## EP 50: Long Covid Brain Fog, a Meningitis Vaccine for Kids and IBS Help

Dr. Kipper shares some revolutionary treatments for diabetes and cholestral. Plus he gives Anna and Peter a quiz about menstrual health, and answers a caller's question about the latest weight loss drug. Here's a hint: it could be the best one yet.

**Peter:** [00:00:23] Well, everybody, welcome to Bedside Matters. It's another episode of this wonderful medical podcast. Hopefully, we're going to give you answers you're looking for, so you can be more informed and healthier. I'm Peter Tilden, one of your hosts. Anna Vocino is another one of our hosts, and Dr. David Kipper, of course, is the man with the answers. Because I'm about 700 credits shy of a medical degree. How are you, David?

Dr. Kipper: [00:00:53] I'm good, Peter. I just made it, by the way. I'm three credits over.

**Peter:** [00:00:57] Yeah, well, and, David, also what people should know listening to this, I don't know how you see patients, as many patients as you do a week, and also stay on top of all the literature because I know there's such... First of all, a lot of advances, which is why we do the show. It's unbelievable how quickly medical technology is moving. So with that, with that said...

**Anna:** [00:01:16] Here's what we're going to talk about today. Apparently, there's a new treatment for brain fog due to long Covid, which I'm very excited to hear about because I, feel like me personally, my lungs have been squishy, my brain has been foggy. I want to hear all about this long Covid thing. It's very real and it's very – it'll stop you in your tracks.

We're also going to talk about another one of my favorite topics, IBS and the bowels. There's good news. We're going to talk about the good news. Dr. Kipper will give us the good bowel news that we all have been waiting for.

**Peter:** [00:01:48] And This Just Happened: A new meningitis vaccine for kids. Is meningitis still happening in a big way? And why just for kids?

And then we have a caller in our Hey, What about Me? segment that wants to know about abdominal pain and a new test for abdominal pain. How does it work? So, we'll find out all about that. So, let's get started.

**Anna:** [00:02:07] Long Covid, new treatment, brain fog, fatigue, yada, yada, yada. What are we doing?

**Dr. Kipper:** [00:02:12] What they found out was that people that have long Covid have lower serotonin levels in their system, and then they had to figure out why that was. But serotonin, for almost every viral illness, when they get initially sick, the serotonin levels drop and every other virus, they come back, they rebound back to normal. But in long Covid, they didn't rebound. So what they found was that lack of serotonin is probably ultimately responsible in part, but in a major part for all these neurologic and cognitive memory foggy issues.

**Peter:** [00:02:52] Which makes sense. But can I ask a question first about long Covid? How do you know? Like some days I feel punchy or whatever.

Anna: [00:02:58] That's a good question.

**Peter:** [00:02:59] And you go, "Oh, I think I have the brain fog." And, no, you don't. And, "I think I have long Covid." No, you don't.

Anna: [00:03:04] Like, I wouldn't go to the doctor, but I feel like I might have it.

**Peter:** [00:03:07] So, what's the definitive? David, what does that feel like, or is it hard to identify? Is it different for everybody else? People listening, thinking, "Oh, I have brain fog? Or maybe it's because I'm older, there's a little bit of dementia or I'm just slowing down." How do you know the difference? How do you know when it's that?

**Dr. Kipper:** [00:03:23] The metrics for this are that, if you're still symptomatic 2 to 3 months after your initial injury, you are considered to have long Covid. But what does happen is that people get better and then a couple months go by and they get another round of this. And generally the things that we see with long Covid are fatigue. That's the main one. But they'll also get headaches or nasal congestion. They'll get some cough, they'll get some of these symptoms, but mostly they're going to get really fatigued.

Peter: [00:03:54] How would you describe the brain fog?

**Anna:** [00:03:56] Yes, and let me back it up, too, by saying to describe the brain fog and also maybe give us a little serotonin 101, like how that all ties in.

**Dr. Kipper:** [00:04:07] So, the brain fog is that these neural pathways that allow us to not just think, but to remember, they're a little fuzzy with this virus. There's a lot of information that goes on in the brain with this virus. And so it may present as being dense, not remembering. These are all things that neurologically define this. And, again, the major thing is fatigue.

