Research Behind FMT for Your IBD Transcript

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Introduction and Guest Background

Welcome back or continue our conversation on reversing Crohn's and colitis. I'm your host, Sinclair Kennally, and today I am joined by the wonderful Dr. Natalie Scheeler.

She's a naturopathy doctor specializing in integrative treatments for gastrointestinal conditions, early replacement therapy, and also cardiovascular risk reduction in modern med.

She completed a two year general medicine residency at Southwest College of Natural Medicine Medical Center and best your university with her education from Johns Hopkins and her focus on evidence based approaches, Dr. Scheeler is dedicated to providing comprehensive care for patients interested in an integrative approach.

And she also just happens to be an expert on FMT, which is why we chose her to be included today. We wanted to make sure that you guys get the lowdown on what FMT is, whether or not it might be right for you, and some things to consider before even diving into further research and talking about this with your practitioner.

So welcome Dr. Natalie. It's great to have you here. Thank you. I'm excited to be here. I'm excited for our conversation. I'm really curious why you're you got into FMT, but not everybody even knows what that means.

Can you explain what fecal microbiota transplants actually are first let's start there. Yeah. Yeah. So FMT or as you said fecal microbiota transplant is essentially taking the stool from a healthy person and translating that into another individual with the goal of reintroducing beneficial microbes into the gut.

And so that's essentially what the process is similar to if you're doing a blood transfusion or etc.. We're taking a healthy individual and putting it into another individual with the hopes that we see some kind of beneficial outcome.

as far as how I got into FMT, I actually accidentally landed there. So I started in my second year of residency. I was working with a provider who saw a lot of inflammatory bowel disease and is an expert in FMT as well.

What FMT Is and Why It Matters

And so I started training under him and I saw how amazing this treatment can be for so many people and what, the benefits that people are getting. And as many of the people listening in the audience know that that as far as where we are conventionally treatment options for inflammatory bowel disease, they are limited.

If they work for some people, they work, they can work really well. But there's a lot of people who do not see the benefit that they're looking for. Get to that. Ultimately said remission for conventional therapy.

So there's a really large need for for additional therapies. And I think F and T as a it's really promising to be one of those potential options. Okay.

So I want to understand from the we have a couple of people in the audience today. Right. And we talked about this. We have folks who are brand new and you know, their health seeker journey.

They've just been gotten some news. Finally they they finally have a diagnosis like colitis or Crohn's. And they're trying to understand it. there's also folks in the audience who have defied diagnosis and suspect, you know, they're basically having to diagnose themselves because they haven't found practitioners that are really up for the job and helping provide a gold standard treatment of care, you know, treatment yet.

So and then of course we have my beloved somewhat junkies who love to inhale information. The, the CEO of their own health. They're just looking for some advanced nuggets today.

So don't worry guys we have something for all of you and of course for our wonderful colleagues, practitioners in the audience that are looking to stay up to date on FMT and how this might fold into your practice.

So before we go there, can you help the audience understand, like how did FMT become such common practice? Like what is the history of FMT? It sounds a little wacky.

Is this scary? You know, what should we be thinking about? Help us understand. Yeah. Yeah, absolutely. So FMT actually has a really interesting history and a very long history.

So is first documented use back in the fourth century. It was used by a Chinese physician. And what they did is they took fermented stool from healthy person and made it into a broth.

And they would give that to somebody who had diarrhea or any kind of digestive illness. and it was kind of termed yellow soup. And so there's a dirty little joke that it didn't stick around because people aren't really interested in consuming poo stew.

but we do see it throughout history after that point, too. We see it in 17th century. We see it again in veterinary medicine. It was very popular to use with cattle and metabolic or digestive diseases.

History and FDA Status of FMT

and then in the more recent history, we see, in 1958, there was a doctor, Doctor Isom, and he had treated for patients who had, Pseudomonas colitis, which is an inflammation of the lining of our large intestine, which can happen secondary to an infection called if we at that point didn't connect it, to see that if we didn't come about till the 70s, but at that point, they, the those patients were unresponsive to antibiotic therapies.

