EPISODE 251

Hidden Causes of Digestive Issues & The Bloat Cure – With Guest Dr. Robynne Chutkan

Shawn Stevenson: Welcome to *The Model Health Show*. This is fitness and nutrition expert, Shawn Stevenson, and I'm so grateful for you tuning in with me today.

I want to share something really interesting that just happened to me. I was at the track- racetrack at my old high school, and I took my youngest son along with me, and he's six years old, his name's Braden, and he just- like I have to stop him from doing everything that I do. It's amazing.

And I don't know if you've ever noticed before, but kids don't seem to get tired like we do, right? They can just like reset, reset, they're not really breathing hard. It's like, 'Bro! How are you-?'

And I think a part of it is like they're not just carrying as much around, you know? Plus I think they're a little bit lighter as far as like their psychological weight that they're carrying, too. You know? It's just a lot lighter.

But anyways, so I'm doing some sprint drills, and he's doing everything with me, and I'm doing a backwards sprint. And you know I'm moving, I'm moving pretty well, but there's a couple that's walking around the track and they literally come over to me, and the guys stops, and he's like, 'You must be an athlete. You're an athlete, aren't you?' I was like, 'Yeah I guess. Back in the day.'

And I was like, 'You know, I actually went to school here,' and we started talking a little bit about the high school days, and how I broke my hip in high school, but not from playing football. This was during track season because my bones were so brittle.

Long story short, diagnosis with a degenerative bone disease, and ending my hopes and dreams kind of thing.

But I didn't get to that part of ending the hopes and dreams. So after we were done talking, he says, 'So where did you play in the NFL?' I was like, 'What? Where did you get that idea?' It was so shocking but kind of cool, I guess it was a compliment, but it was just kind of outside his paradigm to see a guy out in kind of this age bracket performing like that, just really going 120 and doing these different things, moving my body in this way, and really just expressing myself.

You know, and so he wasn't that much older than me, he was maybe fifty, right around there, but I thought it was a really cool story, and something really interesting because oftentimes people come up to me at the track and just like, 'Are you training for something?'

'For life! I'm training for life so that I'm ready,' you know? And that's what I really want to imbue for everybody listening as well, is that's what we're doing this stuff for, is we're staying ready so we don't have to get ready. Right? You never know what life is going to throw your way, and conditioning ourselves, we're able to better adapt when things present themselves.

You don't have to look like you're in the NFL, but if that happens, so be it. That's pretty cool. And so also a big part of that story and that experience was having my little son there. And my older son who actually plays football in the same place that I did, he recently broke his leg, his fibula.

And I was just talking to my guys here in the studio about that, and he's doing amazing for people who've been following us on Instagram, he's such an optimistic person. He's the most optimistic person that I know, and I guess I did something right in helping to make that part of his psyche.

But I felt worse than he did, and I even did a post about it because I was feeling a little bit down. And I'm a very, very optimistic person in general, but you know, when your kid gets hurt you start thinking about like all the different stuff you could have done differently.

But the reality is this is just- and for him he's looking at it as an obstacle for him to get better, you know? And he said, 'a minor setback for a major comeback.' Alright and he said this himself, and so I love it.

But guys, I'm really appreciative of you tuning in with me today. We've got an absolutely amazing guest on, and I just love her. She's amazing, and I love her books, they're so important.

'The Microbiome Solution.' We had her on not too long ago, it's been a little while now, but we talked about 'The Microbiome Solution.' She's one of the people really getting this conversation out into our kind of major civilization and popular media as well, and it's super important stuff.

As you guys know, all health really begins in the gut, and there's really nobody better in the world. So I'm really excited to have her on today.

Before we get to our incredible guest, I want to give a quick shout-out to our green superfood blend that my son- both of my sons are on, and myself included, and my wife, and all my friends and family, I get this for them or they get it for themselves, Organifi.

So often people come to me and are like, 'Shawn, what do you think about this multivitamin, this multivitamin, that multivitamin?' I don't think about it. I don't think about that multivitamin because most of them are synthetic, and they're also processed not really adhering to retaining the nutrients that are in that food.

Because there's a difference between magnesium in its natural state and magnesium that's been heated to devastating temperatures, alright?

If you look at Mendeleev's Table of Elements, for example, that's measuring the ash. That's one form of magnesium. Magnesium exists in many different forms. There's different forms of magnesium, there's different forms of B-12, there's different forms of vitamin C, and now this is really starting to come forward in the field of nutrition that we're realizing like we know maybe 5% of the stuff we need to know.

But what we can do is look to our ancestors, and part of the formula that we see with Organifi is amazing. We see spirulina, 71% protein by weight, super high in beta carotene, very, very good source of magnesium as well.

Also rare nutrients like fikosianin which has been clinically proven to increase stem cell genesis. That's literally the creation of stem cells. Amazing.

Alright and then it also has moringa, we have chlorella in there as well, we have ashwagandha, we have coconut water, all kinds of good stuff to make it taste good too.

This is the key, if it doesn't taste good, I don't want to be involved. And especially trying to have kids to drink this stuff too, it really needs to taste good. So head over, check them out. It's www.Organifi.com/model. So that's www.Organifi.com/model and you're going to get 20% off your entire purchase from here on out. Always you get 20% off of your entire purchase.

So head over there and check them out, get yourself some Organifi green juice. That's where you get the vitamins and minerals in a real bioavailable form from earth grown nutrients. Alright head over, check them out, www.Organifi.com/model, and now let's get to the iTunes review of the week.

ITunes Review: Another five star review titled 'So much,' by BasicLady101.

'I came across this podcast on a new adventure of my life. It's time to work on my health. As a sufferer of chronic headaches for the last nineteen years, enough is enough. This podcast has given me so many resources to finally get under the root causes, as I am the one who's been on a mission to clean up my lifestyle of being more aware of the things I do and what I eat.

It has not been easy, maybe even a little bit more frustrating, with all the resources. It's not always that easy of sleeping, eating better, and having the right thoughts. It takes time, effort, sweat, and tears to find your right path. You can hear that in all of the speakers that Shawn brings to us in this podcast. Keep it up to all.'

Shawn Stevenson: Awesome, thank you so much for sharing that with me. I truly, truly do appreciate that, and wow that really does mean a lot to me. Thank you, thank you, thank you.

Everybody, thank you so much for leaving these reviews over in iTunes. Please keep them coming! Alright it really helps to keep the show going, and it really just fuels me even more when I hear messages like that, so thank you so much.

Now on that note, let's get to our special guest and our topic of the day. Our guest today is Dr. Robynne Chutkan, and she is an integrative gastroenterologist and the author of 'Gutbliss: The Microbiome Solution,' and 'The Bloat Cure,' which I have right here in my hands.

And she was educated at Yale and Columbia, and she's been on the faculty at Georgetown University since 1997, and is the founder of the Digestive Center for Wellness, an integrative gastroenterology practice incorporating microbiome analysis, nutritional counseling, and biofeedback as part of the therapeutic approach to digestive disorders.