But going back to your second question about serotonin, what is it? There are two major neurotransmitters in the brain. One is serotonin. One is dopamine. Serotonin is the calming neurotransmitter, which is there to mute the excitatory or stimulating neurotransmitter, which is dopamine. So those two neurotransmitters try to balance each other out. If one gets too high, the other one kind of comes in and vice versa. And serotonin is responsible for a lot of things. It's responsible for cognitive issues. It's responsible for moving the bowels. It's responsible for moving the bowels. It's responsible for moving the bowels.

**Anna:** [00:05:22] So, how are they using serotonin to treat, now that they know that it's a lack of serotonin, what are they doing to treat the brain fog?

**Dr. Kipper:** [00:05:28] Well, there's several things you can do. One is that you can replace the serotonin with some pharmaceuticals. Prozac is a serotonergic medicine. Zoloft, Lexapro, there's ten of these and they literally deliver serotonin to the system. And we haven't really tested this out enough. But this is what people are now starting to do, is to give serotonin.

So, if you go to your doctor with these symptoms of long Covid, you might ask the doctor about a trial of one of these medicines. Doesn't mean that you're going to be on at the rest of your life, but it's something that certainly might help. There's supplements that provide

serotonin, vitamin D, omega threes, St. John's Wort, sunlight, exercise can boost your serotonin levels. And pretty soon, we're all going to be eating some tryptophan right at Thanksgiving.

## Anna: Yeah!

**Dr. Kipper:** Tryptophan, which is the precursor to serotonin, gives you the serotonin. So turkey, if you want more serotonin, you might not stay awake, but it will give you more serotonin. Dairy, tofu, spinach, bananas. So there are several things in our diet that will help boost this.

Anna: [00:06:46] That would make a disgusting smoothie.

**Peter:** [00:06:48] Hey, David, if you're getting Prozac for serotonin, how long does it take before people, I remember with these antidepressants, it takes a while if it's for mood. If it's for serotonin replacement, is it the same thing where it takes a while?

Anna: [00:07:01] Oh, good question.

**Dr. Kipper:** [00:07:03] Very smart question, Peter. And this is one of the issues. So if you ask your doctor for a serotonin medicine, it could be 6 to 8 weeks before you get a response. So, yes, there is that issue. Zoloft, which is one of the serotonergics, Zoloft actually gets into your system a little quicker. So as a clinician, I would probably start with Zoloft to see if someone could get a more immediate response.

## Peter: Very smart.

**Dr. Kipper:** I think another interesting question to this and how they came to this understanding is, why is it that the serotonin levels don't rebound? You know, what is it they keeps them from coming back?

And there's three things that do this. One is that the virus itself lingers in the gut. And the gut, as we've talked about with the microbiome, produces 90% of the serotonin we have. So if that virus is hanging around the factory, the factory is not going to make much serotonin. There's a problem with platelets. Platelets are those things that cause our cuts to scab over and to close down and serotonin lives in, is concentrated in, the platelets. And one of the problems that we have with Covid is that people get blood clots. So when people get a blood clot and all those platelets are sort of locked up in a clot, the serotonin that's there isn't going to get out into the circulation. That's another issue.

And then there's an inflammation problem where, obviously, the Covid creates this tremendous cytokine storm and there's inflammation in the lining of the gut and interior and the gut at that point, it just can't absorb the tryptophan that it needs to make the serotonin. So there are a few different mechanisms for why the serotonin is not coming to the plate.

**Anna:** [00:09:01] Well, it's interesting, especially that you mentioned the gut, because, not just Covid affects the gut, but anybody with any sort of gut dysbiosis, right? That could be that they have a serotonin issue, right?

**Dr. Kipper:** [00:09:12] Yes. And that's often the case, by the way, and this is interesting, Anna, because since serotonin is an anxiolytic, if you're normal in your serotonin levels, you tend to be less anxious. If you're deficient, you tend to be very anxious. So when you

look at this, the serotonin helps in that regard. And it's the anxiety that often promotes some of these other symptoms. So there's a direct connection between your serotonin levels and what's going on in the brain.

