighted to be talking with Ben Brown today. The nutrition team at the OHC have been very, very lucky to have had one to one training with Ben, in the good old days when we could meet face to face in the clinic. I've had the pleasure of attending many of Ben's lectures, so thank you so much for contributing to my conference and welcome Ben.

Ben Brown

Thank you. It's a real privilege and honor to be here, so I'm looking forward to getting into this conversation.

Sarah Jackson

Fabulous. So in today's interview, we're going to be delving into the connection between chronic fatigue and gut health, which is more important than ever to look at, given some of the characteristics we're seeing with both ME/CFS, but also looking at long COVID.

So before we get into that, I'd like to give you some background on my guest, Ben, who I'm pleased to say, is a fellow Aussie. We're both missing home I think bit at the moment. Ben's a science writer and a speaker specializing in nutrition and functional medicine. He's an author and contributes regularly to industry magazines and scientific journals. And I know you've had published work in CFS quite a lot in the past, and we've referenced that quite a lot here at the clinic.

Ben is a founder and director of the Nutritional Medicine Institute, contributing editor of Integrative Health Care and Applied Nutrition, is a consultant and director of Clinical Education for Pure Encapsulations, here in the UK and in Ireland. And he's on the advisory board and lecturer of BCNH, the College of Nutrition and Health.

Ben's one of the UK's leading educators and he hosts the Positive Health podcast. So there's a bit of a mouthful. You've done quite a lot in this area, Ben, and I know you're a huge advocate for the way that we approach CFS and ME, in terms of an integrative, patient centered approach here at the clinic. So first, I'd like to know a little bit more about what it is about ME/CFS that's drawn you to the research and to work in this area?

Ben Brown

Actually, like a lot of us, it was personal experience and in an indirect way, it was my own experience with CFS that led me into this field. So as a, as a teenager, I developed chronic fatigue syndrome. And it wasn't until I saw an integrated therapist that I started to get better and that got me interested in self care. And then, you know, I eventually went on years later to study natural medicine. And I guess it was... For me that was a driving force is that my own personal experience, it got me interested in my own health and taking care of myself.

I didn't really realize the power of lifestyle, medicine and nutritional medicine until I experienced that. And that was quite pivotal, pivotal and something I've tried to do. You know I'm a bit of a generalist, but something I've tried to do throughout my professional career is support integrative care for chronic fatigue syndrome and ME because, you know, it's still... We've got a long way to go you know in providing better care for these these people. So it's nice to be able to make small contributions.

Sarah Jackson - [00:03:22]

It's fascinating. I actually didn't know that you had a history with the illness yourself.

Ben Brown

Yeah, yeah, yeah. So I don't mention it a lot, but that's yeah, that's how I got into it.

Sarah Jackson

Right. OK, yeah. I think if there's any silver lining to Covid it's that more money and more research is being spent in this area, which I, I hope and we feel confident will only benefit our ME community.

Ben Brown

Yeah, absolutely. I mean, I agree. I think one of the silver linings is that Covid is bought into sharp relief, the importance of nutrition, lifestyle and just optimal health. It was really clear early on into the epidemic that the main modifiable risk factors for Covid are lifestyle and nutritional risk factors. So it's, you know, we've been really lucky to see an explosion of research in this area, and I think it'll put us in good stead for the future.

Sarah Jackson

I know it's pretty simple, isn't it when you look at it really and all the evidence that's come out, you know, to just show that simple interventions that we can do with our nutrition and our diet can make such huge impacts on to the severity of Covid and then ongoing to long Covid.

Ben Brown

Yeah, absolutely. We just need more people to pick up on this. I think the research is there, it's just, it needs to start being translated into public health and the medical system, because at the moment it feels like it's sitting on the periphery and in the scientific literature, but it's not being communicated at large yet. But we'll get there. I feel confident of that.

Sarah Jackson

Yeah, absolutely. So I'm interested to hear from you. What you see is the connection between chronic fatigue and gastrointestinal health?