And so he treated them with FMT and he treated them successful. So resolution in that sort of membranous colitis. And so that really pushed for more research in FMT.

Is this a viable medicine that we can use in in, in this century. and then ultimately in, in 2000, 2001, we started to see a new strain of CSF become more rampant.

Could have been that infection. and so that pushed our research in microbiome and FMT even further. And then, in 2013, FDA said that they would look it up and t review FMT as an investigational new drug.

And then eventually in November of 2020, we had our first FMT product approved called Re biota. And then in April 2023, we had our second, which is oral capsule form called the mouse.

And so ultimately in the United States, where we are right now, FDA only approves the use of, FMT for treatment resistant CHF, meaning somebody has a C infection, takes the, standard of care, which are antibiotics, doesn't have the appropriate response.

And so at that point, then they are then there is an FDA approval. So unfortunately with our IBD folks, even though there is research to support that use, we're not at a place where it has been approved by the FDA.

And so what that ends up looking like is that people will do this on their own, or they can go outside the country. There are a few options outside the country that you can go to for I think t as well.

As is Europe further ahead than they usually are and things like this. Yeah, yeah. So there's a there's one of the more popular clinics in the UK. and so a lot of people look at their.

Got it. Okay. Makes sense. Yeah. So can you tell us a little bit more about the research to support the use in ulcerative colitis or in Crohn's disease?

Yeah. Yeah, absolutely. So I think I can go through both because they're a little bit different. So on the sort of colitis

side with ulcerative colitis just as a primer for everybody.

So we're on the same page. The inflammation that we see is in that large intestine versus in, Crohn's disease. They can see that inflammation anywhere throughout the digestive tract.

And that matters because of kind of location of where we're administrating the FMT. If we're doing it through a colonoscopy or an enema, the results might look different for, somebody who has inflammation in their colon versus somebody who has inflammation higher up in the digestive tract.

so as far as ulcerative colitis and the other thing too, as far as what we are looking at from a clinical perspective and also a research perspective, is that there's a few steps.

So first, what our goal is is to get somebody into symptomatic remission, meaning that we're not having the diarrhea abdominal pain cramping, button stools etc..

And then second step is what we call serologic remission. So we're looking to see that the markers of inflammation CRP, sedimentation rate, fecal cow protection, those are all normalized.

and then the later steps that are just as important. Oftentimes I'll see people, kind of get to that symptomatic and serologic remission and then give themselves two thumbs up.

I'm good to go. But really, ultimately what we're looking for those later two steps, which is endoscopic remission, meaning when we look with a scope, whether through an Oscar or colonoscopy, and we don't see any signs of active, disease, and that if we and then final step histologic remission, that if we biopsy that we don't see any active disease.

And the reason those are important is because if we have the endoscopy and it's got back in historic remission, that gives us the better outcomes down the line of all the things that we're trying to prevent as far as chronic inflammation wise, like strictures, cancer, main maintenance, remission, etc..

So that's ultimately what we're looking for. And so just as helpful as is thinking through some of these studies that some look at some of those things and not others.

Research for Ulcerative Colitis and Crohn's

And so just helpful background. but so for ulcer colitis. So in the earlier trials that we started with, with 20 tens and it started to get more popular, what we saw was about they were treating with 1 to 6 FMT treatments.

And from that those research studies, we see about 25 to 35% of the patients who received FMT, reach clinical remission versus about 8 to 10% in the placebo group.

So that's kind of where our foundation was more recently. We're getting more and more research out. And so we're starting to look at additional things as far as using a FMT for maintenance.

So people who are in clinical remission and continuing the use of that. And then also, increasing the dosage from, from 1 to 6 at the initial therapy and seeing if that's more effective.

and so one of the studies that I find more recently that I find super interesting was done in 2019 out of India. and it looked at patients who, reached clinical remission from multi session FMT, but then were divided randomly into either maintenance up into you receiving FMT every eight weeks via colonoscopy or they were given placebo.