**Peter:** [00:09:50] Can we change St. John's Wort to another name? I mean, it's such a creepy name, really.

Dr. Kipper: [00:09:54] No.

Anna: [00:09:55] Speaking of the gut, there's some good news. Tell us about this, Doc.

**Dr. Kipper:** [00:09:59] It's really a common thing that we see in a general practitioner's office, one of the most common things we see. It's also the most common GI issue that we see. And there is no cure for this. So everything we're doing is just sort of patchwork and we're chasing the symptoms.

But here's a new idea, which has been borne out with some research that will also improve your symptoms. And this is amitriptyline, which is also known as Elavil. It's a tricyclic antidepressant. It has been used for a long time for depression. In fact, we had these tricyclics before we had these serotonergics. So, before Prozac came these drugs. There are acetylcholine receptors in the brain and acetylcholine is associated with depression. So the amitriptyline, these are anticholinergics. They block the acetylcholine receptors. So the depression is, that's probably how it works in depression.

So it's very interesting because, again, we don't have great medications for this. We also know, as I said, that people that have anxiety disorders, their neurologic input into the bowel is off. Here's what happens, the bowel is a tube around and the stuff has to get from the top of the bowel. The stomach, mouth, stomach has to go down to the bottom, right? And to get there, there's a sort of a synchrony of how one part opens up and then the part below that is closed. It does its work. Then that part that was opened, dilated, now constricts, the part under it, opens up, dilates, takes the product, it takes out in that area the bowel, what it wants. And that goes on and on throughout the whole intestinal tract.

Peter: [00:12:03] Like a pig going through a piranha.

[laughter]

Anna: [00:12:04] Is that peristalsis?

Dr. Kipper: [00:12:08] That's peristalsis.

Peter: There you go.

**Dr. Kipper:** So how does that work? It works because there are nerves that wrap around the outside of the bowel and they're really running. It's like a signal set up in traffic.

Anna: [00:12:22] Like a relay race.

**Dr. Kipper:** [00:12:23] And what happens in an irritable bowel is that because of the increase in cortisol and anxiety that causes these stress hormones to come out, that synchrony is disturbed. So one part that's opening when it should be closing and another part further down might be closing, when it should be opening. So the valve's not moving

normally. And the peristalsis, another good word for today is "abnormal." And that's why we know there's a huge association of stress with irritable bowel.

Peter: [00:12:58] And that's all cortisol. David. Is that because of cortisol?

**Dr. Kipper:** [00:13:01] Yes, the cortisol, again, it liberates or provokes these stimulating transmitters and that causes this disruption in the normal peristalsis activity.

Peter: [00:13:15] So, Anna talks about IBS a lot. My son has an issue.

Anna: [00:13:19] I enjoy talking about it.

Peter: [00:13:20] Because a lot of people have a need to enjoy talking about it.

Anna: I do.

**Peter:** But the question I have is, if everybody has a different IBS issue, because it's stress, it's this, like my son is on a bunch of medication for another issue that he has. Could this med not work because it would impact other meds that people are on, or some people have IBS because of the meds they're on?

Anna: That's a good question.

**Peter:** So what's the impact there? Because nobody's in a vacuum, where it's just, this is what I have, this is the only thing I have. So I'm going to take this and it's going to impact it. If they're not stressed and they have it, what are the alternatives here and how much better is this drug than another drug?

**Dr. Kipper:** [00:13:56] Another great question, Peter, and I think that the answer is this drug I don't think is going to cause IBS symptoms. This drug does have some side effects, but that isn't one of them. But when you query people long enough that come in with their symptoms, they will identify something that was recently stressful. So it almost always gets back to stress. Sometimes it's diet. Dairy can provoke this. Caffeine can provoke this.

There are two kinds of IBS. Eighty percent of them are the diarrhea-type, IBS-D, and then 20% are the constipation. So you can have constipation or diarrhea. The most common one is the diarrhea. But I don't think that this drug is going to create any imbalance with any other medicines unless those enzymes are, you know, shared.

What they did, by the way, was they gave people amitriptyline (Elavil) for six months with these people that were suffering from this and they got better and their symptoms got better. And they, you know, you don't have IBS all day every day, you have IBS creeps up when there's a problem and then it goes away after a while. So these people stayed out of trouble for a long period of time.