Ben Brown

Yeah, it's a good question. It's pretty broad, and I think you understand this, but for listeners, something I want to round this all in before we get into, sort of narrow discussions in certain areas related to chronic fatigue, is that chronic fatigue is very personal. And although we're going to talk about gut health, it's not necessarily the key factor for everyone and it's often part of a bigger picture. So it's not that you can, like, test your gut health, take a probiotic and get better. Like that doesn't work.

But with chronic fatigue, what we're looking at is a sort of multifactorial condition that varies from person to person. And often several things are at play. And we've kind of got to work on several different things at once to tip our system towards better health, basically, and better function.

Another way of thinking is that you're fine tuning different points. And to bring the whole system into better function. And gut health is one of those systems that we need to think about. It is really important. And we have known that there's an important connection there for many years. And for some people, it really is pivotal, but not for everyone. And the connections are really interesting, I mean, we can dive into that.

But fundamentally, I think what people need to know is if your digestive system is not functioning very well, it can give rise to symptoms of fatigue. And there are mechanisms that explain that. And there are different types of dysfunction we could talk about, but that's fundamentally it. And for a lot of people, that's a strange thing to grasp, is like, my gut causes chronic fatigue. It doesn't make a lot of sense because the fatigue is in your body and it's in your brain and we know chronic fatigue affects our immune system. So how is all that even connected? And that's a big leap for a lot of people.

But everything in the body is connected. Like that's the main thing that should be fundamental in medicine in general. And if there's dysfunction in one area, there's dysfunction in another. And this is what's happening in the gut. We've got dysfunction that's causing dysfunction in other areas that are manifesting as fatigue for some people.

Sarah Jackson - [00:07:21]

Absolutely. And certainly on the nutrition side of the OHC we'll always go to the gut first. And whether or not there are symptoms there of the gut, we need to ensure that those foundations, the fundamental layers of the gut are working well, obviously for absorption of nutrients, which is hugely important in terms of mitochondria function and actually making energy. What are some of the other mechanisms that you see as reasons why we look at the gut as one of the first places?

Ben Brown

Yeah, it's a good question. The history of the connection between chronic fatigue and gut health is really interesting to trace. And one of the first connections that were made in that area was by a researcher called Dr Michael Maze, who is still really prolific in chronic fatigue research and other areas. And his group... he was originally, he's not based in Belgium any more, but he was originally running chronic fatigue centers, medical centers in Belgium. And their group back in, I think it was like the early 90s, started testing the blood of their chronic fatigue patients for what we call endotoxin.

And for listeners, endotoxin is basically a gut derived toxin. It's produced by bacteria in the gut that can... If you've got a lot of, to simplify it, a lot of bad bugs in the gut or what we call a sort of microbial imbalance, you can create more endotoxin than you should be. And that can sort of seep into your bloodstream and then you can test it. And this is not quackery or anything, like this is really good science.

Sarah Jackson

It's hard science. Yeah. It's been backed up by considerable, excellent research.

Ben Brown

Yeah. And we're actually talking about what a lot of people call leaky gut and that was like sort of relegated as insane years ago. But now it's... We have top gastroenterologists and scientists all around the world talking about leaky gut. And Michael Maes' group were the first to really link that to chronic fatigue. So they looked at their patients and they found that there were high levels of, what we call antibodies to endotoxin in the gut of their patients. And then what they did is they went, well, if there's high levels of these antibodies, let's put them on a program designed to try and reduce those, so like fix their gut, and improve their gut health.

And we can go into specifics later, but they did some very simple things with diet and a few nutritional interventions. And they tracked these people over time and they saw that the endotoxin kind of went down over time. And that correlated really strongly with symptomatic improvements. In fact, it

predicted it, meaning that if your symptoms were still stuck, your endotoxin was not going down, but if it was going down, the symptoms are going down. So there's a really good correlation, there suggesting that, well, leaky gut is contributing to chronic fatigue type symptoms.