She's also an avid runner, snowboarder, and yogi, and she's passionate about helping her patients live not just longer lives, but dirtier ones. And I'd like to welcome back to *The Model Health Show* Robynne Chutkan. How are you doing today, Robynne?

Dr. Robynne Chutkan: I'm great, and thank you so much for having me back on. I will add that it's a PG-13 'dirtier.' Dirtier as in dirt, not dirtier as in anything else.

Shawn Stevenson: Got it, even when I said it I was like, 'Huh this is kind of- I don't know. I don't know what that could mean.'

Dr. Robynne Chutkan: No rolling around in the dirt, micromes, rewilding, that kind of dirty.

Shawn Stevenson: Yes got it, got it, got it. And guys, we'll put her first appearance on the show in the show notes for you guys to check out, because you do not want to miss it. And just her amazing story of how she got into this field.

But I would love to know, first of all love your books. 'The Microbiome Solution' I think is one of the most important books in the last few decades as far as our health and wellness is concerned.

But I want to know, what made you write a book specifically on bloat?

Dr. Robynne Chutkan: You know, I like to say if I had a dollar for every bloated woman I see, I would be way richer than Oprah. It is such a common problem, Shawn. And it's one that the typical sort of conventional medical community really gives short trip to.

Sort of, 'Yeah you're bloated, not a big deal, but you don't have cancer, your gallbladder is fine, you don't have colitis, so don't worry about it.'

And I saw so many women- and not to generalize, of course this is something that affects men too, but I saw so many women who had been to see their doctor, their gastroenterologist, and really had come out of there with no useful information about why they were bloated.

Now the good news is most causes of bloating are benign. Constipation is a huge one, microbial, misarray if you will is another. But there are some causes of bloating that are worrisome like ovarian cancer, and so on.

So I really wanted to give people a guide so that they could be their own medical detective, and they could look at the book, it's organized in this A to Z, 101 things that bloat you, and they could go through and try and figure out, 'Is it my thyroid? Am I lactose intolerant? Do I have gluten sensitivity? Could it be an ovarian cyst, maybe not ovarian cancer?'

And so something that would be really actionable and a guide because I just felt like my medical colleagues really weren't addressing it.

Shawn Stevenson: I love it, I love it. And so the book is 'The Bloat Cure: 101 Natural Solutions for Real and Lasting Relief,' and it's actually not a very big book because you get right to the point, and I love that.

Dr. Robynne Chutkan: Yeah.

Shawn Stevenson: And there's again 101 things that you address, and I'm sure like people can maybe think of maybe five things that might cause them to be bloated. And I didn't share this earlier, or actually I didn't share this with you, but this was something that I was struggling with for about two years.

And it was like this kind of weird food sensitivity that developed when I'd eat certain things, I'd get bloated, and it'd be pretty painful sometimes. And it's because I've done some just ridiculous stuff to myself, and experimentation, and you know how it is, but just all the different supplements I was taking over the years to experiment, find out what does this thing do, that thing do, the different diets, and it caused some gut dysbiosis for myself.

And so I'd go from a flat six pack in the morning to some part of the day I'm looking like I'm having a baby, alright? Arnold Schwarzenegger- what was the movie when Arnold Schwarzenegger had a baby? Do you remember that one?

Pop quiz for anybody in the studio, nobody knows. Somebody listening is going to know, and shout-out to you for knowing this, you get a prize of knowing something pretty random and it may help you in *Jeopardy* one day.

But yeah, so addressing that and helping to really focus on rebuilding my microbiome was the solution for me.

And today I would love for us to talk about some of these huge things that are kind of just happening in the background for people that they might not realize are causing them to be bloated frequently.

And the first one, in your book one of the very first things is acid blockers.

Dr. Robynne Chutkan: Yeah.

Shawn Stevenson: How in the world could that be causing bloating?

Dr. Robynne Chutkan: Yes, and I'll tell you Shawn, I distinctly remember the first time I realized that these drugs that we tend to prescribe like candy were really a problem. It was about fifteen years ago at a Food As Medicine conference, and my friend Gerry Mullin who's an integrative gastroenterologist at Hopkins, a great guy, he's got some great books out.

He started talking about the effect of acid blockers on the gut and the microbiome. And you know, think about it, a dozen years ago, fifteen years ago, nobody really knew much about the microbiome or rather we knew about it but we didn't know how important it was.

And I remember listening to Gerry's lecture and just being riveted and realizing we are actually creating disease with a lot of these drugs. So let me walk you through what happens when you're on an acid blocker- a potent acid blocker like what we call proton pump inhibitors. A little purple pill, and others.

And keep in mind that these drugs are amongst the most commonly prescribed drugs in the world because when people have acid reflux and they take these drugs, these drugs really very effectively and efficiently block stomach acid, and what that means is you don't get that natural feedback that's so important from your body to tell you that something's wrong.

When you're having a porterhouse steak, and mashed potatoes with cheese, and a couple scotches at 10:00 at night, and you don't feel well, that's a really important

sign. That's important feedback that your body is giving you to protect you from doing it over and over again.

Shawn Stevenson: Right.

Dr. Robynne Chutkan: And so when you remove that negative feedback, you can really induce some damage. So these drugs block stomach acid virtually 100% and stomach acid is important for some really big reasons.

Number one, they provide the ideal pH to digest food. So when you don't have any stomach acid, you get maldigestion where you're really not absorbing and assimilating the nutrients properly.

And we know that because we know people who are on these drugs for years and years, or even sometimes for months, can end up with iron deficiency, they can end up malabsorbing fat soluble vitamins like A, D, E, and K, and this can actually lead to Osteoporosis and Osteopenia, and so on.

So this can lead to bone issues because of not absorbing vitamin D, and calcium, and other things properly. So maldigestion is a big one.

The other thing is that having an acidic pH provides the ideal pH for the digestive enzymes to work properly. So now the enzymes are trying to function in a different pH, and that's not quite ideal.

For my purposes, one of the biggest issues with them is that they cause an overgrowth of gut bacteria because they transform the stomach from a pretty hostile acidic environment where excess bacteria don't like to hang out to a very friendly alkalide inviting environment. Now you have overgrowth of gut bacteria in the wrong part of the GI tract.

Gut bacteria are really- as we go from north to south, from the mouth all the way down, the amount of gut bacteria increases, so they should really be concentrated in the colon. But instead you have increasing levels of gut bacteria in the stomach and the small intestine, and a form of dysbiosis called SIBO, small intestinal bacterial overgrowth.

It's really an imbalance issue, so these drugs can really create this problem or they can compound the problem, and somebody who has other risk factors like taking antibiotics, being a picky eater, and so on.

And I'm so glad, Shawn, when you talked about your story you mentioned this sort of background of dysbiosis because I see that so commonly. People might be struggling with thyroid issues, or lactose intolerance, or Celiac's disease, or Crohn's, but there is that background of alterations in the gut bacteria, and microbial sort of disarry- dysbiosis essentially.

And so even if they remove the lactose or get rid of the gluten, sometimes they're still not better because they haven't dealt with the imbalance. So it's such an important point.