And so what they found is that, 87% of the patients in the FMT group maintenance group versus, 67% in the placebo group maintained that steroid free clinical remission.

And then even more importantly, we see that endoscopic remission 18 out of 31% or AGM 31, which is 58% in the

FMT group, reach that endoscopic remission and then, in historic remission, we saw 45% of the FMD versus 16% in placebo.

So that's really exciting that we're seeing that, we're seeing these additional outcomes if we continue to use it. I think as far as myself and a lot of other providers that we're using or recommending a FMT, discussing FMC with patients with, Crohn's, colitis, we talk about doing, an increased initial treatment, so doing about ten sessions initially and then depending on obviously how the person responds, considering that for eight weeks, doing some 1 to 2 maintenance treatments and then tapering that out as, we progressively get into a better and better place.

And so what's exciting is now that we're seeing research to support that and that we're seeing more beneficial outcomes, versus originally people were less excited about the FMT research with just using one treatment, one or just a few treatments one time.

and not seen as exciting numbers as we were hopeful for. But now we're seeing with more and more studies that we're more positive and exciting results.

and yeah. So I think this is really interesting. And I obviously we're looking at a range of outcomes here and we're looking at, you know, maintenance versus actually trying to turn the corner on a full blown, you know, disease state.

So maybe I'd like a general process overview. It would be super helpful for the audience. Like what does this look like. You know undertaking like as of today's understanding clinical understanding as of the studies right now, you know, what would best practices be like screening yourself?

Am I a candidate or not? Screening and donor? I'm going to do this on your own. Like what does that part look like? Yeah. So as far as best practices if you're doing it on so at this point you will want to find a donor.

And so generally we recommend screening all donors. and, and that's because we want to prevent the passing of infectious diseases, from one person to another.

And so generally speaking, if we're looking for a donor who is generally healthy, eating a, having regular bowel movements one a day ish, and then is eating a diet that is would be general promoting of a, beneficial microbiome.

So it doesn't have to be anything super strict or intense, but including vegetables, fiber, etc. that would promote a healthy microbiome. The other thing to do is we want to kind of avoid, people who have chronic diseases, autoimmune diseases, other GI disorders.

we're still very, very early in our research of the microbiome. And so we want to be as cautious as possible. And so, so generally speaking, we want to avoid any of those kind of chronic diseases.

It is it can be difficult that for many that is a unicorn that we're looking for. oftentimes people will use family members or children. And that's totally an option to, what we see is that for children that the microbiome around three years old, as far as diversity wise, becomes, like the adult microbiome.

And ultimately, what we do know is that more diversity is more beneficial. And so, so around three is when that happens. But I have had patients who abuse newborn babies and even younger and still see beneficial effects. There.

so generally, that's the kind of person that we're looking for. Next step would be when we, we believe that we found that person would be to do screening.

And so there's blood testing and stool testing. blood testing. We're looking for things like, HIV, hepatitis, syphilis that we want to screen for. If somebody is using an intimate partner or, immediate family member, they may forgo that screening because it is more likely to be passed, through another, source versus the stool.

but that if if we're being the most, kind of comprehensive include that blood testing and then stool testing. So we always, always, always want to do stool testing regardless of the donor, regardless of how healthy they are, regardless of the age.

So what we're looking for Ccdf.

Donor Screening and Safety Considerations

and then we do a stool culture of just common, GI pathogens and then over and parasites. It's very, they're it's very possible that people who are healthy can be carrying these pathogens but not have symptoms.

And so if we give yeah, if they're not having system symptoms that there is a pathogen present and then we give it to another individual, especially if they have IBD and their immune system may not be as strong that they, that we can start to see I can see an infection occur.

thank you so. Much for saying that, because we have so many people in our practice that are like what I my all my symptoms started. I carry parasites, all my symptoms started with a stressful life event.

Yeah, but look at your entire health history. Like, look at the symptomology of this. Like, these were they were very. You were just able to tolerate them until the straw that broke the camel's back.