And his group and others now have gone on to delineate mechanisms or explain the mechanisms for that. So the, one of the core things we think is happening is these endotoxins activate inflammation in the body and they damage the mitochondria so they negatively affect the mitochondria. And I think everyone who's listening to this conference probably has a bit of insight into the mitochondria by now. But these are the energy producing organelles of the cell, these little energy powerhouses. And if they're not working well, you get fatigue. So it's gut bacteria making toxins, get into the blood, damage energy production.

But if we fix that, we can reverse things. So that is one of the most beautiful examples of how gut health can affect fatigue and energy. And we're still working with that. Like I know the OHC is working with that concept in practice. It was really fundamental to our understanding around the gut chronic fatigue connection. It's really helped direct treatments as well.

Sarah Jackson - [00:11:27]

Then to come back to, sorry, just to come back to the functional, the functional medicine model. We can talk about LPS and the connection with the liver as well can't we? And it's just such a good case in point to show that it's not just one system in the body, it's everything. And it's how it has such a big systemic influence on everything else doesn't it? That information is such a big driver.

Ben Brown

Yeah, absolutely. It really does connect a lot of dots. And, you know, a question we're often asking, and when we're practicing functional medicine, is like we're not looking at diseases per say. We're looking at dysfunction. And one of the core types of dysfunction we're looking at is this chronic low grade inflammation. So a question we're often asking, is so, a patient has inflammation, where's it coming from? And often the answer is the gut. Because of this connection with gut derived endotoxin and so-called leaky gut.

Sarah Jackson

Yeah, yeah, exactly. And I'm really interested in the research that's come out in the last few years showing the difference between someone's gut who has CFS/ME and someone who doesn't. So we can actually prove that, you know, with these changes in the gut microbiota, the condition has real physiological effects, doesn't it? And I know some of the studies that came out in the last few years show lower levels of bifidobacterium, and faecalibacterium and higher levels of bacteria like alistipes, which are the top biomarkers of ME/CFS with IBS.

But then there's a whole other picture that happens with people who don't have IBS or CFS because, of course, a lot of people do, but not everybody has IBS alongside. Can you tell us a bit more about what this gut bacteria has to do with the ME/CFS picture?

Ben Brown

Yeah, absolutely, and as you rightly put it, so basically, all of us have a diverse ecosystem in our gastrointestinal tract and getting a handle on this medically is really tricky because it's so diverse. It's like looking at a forest and trying to work out what's wrong with the forest. It's really complicated ecology, basically. And there's a lot we don't know and some we do and some we can make assumptions from. But it's pretty early days in all this. But I think a simple way to put it is, and you beautifully explained it, is when you take a group of people with CFS or IBS, I'm not grouping them together, it's different conditions, and then contrast their gut ecology. So we've got these really sophisticated tests now where we can look at the forest, like look at 40, 50 different biomarkers related to their ecology or more even.

And when you do this sort of thing in practice, and when it's been done scientifically, and in research, you see clear differences between healthy people with no gut symptoms or no Chronic Fatigue Syndrome and those that do have either IBS or Chronic Fatigue Syndrome. And so it's suggesting that there's something going on in the ecology.

Now, you know, association doesn't mean causation, meaning that just because we're seeing that doesn't mean the gut bacteria is to blame necessarily. But we think there's something going on for sure because there are mechanisms, as we just saw. Some bacteria produce toxins and slow down our mitochondria. Others have other effects on our immune system, oxidative balance in the body. There's all these complicated mechanisms. But the point is there is core differences in ecology. And are there key bacteria that we need to think about? Well, one of the dangers, firstly, before getting into key bacteria or thinking about this, is that we've got to think about this more like a forest. So it's not like you've got a bad bug and you kill it with an antibiotic and then you get better.

Sarah Jackson - [00:15:17]

Wish it was that easy Ben.