Shawn Stevenson: Exactly, and of course you address that so much in 'The Microbiome Solution. And you of course talk about it 'The Bloat Cure' as well, because it's not just we're going to go in here- and I want to talk about this next; antibiotics and how this can lead to bloating.

Dr. Robynne Chutkan: Yes.

Shawn Stevenson: But just going in and kind of destroying the terrain, and that's going to solve your problems with something like SIBO, or some other kind of infection.

But we have to really focus on rebuilding with all the different stuff that we're exposed to, to kind of crowd out the bad guys in a way. So let's talk about that next. Let's talk about how antibiotics can play into this whole equation.

Dr. Robynne Chutkan: Well I'm so glad you mentioned the word 'terrain,' it's one of my favorite words these days, and we're really referring to the internal ecosystem in our bodies, and primarily in our gut.

And that soil needs tending the same way the soil outside needs tending. You wouldn't just go outside in your garden and drop some seeds in the ground and hope that somehow something useful grows. So you really have to prepare the soil, and cultivate it, and think about the sun, and the wind, and the rain, and what you're planting, and when the best time to plant it is.

There's really a lot of thought and preparation that goes into it, and the same thing. If your idea of remediating the problems that are going on are just to take a probiotic and call it a day, you're really not going to see meaningful repopulation and regrowth.

Antibiotics are really high up on the list along with acid blockers because a typical five day course of a broad spectrum antibiotic, the type that you would take for a sinus infection or a urinary tract infection, can remove up to a third of your gut bacteria.

And those species are really never coming back with the same vibrancy and intensity that they were there before.

So I like to use the analogy that it's sort of like taking a bath that's full of water, draining out all of the water, and then pouring a cup of water in which is your probiotic. And not to say that probiotics can't be helpful, but there's no probiotic out there that can completely mitigate the damage of an antibiotic.

And so the most important thing for people to know is that they have to use antibiotics judiciously. You can't just go eat some yogurt or take a probiotic and think that you'll be fine. So you have to be absolutely sure that the condition you're taking the antibiotic for is absolutely necessary. It's not something that's going to get better on its own, or you can sort of watch and wait. You've got to be really, really, really sure that you need to take it.

Shawn Stevenson: Exactly, thank you so much for saying that. And again, if your physician is against this approach, you can always find another physician because the goal here is to be empowered, and your physician should be more of a coach to help you with these processes.

And there's also testing that you can do to find out which antibiotic is specific for the thing that we're trying to target, right?

Dr. Robynne Chutkan: Absolutely, and so much of what people are being treated for are either self-limited things that will get better on their own, or they're viral and antibiotics of course don't work against viral illnesses.

Shawn Stevenson: Exactly.

Dr. Robynne Chutkan: But we're in this sort of quick era of medicine where, 'Here's a prescription, see you later.' It's a seven minute appointment, and so the point you made is so important, we really have to be advocates to be more empowered about our own health. And if you're having a monologue with your doctor where they're speaking at you rather than speaking with you, and it's not a dialogue, you probably need a new doctor.

Shawn Stevenson: Okay, yes. Oh you're the best. And by the way guys, that movie I was talking about earlier with Arnold, somebody pulled it up, it's called *Junior*. Alright, shout-out to *Junior*. 'I'm having a baby.'

Anyways, so Arnold movies.

Dr. Robynne Chutkan: A bloat baby.

Shawn Stevenson: A bloat baby, yeah.

Dr. Robynne Chutkan: People come into my office with bloat babies all the time, male and female, and I try to deliver them.

Shawn Stevenson: I love it. I love it, I love it. So let's shift gears and let's talk about something that's a little bit more probably off the radar for people when it comes to bloating. Let's talk a little bit about how alcohol plays into this equation.

Dr. Robynne Chutkan: This is a sad one. In the first book, 'Gutbliss,' I talked about SAD GAS as six of the things that can bloat you, and the SAD part is soy, artificial sweeteners, and dairy, and the GAS part was gluten, alcohol, and sugar. Or as some of my friends like to say, 'Well what else is there to eat besides gluten, alcohol, and sugar?'

Shawn Stevenson: Exactly.

Dr. Robynne Chutkan: But alcohol can be really problematic on a number of levels. It typically causes you to retain water, so in addition to causing bloating in the belly, it can make you puffy all over, and so that's one that can cause bloating.

It also damages the liver in excessive amounts, and most people would be surprised to realize that excessive amounts for women equal one or more drink per day, so seven or more drinks in a week, and for men it's around ten or twelve. So alcohol really puts a- sort of taxes the liver, and when you think about all of the other drugs that people are often taking that are metabolized through the liver whether that's a prescription drug or a supplement, that can really put sort of a toxic load on the liver, and that can be a mechanism by which people get bloating also.

Alcohol can be very hard on the lining of the stomach and it can cause a condition called gastritis, which means inflammation of the lining of the stomach. You can get swelling of the tissues and bloating on that basis.

So from the more mundane you had a few too many and you're puffy and bloated, to damaging your liver, to causing inflammation of the stomach, lots of ways. And of course more severe liver damage can lead to cirrhosis of the liver where you have a lot of excess fluid in the abdomen called ascites and you're super bloated.

Shawn Stevenson: Wow. This is a tough pill to swallow, and it's just again everybody, this doesn't mean that you can't enjoy some alcohol, but it's to be aware that this might be causing an underlying problem. And maybe you've tried a lot of other things, but now maybe we need to look at the- we'll just say the party time with the wine.

Because apparently this is a thing that happens. We go out, we have some dinner, we have a couple glasses of wine, then you come back home and you have a couple glasses of wine, and the wine just continues.

Dr. Robynne Chutkan: Yeah.

Shawn Stevenson: It travels from the restaurant to the home. I mean you just have to be aware of these kinds of things, and again it's all good from time to time, but if you're having strange issues with gastrointestinal problems, bloating, maybe even skin problems, we might want to look at what's going on with the alcohol.

Maybe pull it out for a little bit of time and see if things start to subside.

Dr. Robynne Chutkan: Shawn, I was going to say also one of the big issues with alcohol is before there were antibiotics, what was our main way of preventing infection, and cleaning wounds, and so on- cleaning up the operating room? It was alcohol.

Shawn Stevenson: Right.

Dr. Robynne Chutkan: So alcohol has antiseptic properties, and it is bactericidal, it kills bacteria. You know, when you go to get your blood drawn, they put that little swab on your arm to clean it, and that's alcohol. So the same way alcohol exteriorly can get rid of germs, alcohol is getting rid of a lot of essential bacteria in the gut when you're drinking it.

Shawn Stevenson: Wow. Anybody who might be drinking and listening to *The Model Health Show*, again no judgment, no love lost. Again, and there are some benefits. You know, things like wine, there are studies about this. But again, you have to keep everything in perspective. Pay attention to your body, and keep it moving.

And on that note of keeping it moving, you mentioned dairy earlier. So let's talk about specifically lactose intolerance. Bloating I think for a lot of people, they can see that being connected, but let's talk about that.

Dr. Robynne Chutkan: Dairy is really for baby cows when you think about it, right? Dairy is this ideal food that the mother cow produces to help nurse her baby cow to become 1,000 big huge grown-up cow.