Anna: [00:15:21] Do you have to stay on the meds for forever or can you...?

**Dr. Kipper:** [00:15:25] I think that you can take, what it looks like, is that you can take these medications as needed. So if you start to get your, or if you are plagued with chronic IBS, that might be another reason to stay on these. And, as we said at the beginning of this, one of the things that it's going to do is it's going to help with depression and anxiety, which is one of the causes.

Peter: [00:15:48] Going to help the whole system.

Anna: Great.

**Peter:** So, when people have IBS, and let's say constipation, okay? If you stay on these drugs long enough, or you try a lot of different stuff for this constipation, can you irritate, inadvertently irritate, the system so that you now have lifelong constipation, because you've fed so much stuff in there, you've inflamed it and done damage to it, and now you constantly have the problem?

**Dr. Kipper:** [00:16:17] It's very unlikely that you will shift from the constipation variety to the diarrhea, unless, of course, when you're in the constipation arena and you start taking all these laxatives and anti-stress products and other things, eventually the dam is going to break and you might have some diarrhea.

**Peter:** [00:16:37] But could you end up with constipation forever by taking a variety of drugs to cure the constipation over the years?

**Dr. Kipper:** [00:16:42] I've never seen it. And I don't see how that would work. It's a good question, but I've never seen it.

**Peter:** [00:16:48] I just, you know what I thought of, it's sort of, it's weird, like the nasal spray, use it so much, the inflammation happens and now you have to have your nose cauterized or whatever. If you're taking so much constipation stuff all the time, I don't know how that impacts your system.

**Dr. Kipper:** [00:17:00] There's another issue with IBS, and I think we overlook because it's a very nonspecific form of pain. And, again, the associations are not always there and you really have to ask people what's going on. And women being twice as likely to get IBS, we see a lot of surgical procedures in women that didn't need it because they've got abdominal pain. So women get operated on with hysterectomies, ovarian surgeries, because, again, it's sort of nondescript and IBS is a diagnosis by elimination. No pun intended.

**Anna:** [00:17:39] Shouldn't you get an ultrasound before you're going to get a, I don't know if I'm pronouncing it correctly, a oophorectomy, or a hysterectomy. Like, shouldn't you be... Shouldn't they have a little bit clearer...

Peter: [00:17:51] Rule out the other stuff before they start taking stuff out?

**Dr. Kipper:** [00:17:55] Yes, but, remember, the female system is very complicated and has a rhythm to it. And so you might see normal female anatomy, but you might be having a bad and recurrent problem with IBS, and not everybody admits to being stressed. I would bet if you're out there listening and you are suffering from IBS, and a lot of people do. Trace all this back to seeing if you had some stressor that provoked this.

Anna: [00:18:28] Yeah.

Dr. Kipper: [00:18:29] Or foods.

Peter: It makes sense. And what do people have to be stressed about?

**Anna:** [00:18:33] Well, just pry that dairy for my cold, dead hands, you know what I'm saying?

## [laughter]

**Peter:** [00:18:37] Okay, Charlton Heston. So, this just in: This Just Happened. A new meningitis vaccine has been created for kids. Two questions. I didn't know that meningitis was still around: How does it present? And why just kids?

**Dr. Kipper:** [00:18:52] We see it more commonly in children and young adults. We don't see it so much in older people. And to your question initially, Peter, yes, adults can get these vaccines. The problem that we've had is that the vaccines are not that specific. So kids starting at age 11, they have to get multiple vaccines to cover the five different strains of the meningococcal bacteria.

These vaccines have not been inclusive of all of them. So, at age 11, they get three shots to cover these variants. And at age 12, they get it again. And at age 16, if they're high risk for getting these illnesses. And those are kids that have underlying health issues. So at the end of the day, these kids have been stuck and jabbed. And schools, most schools, most states require to get into school, you have to show records of vaccinations.

**Anna:** [00:19:56] So, here's my question. You're talking about five strains of the bacteria. I always heard when we were kids there was viral meningitis and bacterial meningitis. The bacterial one's, the worst one. So are we not worried about the viral one? Or am I just remembering that falsely from childhood?