So don't assume just because you're asymptomatic that there aren't parasites a part of the picture. Your body is just healthy enough to withstand them right now.

And of course, that may not be true for the what would you call that? The transplant recipient works you make that might be. Yeah, yeah. But you're I mean you're totally right to and and even could be that that we can see we are learning too that there's a little bit more of a spectrum between bad and good when we're talking about some of these bugs.

And so that there can be some of these that we have conventionally thought of more on the negative side, but they can live and, in a, in a healthy microbiome act and a healthy microbiome and not have pathogenic effects.

But if we place them in somebody else who's maybe immune system can't keep it as low or the other microbiome by imbalance doesn't keep it as in check that it can become problematic.

And that's obviously not what we want to do with somebody with inflammatory bowel disease, especially oftentimes we will talk about this. We can do it in a flare if somebody is in a flare, or just not in a in a group.

Optimal space typically is when you are doing it. So yeah, we want to be cautious of that. And I think I mean, for even young, young kiddos who haven't been exposed to a lot, there can still be young kiddos can see different patterns of symptoms.

I think it's about like 30% of kids under two. Gary CDF. And so, really something that you want to make sure and always, always, always do. My number one, make sure that you are doing this.

So testing. Yeah. And I know that there's going to be some audience questions coming up. So I'm just kind of sensing into that right now. One of the things that, I love about our community is how thoughtful and caring people are, like, okay, my child is really healthy.

I feed them organic food. You know, I've been very careful about antibiotics, which of course, I want to unpack antibiotics with you for both the donor and the recipient if we have time today.

but, you know, they're looking at their child saying, hey, could my child help heal other people or could my child help heal? You know, the person in my family who's struggling with ulcerative Crohn's or I mean ulcerative colitis or cracks?

What do you say about that. Yeah, I would say I mean I say certainly, I mean as long as you are still going through the proper testing, as I mentioned to at three years old is where we kind of see that diversity that we are looking for.

But even in young, young kids, we've I've seen them be used as donor very frequently and we still have beneficial effects. And so hopefully that's where eventually with research we start to see, we're able to piece out more what makes the kind of quote unquote best donor or terminate the super donor to what we're looking for in those regards.

But I've certainly seen really good effects, from young kiddos, especially if they are antibiotic naive and haven't had any of those things at this point.

that's great. And that kind of leads us to the antibiotic portion of it, at least for for the donor. We are looking so obviously majority of antibiotics have effect on our microbiome or a large effect on our microbiome.

And so the goal is to to have the donor not have had antibiotics in this in the past six months. and infrequent antibiotic use in general, with the goal that we want the most diverse microbiome that we can, possibly have with somebody that's had it within a 3 to 6 months time frame.

I kind of, I say a yellow flag. It's hard because this donor, as I mentioned before, can be a unicorn. And so sometimes when we were doing cost benefit analysis, we were it's really an individual, choice.

Do they feel comfortable with that? But if we're talking about kind of, optimal quote unquote optimal or our preference, it would be six plus months, very minimal to never, if possible.

Right. That makes sense. I mean, you think about how closely into like the gut microbiome as not just to the obviously the health of these locally experienced conditions in the digestive tract, but also just in on your mood, your attitude, if you get one course of antibiotics, whether you're having, 23% increase chance of anxiety and depression over the following year, if you get two courses of antibiotics in a year, that goes up to over 60% likelihood of experiencing depression.

So what are we really intentional about what we're inflicting on ourselves here? You know, and obviously we're doing this to round out the microbiome or considering.

Yeah. Yeah, 100%. Yeah. What other factors should somebody be considering if they're sourcing their own donor, or considering yeah. Let's start there.

Yeah. So I think, I mean, just screening is a big part. It's helpful if you're able to work with the provider to help guide you through it and really tailor it to what would work best for you, for you, depending on where you are and and what that looks like.

obviously that's not always possible, but it's so knowing what safety profile looks like is helpful and I can go through that. as far as so the main thing that we think about is infection.