And lactose is a milk sugar, it's what it is, and it's why kids tend to really like it because it's broken down into the bloodstream to something that is essentially a simple sugar, and it can create that effect that we all know that we get from sugar, sort of a sugar high when the dopamine receptors get triggered.

So the first thing to keep in mind is if we think about how we're designed, and how the universe is designed, dairy is designed for baby cows, not for adult humans. And as a result of that, many if not most adult humans, the number ranges from 50% to 75% depending on which study you read, but most of us lose our ability to digest lactose. We've become lactose intolerant.

The enzyme lactase that's located in the small intestine along the brush border, and it's sort of precariously located there, over time you lose it. Now some things can result in you losing it faster like a viral infection can wipe it out, certain types of things like antibiotics can wipe it out, and there are so many people who know they're lactose intolerant, my twelve year old is guilty of this, she knows she's lactose intolerant but she's like, 'I still want some ice cream.'

And she would love me telling you this, she has the worst gas after she eats dairy, and I'm like, 'Sydney something died up in there,' and it's not- trust me, I know about gas. It's not supposed to smell like that. But she really loves it, and she likes to eat it, and she's a vegetarian so her options are a little bit more limited so I give her a little bit of leeway.

But most people have some degree of lactose intolerance like that, and they might be able to tolerate a little bit of yogurt, or a little bit of hard cheese, but they have a big bowl of ice cream or enough pizza, and they start to feel sick.

And again, I love your message that it doesn't have to be all or nothing, but you have to really listen to the feedback your body is giving you, and you have to think about your terrain.

So if your terrain is really messed up, alcohol, and dairy, and sugar, and some of these things could be problematic. So taking a break and taking it out, maybe reintroducing it in a limited quantity later on can be a really good way to go to figure out if it's part of the problem.

Shawn Stevenson: Perfect, perfect. And so again everybody, if you've been experiencing some bloating issues, if this is something that even happens occasionally, that's what today's episode is really all about; looking at some of the possible underlying things that can be causing this issue, and it's not healthy.

And the bloating, it's a symbol or a feedback from your body that something is awry and we need to pay attention to that.

So let's move on, and I thought this was so fascinating in the book, that anatomical differences can be part of the reason why bloating occurs, more so for women. So let's talk about that.

Dr. Robynne Chutkan: The voluptuous Venus colon. So for years I would hear my male colleagues tell women that they had a tortuous colon or a redundant colon, and I mean who wants to be told you have a tortuous or redundant anything?

Shawn Stevenson: Right.

Dr. Robynne Chutkan: And I came across this information years ago when I was writing a paper for a book. I was writing a chapter on colonoscopy and women. It was a book that was devoted to GO issues in women, and they asked me to do the chapter on colonoscopy.

And I realized that women had lower completion rates for colonoscopy. What that means is that there was a higher percentage of times when the gastroenterologist could not get to the end of the colon in women, and that was true for women who had

had surgery, like a hysterectomy, and so had scar tissue that might have been blocking things, or women who hadn't had surgery.

And there were a lot of hypotheses floating around about why that was the case, and one of them was women just have a lower threshold for discomfort. And having been through eighteen hours of labor, I wasn't buying that one.

So I don't think- I mean pain thresholds vary from person to person, but a generalization like that that women have a lower threshold just didn't seem to make sense to me.

Shawn Stevenson: Yeah, it's crazy.

Dr. Robynne Chutkan: So yeah, I started doing some research and I found three really interesting facts that were not known to me as a female gastroenterologist, not known to my other GI colleagues, I thought really not known to the general public.

And the first is that women have a longer colon, an average of about ten centimeters longer. Ten centimeters might not seem like a lot, but it leads to a lot of extra twists and turns, curviness, redundancy if you want to use that term, but it leads to a lot of extra twists and turns, and so it makes colonoscopy in women more challenging.

I mean the truth is it takes me typically about twice as long to do a colonoscopy in a woman as it does in a man because of the configuration of the colon.

And why do women have longer colons? We're not sure, but we think part of it might be so that they can absorb more water during childbearing to keep the amniotic fluid replenished. So the longer the colon is wanted portion factor.

The second thing is that women have a wider deeper pelvis, and again to allow for childbearing. And with that wider deeper pelvis, most of the colon lies deep in the pelvis in women.

And what else is in the pelvis? We've got a lot of plumbing, we've got a bladder, a uterus, fallopian tubes, ovaries. And so the colon has to wrap around all these organs, and it's really crowded down there, and that's why in women the first part of the colonoscopy, the sigmoid colon which is low down in the pelvis, takes a really long time.

Men, you guys just have a bladder and an itty bitty prostate, and that's it. So it's a quick just- I compare it to a horseshoe in men versus a Six Flags roller coaster in women.

Shawn Stevenson: Wow.

Dr. Robynne Chutkan: And so that's a second reason, is a wider deeper pelvis and the reproductive organs in women, everything competing for space.

The third reason is hormonal, and that's because men have higher testosterone levels. Of course women, we have testosterone too, just not as much, and higher testosterone levels mean a firmer tighter abdominal wall.

And that's true even for the guy with the big bear belly who doesn't work out, just hormonally he gets a tighter Spanx than we do as women. And so that tighter abdominal wall means that again, it's a firmer Spanx to hold everything in and prevent things from bloating, as opposed to women who tend to have a more worn out Spanx because our abdominal wall is not as well developed.

And so this is just one of those gender issues that comes up.

Shawn Stevenson: Wow. And I'm sure a lot of people, and myself included, I never thought about this. And I would see people coming into my office in my clinic and I would see during certain times of their cycle, we might have constipation, we might have diarrhea happening where they're going more at certain times, and now again this just all makes sense why it would change like that.

And so let's shift gears and talk about that, and how menstruation can be a player in bloating as well.

Dr. Robynne Chutkan: I love that you're this macho athlete and you are talking about this. This is so important. So guys, listen up because you need to understand what's going on with your partners, and mothers, and daughters, and so on.

Yes. So the cycle changes-

Shawn Stevenson: I've got the biggest smile on my face, by the way. Just thank you, thank you. Go ahead, go ahead.

Dr. Robynne Chutkan: The cycle does change with the fluctuating levels of estrogen and progesterone, and that does affect the GI tract also. So it's exactly as you said, and it tends to be- it can be different from woman to woman, but it tends to be consistent within an individual person.

So a woman will say, 'I always get diarrhea before my period.' And somebody else will says, 'I tend to be more constipated.'

So it tends to be consistent, but it can vary whether it's looser or less loose within the cycle, and we definitely see that variation on a monthly basis, and that's because again, these hormones affect the bowel too.

And it's all connected. You know, you can't- somebody asked me the other day what an integrative gastroenterologist was, and I joked, I said, 'It's a gastroenterologist who doesn't own an endoscopy suite, so I'm not trying to just scope everybody who walks into my office.'

But really in all seriousness, it is the idea that the body is all connected. Like you, I believe that all disease begins in the gut. Hippocrates said it thousands of years before we did, but if you think of where the GI tract is, it's really in the center of our bodies, and then all the organs come off like spokes, right?