**Dr. Kipper:** [00:20:12] No, you're absolutely right, Anna. There are two types. These are the bacterial varieties.

**Anna:** [00:20:17] Right. Okay. So the vaccine is for the bacterial varieties. And is that the more serious one? Is that why they do the vaccine for that one, or is the viral one not as serious?

**Dr. Kipper:** [00:20:26] Virals tend to be more self-limiting. They sort of run their course. But bacterial infections can go into the general system and you can get sepsis.

Anna: [00:20:37] Oh, yeah.

**Dr. Kipper:** [00:20:37] A percentage of people die with this. Fifteen percent of people die with this.

Anna: [00:20:42] That's horrible.

**Dr. Kipper:** [00:20:43] So, here's what they came up with. Pfizer did this. It's called Penbraya, and it took all these five variants and put them into one shot. So the kid now goes to the pediatrician, gets his shot, and then three months later, there's one booster, but that's it. It covers all of these strains. So this is for kids and some adults that don't like the needles, this is a big selling point.

Anna: [00:21:12] What age should they get them?

**Dr. Kipper:** [00:21:14] You start around age 11. And then you go the next year and then if, again, if you're high risk, you go back a few years later. Adults can get these, but we're less likely to get that infection. What's interesting in this, I think, is that probably 10% of people running around as carriers of the bacterial component and that they live in the nasal passages, they live in the sinuses, they don't express themselves in all these people. But it's out there.

Peter: [00:21:46] And I was going to say, how does one get meningitis today?

**Dr. Kipper:** [00:21:50] It's a droplet infection. Someone sneezes on you, someone coughs on you, like they get all of the other things.

**Peter:** [00:21:57] Everything else. But at ground zero, how would I get meningitis? Not from somebody...

Dr. Kipper: [00:22:01] No, you would have caught it from somebody.

Peter: [00:22:02] Got it from somebody. Got it.

Dr. Kipper: [00:22:04] Yes.

[music]

**Peter:** [00:23:39] We have a caller, of course, in the segment that we have labeled and called Hey, What About Me? giving you a chance to ask Dr. Kipper your question. An intriguing question today, David, that has to do with stomach pain, however, it also has to do with the test for stomach pain.

**Caller:** [00:23:56] Hi, Doctor. I have a question for you. My sister has had some abdominal pain for quite a while, and her doctor has suggested that she could swallow a tiny camera. What is this about? How does this work? It sounds really futuristic. Can you help me?

**Peter:** [00:24:18] Yes, David, it sounds like you start with the camera, then a bit of lighting and then a crew. What's going on?

**Dr. Kipper:** [00:24:23] Well, it's not a Nikon or a Minolta. This is a camera that's extremely tiny. And you can swallow it without getting hurt. We don't go to the camera first. We have several things that we do first. And then when we're really confused and we can't figure it out from the test, then we go to the camera. So the camera's sort of a last resort in diagnosing.

Anna: [00:24:47] What do they find with the camera...

**Dr. Kipper:** [00:24:49] They can find bleeding, sites of bleeding. People come in with GI bleeds and they don't know exactly where they are. But we can actually treat them if we know where they are. They find lesions in the colon, small intestine. You're having abdominal pain and they can't figure out where the pain's coming from. So you take the camera and it takes a little ride from goalpost to goalpost. And there might be some area that looks abnormal and identifies that part. We sometimes find adhesions, which is scar tissue with these cameras, which do cause pain. And it's also probably one of the best ways to diagnose inflammatory bowel disease. So that's Crohn's disease and ulcerative

colitis. And it sounds horrible, but everyone that's done this have no complaints. They swallow it. It's no big deal.

Anna: [00:25:44] Isn't it like small? It's like a capsule, right?

Dr. Kipper: [00:25:46] Tiny, it's like a capsule. Yes.

**Peter:** [00:25:49] And somebody's watching it in real time as it's going down so they can stop and then do the treatment like they do a colonoscopy? Or is it just you get the video later on, they say we've got to go back in?

Anna: [00:25:58] They have to take it to develop it.