Ben Brown

Yeah, yeah. But the problem is a lot of people still thinking like this and it isn't like that at all. And what we're talking about here is ecology, not nasty bugs and antibiotics. It's how do you sort of balance things. So it's more about like... The way I'm starting to think about it, it's more like nudging things in the right direction than it is going in and chopping out trees, you know what I mean? So it's... And how do you even do that? We don't know. And where do you even start? We're not really sure yet either.

But as you pointed out, there are a few generalizations, I should say, that we can think about with CFS. And in general, I think when we're looking at gut ecology and trying to improve the health of it. So we have things like dysbiosis indexes we can use now that give us a bit of a guide. We've got things that are a little bit more robust, like low bifidobacteria is a great example. I think it's one of the more robust biomarkers we can be looking at.

Sarah Jackson

And that's something that we do see in clinical practice all the time when we run stool tests and we look at our patients.

Ben Brown

Absolutely. And that's a great example. I mean, you mentioned others, but I think just focusing on low bifidobacteria is interesting because it's not only an interesting biomarker, it's also actionable.

Meaning not all lab results and biomarkers in the gut in general we can do something about but this we can. And, what we know is that you can rapidly change low bifidobacteria in pretty much everyone by doing some simple things with diet and sometimes supplements like prebiotics in particular are very good at this.

Sarah Jackson

And it happens quickly, doesn't it? That change can happen in a matter of just a couple of weeks or a month even.

Ben Brown

Yeah, and it's probably, for some people it's probably happening within days. We're just not tracking it that quickly. But you're right, in a follow up test in a week or a few months later, it's often a lot better. So, yeah, it works really well. And sometimes that will nudge symptoms in the right direction as well. So if we know something is going on there, we're giving an example of a prebiotics, something that

improves bifidobacteria in the gut. You see increased levels on retesting and that'll often be linked strongly to symptomatic improvement, particularly in IBS and sometimes fatigue like symptoms. But certainly IBS tends to respond quite well to that.

Sarah Jackson - [00:17:55]

Can you just speak a little bit more specifically on what those probiotics could be in terms of, you know, just even looking at food that we could start introducing into the diet.

Ben Brown

Yeah, it's a good question. And I think food is a very good place to start. I think where frequently when we think about gut health, people often make this leap to supplements like probiotics and prebiotics. But I'm a, I'm definitely a food first kind of person. And I think we underestimate frequently the power of food. I think eating an apple daily will do much better for you than most probiotics and and prebiotic supplements, for example. Like, it just, it's natural, it's safe, it's cheap, it has a great effect on gut ecology, like these simple things.

But there are certain foods that will improve gut ecology. And without getting into like... What I should do actually is sort of track some of the overarching ideas around this. So for years we thought, you know. High fiber foods were the way to go, so it's like eat more fiber, like prebiotic fibers. So like, I don't know, you know eat whole grains and beans and legumes and this kind of stuff, and it'll help improve your good bacteria. And it definitely does that. And we've known that since the 70s, even earlier. And we call this prebiotic foods, there's lots of them, but it's basically whole grains, fruits, vegetables and legumes and things like that all broadly fall into that category.

And then more recently, like a few years ago, everyone got into fermented foods. So now we learned that some naturally fermented foods contain bacteria. So it's a bit like a probiotic, but natural. So everyone's crazy for those. And then we learned that polyphenols, so the phytochemicals found in plants like tea and chocolate and berries...

Sarah Jackson

Well there's nice spices as well.

Ben Brown

Yeah, spice is a great example. Like, so these polyphenols, they're not even fiber and we eat them in tiny milligram amounts in these foods have really potent effects on our gut ecology. So adding like a little bit of tumeric to your dinner in cooking has this huge effect on your gut microbiome like who knew. So we call these the three P's, like probiotics, prebiotics and polyphenols. But where it's all going now is like basically everything we eat has a prebiotic probiotic type effect.