So the heart and the lungs and the kidneys and the extremities and the brain, they're all spokes on this wheel, and the wheel is really the GI tracts. And that's why there's such interplay and such interconnectedness, and you really can't separate it out.

You can't sort of just look at one system without thinking about the effect on the others, and particularly for as I like to call it, the below the belt organs like the colon, and the uterus, and so on. There's a lot of interconnectivity.

Shawn Stevenson: This is so fascinating, just so, so fascinating. And if we can start to pay more attention to this, again just paying attention to your body and noticing these patterns, I think we can do a lot of good for ourselves.

But what would somebody do if they were noticing these patterns, a woman for example with her cycle, where she gets constipated during a certain time of the month? Is this something to just be aware of and let it ride out, or is there something that she can do to help to kind of smooth out that transition?

Dr. Robynne Chutkan: There's definitely things that can be done, and one of the things too for women, is to look at what pharma contraception you're using, because if you're on a birth control pill or some hormonal method of contraception, that can be exacerbating what's going on in your gut.

So that's one of the first things to look at to say, 'Hm, this has been worse than the last six years since I've been taking the pill. Maybe that's contributing.'

Even the low dose estrogen pills can cause some bumps in the road, but preemptive treatment is a great thing to do. So if you know you're going to get more constipated before your cycle, then that might be the time to take a fiber supplement, that might be the time to start doing some green smoothies, that might be the time to do some twisting yoga poses, ramp up your liquid intake, take a magnesium supplement which is a great gentle way to encourage evacuation if you will.

So there are lots of things that you can do when you know, right? Because knowledge is really power, and knowledge is what can make us healthy, and have us become our own doctor, which for me is really the goal, is that people don't have to come see me because they can figure out what's going on.

And so again, there are just so many things that you can do along those lines, starting with dietary changes, and then some lifestyle things to help the process along.

Shawn Stevenson: Perfect. And speaking of evacuation and having a proper bowel movement, this is something that is tied into bloating obviously, and you talk about constipation in the book as well.

And I want to kick this back to you, but a big part of this conversation that isn't talked about is being able to put your body in the right position for full elimination.

And the puborectalis muscle that is designed to be pulled in tighter to make sure that you're not pooping your pants when you're just walking around, alright? We're not horses.

But getting down into that squatting position is essential for relaxing that muscle and allowing your colon to basically be emptied out.

And so a lot of people over the years have unknowingly developed gastrointestinal problems, things like prolapse, things like- even causing issues with your blood pressure by straining on the toilet.

And for everybody listening, please do this today, and this is something I have in all the bathrooms in my house, I've sent this as a gift probably more than any other gift, get yourself a Squatty Potty.

And what this is, it's a footstool that is perfectly designed for your already existing toilet, and it tucks away right under the toilet, and it is just amazing. I've been using the Squatty Potty probably for maybe four years? Three years, maybe. I think probably four years now, and I love it.

And my big thing was when I travel, just like I've got to try and find some kind of a hack here. I've used like trashcans, dresser drawers I would pull out, like just to get that same position because it's so- like it's in and out. You use the bathroom, and then you're out.

Whereas today like we have magazine racks, right? And everybody of course goes to the bathroom with their phone as well, so you can let time kind of fly by.

But with that said, also guys listen to this, they now have a Travel Squatty, and so it literally just folds up and it tucks right into my suitcase. It is awesome! Head over there, check them out, go to www.SquattyPotty.com/model. You get 15% off all of the Squatty Potty products, and you get free shipping. Alright?

This is the best price you're going to find. Better than Amazon, better than any store you go to, it's exclusive alert! Alright? www.SquattyPotty.com/model. That's www.SquattyPotty.com/model. Again 15% off plus free shipping, alright? Check them out, get yourself a Squatty Potty like yesterday. Thank me later.

And on that note, let's talk about the constipation connection.

Dr. Robynne Chutkan: And Shawn, I'm so glad you mentioned Squatty Potty. You and I were chatting at the beginning of the podcast about what a great product it is, and I'm so delighted to say that I have no relationship with the company, I don't receive anything from them, but it's a great product for exactly the reason you said.

And it's a very unnatural position. We are meant to be squatting over a hole in the ground, we are not meant to be sitting at sort of a right angle on a porcelain throne.

I told you, I'm pretty bendy, so I draw my legs up and balance myself on the toilet, but I don't recommend that for everyone unless you're really flexible or do a lot of yoga.

But it makes a huge difference, and the same could be said actually of the position for childbirth, that we're not meant to be lying supine in the bed too. That's a little more involved.

But the combination for so many people of getting more plant fiber into their diet and getting in the right position, for so many people that's all they need to really have a great elimination.

And you and I know that when you have a great elimination, life is good!

Shawn Stevenson: Yes!

Dr. Robynne Chutkan: It makes a huge difference.

Shawn Stevenson: Exactly, life is so much better, you're not carrying around all of this crap. Literally, you know?

Dr. Robynne Chutkan: Yes.

Shawn Stevenson: It's kind of symbolic. And another thing, so you mentioned the high quality plant fiber, getting in the right position. Another thing as far as our intake is concerned is water. So let's talk about how dehydration can lead to bloating.

Dr. Robynne Chutkan: And let me just take a sip on that note. Here we go, let's take a little water break.

Shawn Stevenson: Yes, let me get a sip of the canteen. We've got the same bottle, too.

Dr. Robynne Chutkan: Alright.

Shawn Stevenson: That just happened, guys.

Dr. Robynne Chutkan: You know, gastroenterology is not complicated. It's plumbing. That's really all it is, and I laugh at like, 'Yeah the really smart people in medical school go into nephrology, or so on.' We are plumbers basically, and the goal is to get the products of digestion from north to south, from the mouth to the anus, out into the bowl. That's the goal.

And when you think about it very simplistically, when stuff is dry and not in a liquid phase, it moves much slower. So that is again one of those incredibly simple things of just people to drink more water.

If you had a clogged pipe, you would run water through it. That's what you run through it, a thin liquid to try and clear it. It's the exact same thing in your gastrointestinal pipes.

So you need things to be in a liquid phase so that they can move efficiently from north to south. And most people don't drink enough water, and they take medications and drink things that dehydrate them like soda, and coffee, and all their kind of sweet sports drinks that work as a diuretic, and they actually pull fluid out of the GI tract, and have a diuretic effect.

So it's so important to be drinking enough water, to be measuring how much water you're drinking. I tell people look in the toilet bowl, look at the color of your pee. It should be- you should barely be able to see any yellow color. You really should have clear pee as one of the indicators.

There are lots of other indicators too. We can look at skin turgor, and different things, and how people are sweating, but that's a really simple thing to do is just you should be peeing frequently and the pee should be clear.

And you'll notice a big difference too with the ease of evacuation, less straining and so on, with drinking more water.

Shawn Stevenson: Oh my goodness. You just again brought it back to simplicity, I've got to tell you. And we've talked about this numerous times on the show, but folks will be like getting upset because they start drinking more water and they're just like, 'I'm going pee so much!'

Is that bad? Is that a bad thing?