**Dr. Kipper:** [00:26:00] It's recorded in real time. But there's not somebody looking at a screen. But it's, you know, obviously it's hooked up to something. The process is very simple. You go in, you take MiraLAX for a couple days. MiraLAX puts water into the intestinal tract so that camera can slide through. And then you take a couple Gas-X about 30 minutes before you swallow it. And then you don't eat or drink for a couple hours. You can have clear liquids after that, but, after about 6 hours, you can have light snacks. It's already gone past the stomach and it's probably ahead of anything you're going to put in your stomach. And they pass within 24 to 72 hours. They come out the other end.

**Peter:** [00:26:48] This is going to be a dumb question, but it's wireless, right? There's no string attached?

Anna: [00:26:54] You just have one long dental floss out of both ends.

**Peter:** [00:26:57] I'm picturing, like a cable. And I'm thinking, uh-oh, all right, the test is done. It's I'm not going to tell you to go in on three.

Anna: [00:27:06] You made it worse.

**Dr. Kipper:** [00:27:08] It is that, may I say in medical terms, for treatments, it's a hard one to swallow. And there you go. There is a disadvantage to this. Can you figure out what that might be? It's common...

Peter: [00:27:22] Irritation.

**Dr. Kipper:** [00:27:23] Worse than irritation.

Peter: [00:27:24] Gets stuck.

Dr. Kipper: [00:27:25] Gets stuck. Yeah.

**Anna:** [00:27:26] I was going to say, yeah, your stomach loves being the center of attention. And then, all of a sudden, it's like, "No, I'm keeping this camera forever."

Peter: [00:27:34] It's now stuck. What are we doing?

Anna: [00:27:36] Yeah, what are we doing?

**Dr. Kipper:** [00:27:37] Depending where it is, you have to go get it. So it could be a little laparoscopic procedure. It's one in a thousand, by the way. It's not that common.

**Peter:** [00:27:49] Except, I'm the king of people saying, "I've never seen this happen before." So, you know, again, and it has been out of everywhere I've ever gone in any procedure, anything with the car, "I've never seen this happen before."

Anna: [00:28:01] So, you just have to poop into like a Saran wrap until you get it out.

Dr. Kipper: [00:28:07] No, they don't want the camera back. It's yours.

**Anna:** [00:28:10] Oh, it's done. You can just flush it. That's amazing. I thought there had to be a guy retrieving it. And then, like, putting it in a thumb drive.

**Peter:** [00:28:16] 24-hour photo, knocking on your door, "Hi. I'm here to pick up the camera."

Anna: [00:28:20] Putting it in the USB drive, wipe it off.

Peter: [00:28:23] That's the worst job in the world, the camera retrieval guy.

Anna: [00:28:27] That's what I was thinking.

Peter: [00:28:28] Amazing. But the technology is amazing, that something that small...

**Dr. Kipper:** [00:28:31] This is what's actually good news for our caller. We didn't use this for everyone because initially when they first came out, they only got so far into the intestinal tract through the small bowel. They didn't really get into the colon very well. But now the camera has been redesigned so that it goes all the way from top to bottom. So it actually is a better diagnostic tool than it was initially. And the technology, like you said, Peter, has changed.

**Peter:** [00:29:01] Is there anybody who can't have this done because they have some kind of thing? Whatever. Yeah, that where it would be they're too small or their pipes are too small? I mean, how do you test?

**Dr. Kipper:** [00:29:13] By the time you get to swallowing that camera, they've done other tests to see that you don't have a swallowing issue. You don't have a bowel obstruction. You know, these are all the imaging studies that they've done before that.

Peter: [00:29:25] Okay.

**Dr. Kipper:** [00:29:25] So, you're screened for this.

**Peter:** [00:29:28] And, by the way, I've got a quiz for all three of you, including producer Lorre. There's a movie that involves one of our recent guests that's about this technology, and it was done in the '80s.

Dr. Kipper: [00:29:42] I know the answer.

Peter: [00:29:44] Anybody know what it was?

Anna: [00:29:45] It was done in the '80s. "Honey, I Ate the Camera"?