So amino acids do it, vitamins do it, fatty acids do it, macronutrients do it. Like everything has an effect. So where I'm going with it all now is like you need to step back and start reducing things to individual food components and go, well, actually your whole diet is probiotic. In fact, your lifestyle is probiotic. We can talk about lifestyle factors later. So everything you're eating is affecting your gut ecology. So step back and think about what is the overall composition of my diet and how can I better eat to improve gut ecology?

And when you start thinking about it as a macro view like that, you get away from these individual components or even individual foods and go, well, what are some interesting ideas that would help guide me there? And one of the best, I think that's really come out in the literature in recent years and has been translated into practice, and my friend Deanna Minich's been quite good at this, and Miguel Toribio-Mateas, has been really pushing this as well, is this diversity factor, right. So the idea is this, is that you've got a diverse gut ecology like a forest, and all these plants don't eat the same thing, they don't rely on the same environment and nutrients. So you need to encourage the growth of this rich, ecologically rich forest. So how do you do that? Will you eat a rich, diverse diet? Because different

bacteria specialists for different foods and food components. So you really need to eat lots of different things to encourage diversity in the ecology.

So simple practice is like, it's just increasing the diversity and color and different colors of the food that you're eating, because color is a very good indicator of different nutrients and the diversity of nutrients. So I think where we've gone with all of this is really from like fiber in the 70s to probiotics, which just went crazy and then fermented foods. And now we're coming back to the future almost, in that it's actually, it's about the whole of your diet. And that is one of the most powerful things you could be doing to improve overall gut ecology.

Sarah Jackson - [00:22:42]

Absolutely. I love your idea of the three P's and the abundant diet is going to produce an abundant, diverse microbiota, isn't it?

Ben Brown

Yeah, absolutely.

Sarah Jackson

It's simple really when you look at it and eating the rainbow, I mean, that's something that we talk day in, day out to our clients about is, you know, trying to get 8 to 10 portions of vegetables, and that rainbow, it really is as simple as that to make a big significant impact on the gut microbiota, isn't it?

Ben Brown

Yeah, it is. And it's really underestimated. Like, diversity is really key. And the thing is, although people often think they're eating diverse diets, they're not like the average diversity of fruits and vegetables in the United Kingdom is about twenty four, twenty six, something like that. That's the range that people are eating.

Sarah Jackson

And I think about two, maybe two or three portions a day. I think that's the latest stats. If you're lucky it's two or three portions a day.

Ben Brown

Yeah it's like, it's crazy and what we know is historically like pre-Industrial Revolution, people were probably eating closer to like three/five hundred different plants regularly in their diet. Try and find a person today who's eating that level of diversity. It's quite rare. So it's really about switching things up, trying new things, using lots of herbs and spices, eating seasonally, like all of these concepts that were really intrinsic to our diet for many, many years that have been lost and eroded with the industrialization of the food supply. It's sort of bringing back some of these ideas I think.

Sarah Jackson

Because I know a lot of the people listening, you know, are probably interested in IBS specifically because we do see it so prevalent in so many of our clients. And I know it's something that you've written extensively about, especially in relation to CFS/ME. I'd really love to know your opinion about why you think having IBS, or not, has a big impact on this gut bacteria.

Ben Brown

Yeah, so I guess some... One of the... With irritable bowel syndrome, it has so many similarities to fibromyalgia and chronic fatigue and ME in that it's not one disorder. It's a constellation of things that are different for everyone that result in symptoms that are similar. It's like the same with chronic

fatigue. You have fatigue, but what's causing it? And the same is true of IBS.

I wrote a paper a few years ago called, *Does Irritable Bowel Syndrome Exist?*. And pushing forward the idea that probably it doesn't, it's probably one of, I think I identified about 20 or so different possible causes that could be driving the symptoms. So you need to look below the surface and try and find what's what's causing it. But the thing with the gut bacteria is that although IBS is a really diverse illness, one of the most consistent findings you find in IBS patients, it's pretty much true of everyone, is the gut bacteria is a mess. Why is probably different for everyone. But fundamentally it's a problem and that's good news in that it gives us a focal point for intervention because we can change the gut bacteria.