Number one, we want to do the screening so that we can avoid effective infection. The other kind of main safety concern is that theoretically, that when we are transferring stool from one person to another, they can if there can be food antigens in that stool.

So if the recipient has a true allergy, say, to peanuts, then we would ask the donor to remove peanuts for their from their diet for a week prior to donation and and throughout if they're doing it frequently.

and that's out of an abundance of caution. but we want to be really careful and mindful of that. So that's number two.

How FMT Is Prepared and Administered

And then number three kind of major safety thing that we think about with FMT is what we call a quote unquote mechanical complication. And so in the clinical research setting this can be from either the tube through endoscopies or they can do through the nose or colonoscopy.

There's always a risk of perforation if we're putting a tube anywhere, into another tube, like an esophagus, stomach, small intestine, large intestine, very, very small risk.

But that's possible in the home front. But we're thinking about is that we're typically doing it through enema because it is easiest when you're preparing and doing this at home.

and so theoretically there is a concern if somebody is in severe inflammation in that colon. Our rectum is very friable. there, if you insert the enema there is that risk of perforation very, very, very small.

And I can tell people if you're in pain out, that's not supposed to what it's supposed to feel like to prevent that from happening. But that is that is a risk.

So those are the three big ones that are really helpful to know if you are going to do this on your own and be cautious of, I can also I kind of walk through the general process of what it looks like to make the donation that that would be helpful.

Yeah, I think it's a great idea. Anything that we can do to flesh out people's experience. And then I want to make sure we leave a little bit of time to zoom out and help people understand where does FMT fit into, you know, a larger course of action from, you know, sourcing for root causes for, you know, Crohn's and colitis to, you know, what to try first before FMT or you know where that fits in.

But let's absolutely let's cover this part first okay. Yeah. So just a quick overview of general process. So say we found the donor screened the donor.

We now collect the stool. And so when we have the stool donation we we recommend you buy a new blender one that you're not planning on using again or have used before.

So this would be a FMT only. It doesn't have to be anything fancy. but taking the, donor stool filtered water, blending it together, we want the consistency of about people.

We strain that to remove all the larger particles and that would tends to be easiest platform is that we, for what we call the quote unquote fecal slurry into an enema bottle and then insert the enema rectally, hold on to it for about 46 hours, if you can, and then, as I mentioned before with IBD goal is to start around ten treatments, initially ten consecutive ish treatments over a 10 to 14 course day, and then consider maintenance doses from there.

So that's a general process of what that looks like. Just to give people an idea of what you would be in for if you do choose to do this on your own. So you guys, I am not the weirdest person out there.

and the nicknames for me is the Coffee Animal Lady. So, it's so you're familiar with those enemas? Dark color, brown. How to use an enema bucket. Yeah. Okay. And just.

Yeah. What else? Yeah. So I guess that's the basic overview. there is some recommendations that we can talk about as far as dietary prep before generally speaking, we ask people to limit their diet to kind of promote, not promote the likelihood of their current microbiota, because we essentially want to starve and then introduce the, the new microbiome.

But once we start that fmt t process as tolerated, there's obviously a lot of, people who have trouble with certain foods, especially fiber with inflammatory bowel disease.

But if I tolerated it starting to increase that fiber and, microbiome. What about promoting foods? those are the kind of big guys there is. Do you want to clean out before, whether that is from a large volume enema or something?

like magnesium. The day before or all of those are options to. Yeah, that makes sense. You're not going to be guys. You're not going to hold a 4 to 6 hour enema.

and one of those poo slurry, unless you have really clean shirts, you don't waste the treatment. You're going to go through this next week. Exactly. What else.

So it makes sense. Like, let's not irritate the gut with foods that are known to be inflammatory beforehand. what can you expand a little bit on what you said?

Like, we we want to starve out the current gut microbiome. Can you share that thought process? Yeah. So actually this is a can be a little contradictory because some of these foods tend to be more inflammatory.

so again, it is it really ultimately is tailored to the person. If somebody is really diet sensitive, then I wouldn't say who these foods because we know that you'll feel worse if you were to include them.