Dr. Robynne Chutkan: It's good! No, it's good, that's the point. I mean it's inconvenient, right? Especially when you've got to unhook, and unzip, and unbutton, but it's so appropriate and it's so necessary.

And people spend all this time thinking about cleansing, and detoxing. That is one of the simplest things you can do to cleanse and detox, is to drink more water. You know, you don't have to do some thousand dollar green juice fast. I mean you can, but just drinking more water really- that's what it's doing. It's really cleaning you out.

Shawn Stevenson: Yes, perfect. I love this. We've already covered so much ground guys. This is just amazing, amazing stuff, but we've got so much more here as well.

She's just a virtual fountain of information. Let's talk about- so earlier you mentioned some of the products that we might consume, and you mentioned things like coffee, but what about sugar?

What about sugar? How can that lead to bloating?

Dr. Robynne Chutkan: Sugar is a really big one because we talked about antibiotics and acid suppressing drugs as two of the main drugs that can disrupt the microbiome. Sugar is one of the main foods that can disrupt it because it leads to overgrowth of the less desirable species.

Now we tend to look at gut bacteria in very black and white terms as either good or bad, and it turns out that there's this whole concept of a pathobiont.

So a symbiont is a bacteria that is not going to do us any harm, and maybe could do us some good, and a pathogen is a bad actor. So Ebola. Nothing good about Ebola in the body, right?

But if you think about something like yeast. Yeast get a really bad rap, but the truth is yeast are essential as part of the digestive process.

Shawn Stevenson: Right.

Dr. Robynne Chutkan: The problem is when you have overgrowth of yeast. So you take an antibiotic, it kills off a lot of your healthy bacteria, there's a lot of room in the microbiome, and so some of these species like yeast proliferate.

But the yeast themselves are not pathogens, they're pathobionts, meaning that in the appropriate ratio and proportion they're either benign or actually helpful doing a job. But when they overgrow, now it's a problem.

And so we see a lot of these organisms that are pathobionts that get over-represented because they get preferentially fed by a sugary starchy diet.

So you know, a little bit of sugar is fine, and I always recommend that people use real sugar as opposed to artificial sweeteners, but again it depends on your terrain.

So if you are somebody who's plagued with yeast infections, and bloated, and yeast infections are a great sign that the terrain is off, then a more drastic elimination of sugar, maybe a sugar detox could be a great idea.

If you're somebody who already eats a healthy diet, eats a lot of plant fiber and so on, and you're not- your terrain is okay, you're looking to enhance it, you can probably tolerate a little bit more sugar.

So again, it really depends on this idea that nobody should ever eat any sugar. I don't think that's necessary, but you do have to look at what's going on, and really think about what you need to do to remediate it.

Shawn Stevenson: Perfect. Well this one you covered in the book, but I wanted to talk a little bit more about it, and I'm wondering since I get to talk to you about it, have you seen a trend in this particular condition which is colitis?

I know of course colitis is connected to bloating, but what are you seeing clinically? Has this kind of- the rates of colitis gone up? Because that's what I've seen. And what's going on behind the scenes with this?

Dr. Robynne Chutkan: Absolutely the rates are increasing. So colitis and the sister disease Crohn's disease were really described in the 1930's, at least Crohn's was, by Dr. Crohn, Oppenheimer, and Ginzburg back at Mount Sinai Hospital.

And they were considered rare disorders back then, and we have definitely seen- I have a slide that I use in my talks about the hygiene hypothesis and these modern plagues.

So colitis is a form of autoimmune disease, and like any other 'itis,' it means inflammation of the colon. Colon, inflammation of the colon.

And we have seen an incredible increase in colitis, and Crohn's, in MS, in rheumatoid arthritis, and lupus, in a lot of these autoimmune diseases. And by definition, autoimmune disease is a condition where your body is essentially reacting to itself. Your immune system is destroying your body's own tissue.

So in the case of rheumatoid arthritis, it's the joints. It's the case of colitis, it's the colon. And we haven't really been able to figure out exactly why this is.

One of the reasons is food, one of the reasons is widespread use of antibiotics. There's been lots of studies showing that antibiotic use in childhood, especially in the first three years of life and around birth, can dramatically increase the risk of

autoimmune conditions like colitis and we're seeing more and more of that. So that's one thing.

Again, the food is another thing. A more processed diet that is low in plant fiber which is somewhat protective for the colon. But even beyond that, it seems like there are additional factors.

And I give you an example of that. We're seeing more colitis not just here in the US but in the developing world, and we have- our training program at Georgetown, we train a lot of international physicians, and we were training a physician from Saudi Arabia years ago when I first got to Georgetown about twenty years ago.

And I would invite him to come to my colitis clinic, I had an inflammatory bowel disease clinic where I saw Crohn's and ulcerative colitis, and he said, 'Well you're fun to hang out with, but I'm going back to Saudi Arabia, and we really don't have this there.'

And fast forward about seven or eight years later, I saw him at a meeting and he said, 'We now have a clinic devoted just to this at the hospital where I am in Saudi Arabia.'

Shawn Stevenson: Wow.

Dr. Robynne Chutkan: So we're seeing really dramatic increases in colitis in US, but also in the developing world in Southeast Asia, in Sub-Saharan Africa, in the Caribbean, and it relates to this idea of the hygiene hypothesis, which I think everybody should know about.

The hygiene hypothesis came about as a result of a study that Dr. Strachan was doing in England. In the 1950's they were seeing skyrocketing rates of autoimmune diseases of things like hay fever and eczema in post-industrial London, and they couldn't figure out why.

So he did a study looking at 17,000 kids from birth to adulthood, it was about a 25-year study, and he found two really unbelievable and completely unexpected things that formed the basis of the hygiene hypothesis.

The first is that kids from large families where there were a lot of siblings running around making each other sick, they had low rates of these autoimmune diseases. So being exposed to a lot of germs early in life was actually a good thing.

The second was that the richer kids from more affluent households who were bathing more- and these days affluence does not equal better hygiene practices.

Shawn Stevenson: Right.

Dr. Robynne Chutkan: But back then it did in 1950's London. And so the kids who were richer, and were bathing more, and cleaner, they had higher rates of these autoimmune diseases.

So it actually was not a good thing to be too clean, hence my admonition for all of us to live dirtier lives.

Shawn Stevenson: Yeah.

Dr. Robynne Chutkan: And so this turned the whole idea of health and the relationship of germs to health on its head, and this idea that it was actually good to be exposed to germs early on, and it was not good to be too clean.

So what we're seeing in the developing world is that as countries become more industrialized and they start doing things like widespread coronation of the water, more use of antibiotics, more processed industrially produced food, and less exposure to these germs early on, is that we start seeing increasing rates of autoimmune diseases.

So you're 100% right, we are seeing increasing rates of colitis, and it's more important than ever that we get this information out, and that people- really when you're diagnosed, or your kid is diagnosed, or your friend is diagnosed, a loved one, that you say to them, 'Why?'

You ask that question. We're not good in medicine at asking why, we're good at saying what. So you have colitis, here's a prescription, come for your colonoscopy, we're done.

Shawn Stevenson: Yeah.