And as you pointed out, like, with low bifidobacteria you can do that within days and with people with IBS sometimes, not all the time. But focusing on the gut bacteria and improving the ecology can result in really significant symptomatic improvements for some people really quickly.

So it's a very useful thing to understand is that the gut ecology and microbes really have gone awry in patients with IBS that are strongly contributing to symptoms, there are mechanisms for that and improving them can really make a massive difference. And as we're talking about chronic fatigue, it's not improving just gut symptoms. People with IBS don't just have gut symptoms. A gastroenterologist will maybe think that. Well, not pigeonholing gastroenterologists, but you know what I mean. Like, if you're a specialist then all you're focusing on is the gut but actually people with IBS often have chronic fatigue and fibromyalgia and headaches and anxiety and depression and, you know, and a whole host of other problems that go along with it. So it's not just a gut disorder.

Sarah Jackson - [00:27:03]

Absolutely. It's the gut, brain connection isn't it. There's so much more to it. And as you rightly said before, we're only just scratching the surface, but knowing the impact of the gut on neurotransmitter production and that whole connection with the vagus nerve is so fascinating. And it's been an area that we have looked at quite a lot.

So just to give somebody with IBS a bit of hope, as you touched on before, you know, a lot of people just kind of get fobbed off and think they've just got to accept those symptoms and there's nothing that can be done about it. I'd love to know a little bit more about your ideas. Apart from the diet, is there anything else people could do in terms of lifestyle changes to help improve those symptoms?

Ben Brown

Yeah definitely and it's something that's often overlooked is the simple importance of lifestyle changes. And one of the things I'll say is a bit of a caveat again, is that some of these things are not the cause and they're an important part of overall therapy. And if we look at this as an integrative approach, exercise and yoga and mind body therapies are part of the road to get better. It doesn't mean that if you're doing mind body therapies that IBS is all in your head. And it doesn't mean that if you are told to exercise, just going for a walk is going to fix your IBS. Definitely won't, but it will help. And that's what's important, and there are actually a whole host of lifestyle changes that can make a huge difference.

But the big ones are in fact, stress management. And mind body therapies can have a huge impact on symptoms. And I think this comes with a special sort of disclaimer in that because IBS and chronic fatigue as well, as often been relegated, as a psychiatric problem and people are sometimes told it's all in their head, which I think is a tragedy. It's not true. It's physiological, but when your gut or your energy systems are affected, your brain and central nervous system is a part of that. And what you're actually doing with mind body therapies is you're using a top down therapy, meaning you're harnessing the power of your brain to improve clinical symptoms. It doesn't mean it's in your head, but it means you can use your nervous system to get better, which is amazing. It's free, it's cheap, and it can make a huge difference. So mind body therapies are really big.

Exercise is really important. Most people are not exercising enough and just going for a walk regularly, it doesn't need to be much, can have a huge impact on your digestive system function and improve gut transit, reduce pain, reduce gas. It does have measurable and important benefits. So that is a really big one.

And then another big one that is perhaps a bit overlooked is some sleep and circadian rhythm disruption. And this is a sort of environmental thing as much as it is a lifestyle thing, because we often talk about sleep problems being more like insomnia, like I can't fall asleep at night, but I can tell you that just as important, a factor that's just as important as how much you sleep, is how much darkness you're exposed to. And often that's independent of the amount of sleep you're getting.