And we can kind of pass by this stage a little bit more, but essentially low fiber foods. So unfortunately oftentimes those look like very processed foods that just have no fiber left in them.

Maintenance Use, Root Causes, and Closing Thoughts

Or it's skinning, fruits or vegetables to remove, avoiding the higher fiber fruits, vegetables, taking meals off, etc. and things like that. Right, okay. Yeah.

So, you've mentioned a couple of times throughout the interview the concept of maintenance. So bring in FMT to help maintain the progress made, perhaps with other therapies for Crohn's or colitis or also maintenance doses after FMT.

What does that look like? What is a initial course look like? And then, you know, progressive maintenance doses as needed. Yeah. With a most commonly when we're doing if somebody is using FMT for maintenance, it is typically because they have induced remission, from FMT that they use the initial treatment for whatever the symptom severity is.

and then using FMT from there to continue. And that's what we've seen so far in research, in that one study that I mentioned was the FMT for maintenance was used in those people who had induced remission from FMT.

But generally, if somebody is in maintenance or in remission and comes interested in FMT, it is certainly a conversation. It's obviously not something that I would say no, don't do.

But the question is, do we want to break what's not or don't fix what's not broken kind of thing? If you are on maintenance, where you are, if you're in remission, where you are, do you want to change that?

That could be a yes because they need blah, blah, blah, blah blah. All of these list of one things to keep them in their remission, and they're looking for something more simplified and seeing what that would look like.

And then that would be a total response. Absolutely. Let's pull back on some of these things and see kind of where we want to do that. FMT but it raises the question of do we just use it for maintenance or for remission maintenance only if it's not needed.

and then and ultimately too, it's not the easiest process. So the goal is to get somebody if we're using it to induce remission, we want to get them into remission and we want to keep them there, but we want to use as little intervention as possible.

And so it's certainly a conversation because there's some people who have more health preferences to do, to be more proactive and want to do them more frequently, even without symptoms.

There's some people who prefer to be less proactive with their health, and so maybe they keep it in the freezer and when they start to feel a little bit off, or they do regular kind protecting screenings and see a little bit bump, then we decide to do that.

FMT so there's not at this point a set or I don't have a set recommendation for my patients. It's really discussion of what makes sense for them and what their health preferences are.

And kind of where we are with that. I mean, any, any course of action for Crohn's are colitis be highly tailored to the patient anyway, right. Because there's a range of root causes for these conditions.

Let's just, you know, acknowledge that. My favorite thing that you said in this entire interview is that we know very little about the gut microbiome, and that is so true.

I can't stand it. But we have people come on and they're like, yes, and we know everything and it's all over. And no, we don't do minimal understanding of what is going on.

And so let's approach this with curiosity and stay up to date on the latest research and understand that this is, you know, best practices as of today.

You know, it's an exploration. It should be tailored to you. Yeah. And I feel the same way about inflammatory bowel disease as far as root cause, obviously we know that that it's an interplay between genetically susceptible, people and then our immune system and environment and that environment can be a multitude of different things.

One of those things being microbiome. But we're still figuring it out. I mean, we know there's certain things that are negative and in our indicated, but we're still figuring it out.

And so again, I really like what you said coming up with curiosity. And it doesn't mean we can't do anything about those things or just have to sit, but we have to keep all of that information in my I kind of respect the limited information that we have, and so that we're acting safely when we decide to intervene.

I guess. Yeah, that's beautifully said. What a great place to end. Where can people find your work? Yeah. So I practice out of modern med modern and we are based in LA.

But do you see patients out of state. and so I am license in California, Arizona, Maryland, Vermont and Connecticut. and so if you're in those states and I'm able to see you as a patient, if you're outside the states, we do do, educational consults.

And so it can kind of talk through and maybe help guide, guide you and your stats or finding appropriate care of where you are. So both options. Thank you so much.

Yeah, absolutely. Thank you.