Dr. Robynne Chutkan: But you need to ask why, and you need to find that answer out. Was it antibiotics you were given? Is it something you're eating? It never occurred to me twenty years ago when I was doing my GI fellowship that colitis was something that could be treated through diet.

I literally would have laughed in your face if you had told me that. And patients who came in talking about that, I would have rolled my eyes, 'Here's another crazy person talking about how they cured their colitis.'

The only thing we knew about was a pharmaceutical fix, and what is really sad, Shawn, is that twenty years later it hasn't changed. I was sitting at the hospital the other day, and I was doing- I had just finished a colonoscopy on one of my favorite patients, she's amazing, and her colon- she has ulcerative colitis, I diagnosed her ten years ago in 2007, and I just finished her colonoscopy and it was normal.

Shawn Stevenson: Yes, yes.

Normal and beautiful. Healthy looking colon. And one of the GI fellows was sitting next to me and I said to me, 'Take a look at her colonoscopy from 2007, pull up the pictures.' And he did, and he was like, 'Wow. Fulminant colitis is really active.'

And the first thing he said to me, he said, 'Well what is she on?' And I said, 'She's on diet,' and I explained to him the diet that she followed.

And he was like, 'But what other- I mean what immunomodulatory drugs is she taking?' And he was so dumbfounded, and this was last week Thursday, Shawn. This is not ten years ago.

Shawn Stevenson: Right.

Dr. Robynne Chutkan: He was so dumbfounded by the idea that she had put her colitis into remission primarily through diet that I took him back there to meet her, and she so generously sat with him for ten or fifteen minutes and answered his questions. And he was like, 'Is it hard?'

And she was like, 'Yeah it's hard.' And she has three kids, and he asked her what was her motivation for doing it? Was it hard to follow? It was like magic to him.

And I think it's the reverse. The idea that you can a drug and it can magically heal your colitis with you other side effects, that's the magical thinking.

So these drugs, again can be amazing and they can be life-saving, but they come with side effects, a serious infection, and cancer, and all kinds of problems.

So there times to use those drugs, and I certainly have them in my armamentarium in my practice, I try to very infrequently write prescriptions for them, but the idea that you would choose a drug that could potentially kill you over trying to control this on your own, that's magical thinking, and that's really the information that I want to get out to people.

Is that you can actually control your health and what's going on in your body through the choices you make through the thoughts that you think, the foods you eat, the medications you take, through all the choices you make, and it's such an important message.

Shawn Stevenson: This is a perfect place to put a bow on this actually, but of course I want to keep talking to you. This is so powerful, oh my goodness thank you so much for sharing that, and sharing the story as well.

There's so much there, and I hope people, that we really start to pay attention to this because I know people are listening right now that are dealing with colitis, and the

component that she talked about with the antibiotic potential, and also this not being exposed to microbes that actually help to build up your body's defenses.

And also in the book too, and I want to make sure that everybody- make sure you get a copy of 'The Bloat Cure' as well, and specifically we're talking about colitis, you talk about how some of these autoimmune issues can actually take place in your body.

And the leaky gut issue, and kind of breaking through your intestinal lining with things like lectins from wheat and things like that, that can create something that we call today molecular mimicry.

And this is where certain protein structures or compounds in your body look very similar to foreign proteins, or pathogens, or whatever is making its way through that leaky gut because of the things we're eating, and your body will literally start to go and break down your own tissues.

So maybe that protein structure snuck its way in from some chicken that you ate because you have leaky gut, and the protein structure is AABB, and so your immune system goes and it does its job very well to take that thing out that shouldn't be in your bloodstream, but your immune system is also very intelligent and learns very quickly, and it knows, 'Hey if anything looks like this, we need to take it out. It's an invader.'

And that AABB structure might be your thyroid, or it might be your large intestine, right? And so your own immune system is actually in this crazy way trying to help you when it's breaking your tissues down, which is just so messed up.

But the good news is, and she just shared an example, this- your immune system can figure it out. Your body can figure it out, but we have to stack conditions in your favor.

And it's starts with applying some of the things that you're already learning today, and I want to talk just two more things because- and again, it's 101 different things in this book.

I would love to talk about the stress component, alright? How in the world can stress create bloating?

Dr. Robynne Chutkan: Stress is real. Stress is not just in your head, and an example of that would be if a snake suddenly found its way onto this table in front of me. Because I am not afraid of many things in life, but I am afraid of snakes.

And if a snake suddenly started coiled up-

Shawn Stevenson: I see you getting nervous right now.

Dr. Robynne Chutkan: You see what's happening? My hair is standing on end- my hair is always standing on end. No, if a snake were to come towards me now, a couple things- measurable things would happen.

My heart rate would increase, my blood pressure would go up, my hair would start to stand on end, and I would start to breathe really fast. All measurable things.

Now the snake hasn't bitten me or done anything. In fact just the thought of the snake can do it, but that is a great example of how these emotions are real, and it's because of the fight or flight reflex that gets triggered, and adrenaline levels in the body, and so on.

So back in the day when we had to worry about tyrannosaurus rex or something, we were running away from danger, the fight or flight reflex really helped us to mobilize, it helped to increase blood flow to the large muscles of the body, and get you ready to literally fight or flee to survive.

But nowadays, that's triggered all the time. You know, I've got to go teach a class at Georgetown, I've got to pick up my kid, I soaked beans but I didn't cook them and now they're going bad, and I lost my toenail playing squash last week.

So there are 50,000 different things literally every day, ways in which we are sort of assaulted, and our devices actually play a big role in this too because we have this constant to-do list, and now it's electronic, and it's in our head.

And so we're stressed out a lot of the time, and it can absolutely take an effect on the bowel. So stress can cause a lot of constriction in the GI tract, it can cause the muscles to essentially spasm, and that can lead to bloating.

It can impede passage of things from north to south, it can affect nitric oxide secretion and other things that can trigger bloating.

So there are multiple cascades and pathways from affecting gut motility, to affecting muscular contraction in the gut, to affecting secretion of different hormones, and kind of signaling compounds that can result in less than blissful guts for sure.

Shawn Stevenson: Wow. When you mentioned in the very beginning about the changes in our physiology with our heart rate increasing, blood pressure going up, all of those things, like the question is for us to ask, 'How does that even happen?'

Hormones. Like you're literally changing what your hormones are doing with your thoughts, your perception of reality. It's so powerful for us to get that.

It's not- and I love that you- the first thing you said was, and this is something I've been saying a lot lately, is that stress- and it's because actually you can't see it.

We think it's inert, right? It's not invisible. You see the physical changes, but for us because the word stress is like something invisible, we don't think that it matters as much as a Big Mac, right? Because you can see the Big Mac.

Dr. Robynne Chutkan: But if you think of stress as- link stress to serotonin. We know serotonin is one of the feel good hormones in the body, and we know that somewhere around 80% to 90% of production of serotonin happens in the gut, and that's very closely linked to gut bacteria, and the health of the gut lining, and short-chain fatty acids, and all these different things that are markers of gut health.