**Peter:** [00:29:48] Here is what it is. It's "Innerspace," where they had this technology and an evil guy stole the technology. And before he could get caught, plunges the syringe into an innocent bystander, who now has these people inside his system. And that would be Martin Short. And it was Innerspace," 1987 movie, there you go.

Anna: That's right!

**Peter:** And I knew we were talking about this, and I said, wait, this sounds really familiar. And I think Martin Short had this inside him.

**Anna:** [00:30:16] And you're reminding me, listeners, we just had a chat with Martin Short and Steve Martin in the episode prior to this one. If you have not listened to it, go back and listen to it.

Dr. Kipper: [00:30:28] And who better to entertain your colon than Martin Short?

Peter: [00:30:32] This would be a good time to wrap things up, wouldn't it?

**Anna:** [00:30:35] I think we'll wrap things up on this note. We've had a, this has been a poop-heavy episode and that's okay. We love it. Today, we talked about new treatments for long Covid.

**Dr. Kipper:** [00:30:46] Serotonin deficiency happens with long Covid. So speak to your doctor about maybe taking some serotonin medicine for a short period of time. Look at the foods you can eat. There are foods, there are supplements that you can take and you can get outside in the sunshine and exercise to build your serotonin back up. So if you're suffering with long Covid, consider those treatment options.

Anna: [00:31:12] And then we talked about some good news for the bowel.

**Dr. Kipper:** [00:31:15] So amitriptyline has been found to work in patients that have irritable bowel. And irritable bowel is probably in 20% of the population. It's very common.

Anna: That's high.

**Dr. Kipper:** Intermittent episodes of diarrhea, constipation, but amitriptyline works in a wonderful way in the brain to slow things down and to restore normalcy.

**Peter:** [00:31:39] Ask your doctor. This Just Happened: New meningitis vaccinations for kids.

**Dr. Kipper:** [00:31:43] So the meningitis vaccine that we've had forever is brutal. Five different strains of this bacteria and you had to get multiple shots and boosters to protect you. And when you're 11 and 12 years old, that's not fun. So Pfizer came up with this new vaccine that incorporates all of these different variants of the meningitis. So it's a lot easier now. It's one shot and then a couple of months later, you get a booster. But that's it.

**Peter:** [00:32:15] And, if you have a problem inside of you, they can send the camera on a trip like the incredible journey to check it out, right, David?

**Dr. Kipper:** [00:32:23] Yep. It's small, it's painless, and it's sort of odd when you think about it, but it helps us solve those problems that we couldn't get to with our conventional diagnostics.

**Peter:** [00:32:38] It's really amazing technology when you think about it, that we can actually do that to take a look.

**Anna:** [00:32:42] And, by the way, if you guys out there are listening and you have a question for Dr. Kipper, why don't you head on over to BedsideMatters.org? Pop in your question there and it might just get answered on the air. And we have socials, guys. We have social media accounts. We have @BedsideMattersPod, Twitter, otherwise known as X, and we have @BedsideMattersPodcast on Instagram. We're putting clips. Follow us, ask questions, slide into our DMs.

**Peter:** [00:33:12] And find out all about your brain chemistry with Override, Dr. Kipper's book, which will explain why you are the way you are. It's fascinating. And every conversation we're hearing about medicine today has to do with information or brain chemistry. So check it out. You should know Anna Vocino. Go to AnnaVocino.com for her sauces, her rubs, her recipes, gluten-free, go, you do it, Anna.

Anna: [00:33:35] Gluten-free, grain-free, low-carb recipes. They are a joy for life.

**Peter:** [00:33:39] They're wonderful. I eat the sauce all of the time. I'd like to thank Dr. Kipper and Anna Vocino and producer Lorre Crimi. Thank you very much. And thank you for listening to Bedside Matters. If you're sick and tired of being sick and tired, we're here to help. We offer new episodes every Monday. So follow us, like us and have a great and healthy week.

**Announcer:** [00:33:59] The information on Bedside Matters should not be understood or construed as medical or health advice. The information on Bedside Matters is not a substitute for medical or health advice from a professional who is aware of the facts and circumstances of your individual situation. Thank you for listening. If you enjoyed the show, please share it with your friends. We'll see you next time.