So what I'm saying, in other terms, is that the dark night cycle is just as important as whether or not you sleep and that darkness exposure in the evening has really powerful physiological effects that affects melatonin synthesis. A thing a lot of us know is that lights go out, you make melatonin and it helps you sleep. I think what a lot of people don't know is that your gut makes melatonin and your gut is under a circadian rhythm, meaning it's contractions, function even it's microbial ecology is part of that circadian rhythm. So you really need to train yourself with good, dark, light rhythms. And that means just get rid of the electric lights, get off the smart phone, turn the lights down, get some red blocking blue light blocking glasses if you have to. Whatever you change the light bulbs so they're blue light blocking. These kinds of things can actually help a lot and really help and train that rhythm. Dark curtains in the house to block out ambient light, if you live in a city there's a lot of light pollution. So those kinds of things can be really key.

Sarah Jackson - [00:31:38]

It's such a good point and I'm really glad you brought up melatonin, because I guess I wanted to have your thoughts about covid and long-covid. And I know that there's been a lot of research showing the anti inflammatory reaction of melatonin and what that can do for the immune system and how important that is in terms of covid's severity and long-covid as well. I know you've been researching long-covid quite a lot and covid presentations so I'd just love to have your closing thoughts on that.

Ben Brown

Yeah, absolutely. So I think, it looks to me, it's very early days and the research is very fresh on this, but it looks to me like we're going to see a wave of chronic fatigue on the back of covid. Sorry to tell you. Please get more people into your clinic to help people because it does look like that. We saw that with previous coronavirus outbreaks. This is well documented. There was a lot of chronic fatigue development off the back of that.

As you know, but maybe listeners don't, is chronic fatigue is very frequently post viral. So I think what we're going to see with long covid is actually, it's just a new name for chronic fatigue syndrome in a lot of cases. Let's hope that that fuels a bit more interest in chronic fatigue syndrome, an investment in research and care. I really hope but chronic fatigue for so many years has been really relegated to the sidelines. But let's hope long covid really stimulates a bit of investment in taking CFS/ME more seriously.

Sarah Jackson

I think you're right and people like Dr. Fauci in the states talking about post viral fatigue syndrome and the very close links between that and CFS/ME is getting into that popular sort of mainstream. And it's funny that you said we should get more people into the clinic, because actually in the last couple of months, we've employed five new members of the team because we are so busy with people that are now suffering long covid. And we felt as a clinic, we have so much experience and so much expertise in post viral fatigue syndrome, and a lot of these symptoms that are crossing over between CFS and long covid, that it is absolutely an area that we spend hours and hours and hours as a team researching and it's what we are equipped, well equipped now to deal with the influx. It's devastating to think that the numbers are going up. But it's, you know, on the plus side, there's a lot that we can do, and especially the quicker people get onto it and the quicker people look at dietary and lifestyle

interventions, that the less severe those cases should be. We feel confident on that. And the data that we're pooling from the people we've seen and we're working with already, it's looking positive.

Ben Brown - [00:34:23]

Yeah, that's really great. And I think you've touched on something that's really important there. And I'll sort of paraphrase it a bit and agree with you. And that is that I think your best place, integrative medicine and functional medicine is best placed to deal with long covid because chronic fatigue syndrome, ME is really, the way we've been approaching that for years is really the model we need for long-COVID.

We're the best placed people to be dealing with this. It's not going to be easy. It's going to be a diverse condition with varying presentations from person to person. It's definitely not going to be a simple fix. But this functional medicine type approach where you're taking you know, it's patient centered, it's personalized, you're looking at multiple systems and trying to improve overall function is how we're going to get people out of this. So it's good news that people are turning to the clinic here to get better because they couldn't go anywhere better.

Sarah Jackson

Yeah. Thank you for that Ben I really appreciate all of your support with the clinic. And we really appreciate you sharing your years of both personal experience and all the research and hard work that you've devoted to this area. So thank you so, so much for joining us today.

For people who'd like to find out more about you and your work and listen to your podcast, how can they do that?

Ben Brown

Yeah, simply, you can look up *Positive Health* podcast on any of the podcast platforms. And if you want to connect into to other things like newsletters, social media, etc, just go to scientificwellness.com.

Thanks again for having me. It's been a pleasure.

Sarah Jackson

Thank you so much, Ben. I really appreciate your time today.