And so when serotonin levels are low, we tend to be low. It affects our mood and so on. So I think that's a more- I mean it doesn't exactly work that way, it's not really a one-to-one correlation, it's a little more complex, but I think that is a way for people to conceptualize it, to sort of understand it of like, 'Oh I'm trying to boost my serotonin.'

We know that lots of things boost serotonin. Being out in the sun boosts serotonin, and that's one of the ways, again to correlate the stress with our mood, and how we're feeling in our gut.

And we've all had that experience. Butterflies in the stomach, or you kind of have a bad feeling in your gut. Those things are real, and as you said they're hormonally mediated.

Shawn Stevenson: Love it, love it, love it. Okay last one, and there are so many more I want to ask you about. But I would love- because I'm on Team Gallbladder, alright?

Let's talk about how gallbladder problems can relate to bloating and other gastrointestinal issues. Let's talk about the gallbladder, and it doesn't get a lot of respect out there on the streets.

Dr. Robynne Chutkan: Gallbladder is a really important organ. Like the appendix that frequently when doctors can't find out what's going on- so this is a scenario I see all the time.

Somebody has unexplained abdominal pain, bloating, nausea, they don't feel good. Doctor goes in, does an ultrasound and says, 'Well you have some gallstones.'

Yeah, lots of people have gallstones. Somewhere between 10% and 15% of the population, often related to diet. But gallstones don't equal a poorly functioning gallbladder.

You can have gallstones and have a gallbladder that's functioning just fine, and you can have no gallstones and have a gallbladder that's not functioning well.

So doctor can't figure out- does a quick endoscopy, colonoscopy, maybe an ultrasound or a CAT scan. Says, 'Well you have gallstones, so I think we need to take your gallbladder out.'

Take the gallbladder out, the person's no better, they're often worse, and now they have diarrhea because they have this sort of bile salt diarrhea.

So the gallbladder's function is to store and secrete bile to help with fat absorption. And the store part is as important as the secrete, because when you don't have a gallbladder, the bile is in constant circulation now and it can induce diarrhea in the colon, particularly after meals, and you aren't able to digest fat as well.

So the gallbladder can be a tricky one because it can feel like the fix is to take the gallbladder out, but I dare say I see more people who are having symptoms because their gallbladder was removed inappropriately than the other way around, and maybe that's because if the gallbladder really was the culprit, they're fine and they don't need to come see me, right?

So there's a little bit of that. But the gallbladder and fat absorption and fat- not just absorption but assimilation. So the way the bile helps the fat to get absorbed, it's kind of like grease on a plate.

If you had a dinner party and served something really greasy, which I'm sure you never do, Shawn, but let's say you went to somebody's house for a dinner party, and there's a lot of grease on the plate.

When you put a little bit of dishwashing liquid on it, all of a sudden you can wipe the fat off now, right? Because it emulsifies the fat, and that's the same thing that bile does.

It essentially emulsifies it, it creates these micelles that can be absorbed through the small intestine lining, so it becomes partner to help the fat get absorbed through the lining of the small intestine. And without sufficient amounts of bile, that doesn't necessarily happen quite as well.

Shawn Stevenson: Perfect analogy. And again this is to be more empowered, everybody. Is when you go in to see your physician, if you're having some issues, just be aware like you might want to retain your organs if it's not like a catastrophic issue, you know?

We need to just kind of slow sometimes in our approach, again unless there is an accident, unless there's something acute that's really, really creating some pain and drama in your life. Just slow down, ask questions, and be more aware because the gallbladder removal- and I've seen this many times clinically as well.

Just a string of problems result later, and for anybody who has had their gallbladder removed, you still can keep moving forward. I highly recommend, and I've seen a lot of improvement with this, that you're taking a lipase enzyme along with any kind of fats that you're eating.

I think that can be really, really helpful. And so again, just a shout-out to everybody who's dealt with this issue, and moving forward it's time for us to be more empowered, and Dr. Robynne Chutkan has truly delivered today in helping us to feel more empowered.

And I think you're just amazing, and I'm so grateful for the amount of work, like creating these three books. I know what kind of work it takes, but the information that's in here, and the heart that you've put into it, and still just all the stuff you listed today; still working with people, still teaching, being a mom, you're just amazing, and I'm just grateful to know you.

Dr. Robynne Chutkan: Thank you, Shawn. Thank you so much, I feel the same way. As I told you the first time I was on, I think the work that you do is so important, I can't even tell you. And I just think this a great venue for people to get information, it's a great opportunity for me to spread the word, and I hope we can both continue down this road for a long time with really empowering people about their health.

I love the idea about slowing your roll with the organ snatching because once it's gone, it can't come back. And really trying to figure out how to remediate the problem rather than just remove the organ. Love that.

Shawn Stevenson: Awesome. Big hug, thank you so much, Robynne. You're amazing, I appreciate you immensely.

Everybody, thank you so much for tuning into the show today. I hope you got a lot of value out of this. This is paradigm shifting stuff here.

And again I've got 'The Bloat Cure' right here in my hand, and I also have her other two books, 'Gutbliss' and 'The Microbiome Solution,' and I think that they are a must have in your library.

And definitely check her out, we'll put links to her website and all that good stuff in the show notes, too. She's just somebody that you need to follow, that you need to be connected with, because she's like the teacher's teacher, alright?

So she's out there front lines, she's been doing this work and really figuring out some solutions. And the great part about her story is she was in the beginning- like she gave a great example. She was rolling her eyes at this stuff, 'What? Come on, your diet is going to-'

And because of actually paying attention to what works is where she got these answers from. Just make sure to check her out and get your hands on these books.

And today was really about taking a look at something that is really the cornerstone of our health, which is our gastrointestinal health.

And she mentioned it earlier Hippocrates saying that all disease begins in the gut. Duh! Alright, this is where we're putting stuff- like this is a very intimate process where we're taking things outside of our bodies and putting them inside of our bodies, right?

This is like the most amazing and yet dangerous process in a way, and over the years our ancestors have figured a few things out. They've tested and taken the arrow for us to figure out like, 'Okay we don't eat this stuff. These things are good.'

But today we have a whole new array of things that have never existed before. Our ancestors definitely never saw a Twinkie ever. They didn't see a Twinkie. There was no wild Twinkie.

Today we're dealing with a whole new- ironically I'll say 'terrain' of choices that we need to be aware of, and how they're impacting what our genes are doing, and also what's going on in our gastrointestinal tract.

So today is about awareness, and it's also about solutions, and there are a ton of solutions in her books, so make sure to head over and check them out.

I appreciate you so very much. Be ready, we've got some amazing, amazing guests coming up and some amazing show topics.

So stay tuned, be ready, it's going to be amazing. Take care, have an amazing day, and I'll talk with you soon.

And for more after the show, make sure to head over to www.TheModelHealthShow.com. That's where you can find all of the show notes, you can find transcriptions, videos for each episode, and if you've got a comment you can leave me a comment there as well.

And please make sure to head over to iTunes and leave us a rating to let everybody know that the show is awesome, and I appreciate that so much.

And take care, I promise to keep giving you more powerful, empowering, great content to help you transform your life. Thanks for tuning in.