

Dr. Gould: Welcome to Get Your Smile On. This is your wellness dentist, Dr. Joel Gould, here with another episode of Get Your Smile On. We are broadcasting live from beautiful Manhattan Beach, California. Tonight we are on early. We usually go on at 7:00PM. We are on at 5:00PM for several different reasons, most importantly, my guest tonight is Dr. Satsha Gominak. Dr. Gominak, are you out there?

Dr. Gominak: Thank you for inviting me.

Dr. Gould: My pleasure. Sorry for the technical difficulties. Broadcasting and computers, there are some issues when you go live, but I think we're all good. Usually I start off this show and talk about what the topic is, and you and I talked about what I wanted to call this episode, and I thought the idea of calling it Escape Permanent Winter would be a pretty good one. Before we get into that I would love you to introduce yourself and tell us a little bit about yourself, your education, and where you're at now.

Dr. Gominak: Joel, thank you very much for inviting me to take part in your podcast. I am a neurologist. I practice in Tyler, Texas. I'm originally from California. I went to college at UC Santa Barbara, and then I did medical school in Texas. So I'm actually very happy in both California and Texas, and currently I'm mostly interested in improving my patients' sleep. I've practiced for 30 years, and I have a general neurology practice, because of a couple of unusual accidental discoveries I'm now able to improve my patients' sleep, and that's what interests me the most. That's why we're having this discussion today.

Dr. Gould: Fantastic. Initially I became aware of you when I found out, for myself having a wellness dentistry podcast I sort of on my first podcast defined what that means, but anything related to health. After 25 years in dentistry I was having some personal physical problems that had to do with my sleep. I have sleep apnea, and I found out also that I'm terribly Vitamin D deficient. Initially you came to me by way of my sleep apnea research, and I saw one of your first lectures on YouTube 2013 where you started to talk about Vitamin D and a whole bunch of different things. I guess we want to just cut right to the chase here, and let's talk about Vitamin D. We talked in past shows that Vitamin D is not a Vitamin, it's actually a hormone. What I want to talk to you about, if you want to maybe sort of briefly describe how you came upon the whole D issue?

Dr. Gominak: I would say that most of the things we're going to talk about tonight are accidental occurrences in my practice that then I try to figure out an explanation for. What happened to me was I had five years of doing sleep studies in young, healthy women who came to see me for headaches, and most of them did not have sleep apnea. Most of them just did not have enough rapid eye movement sleep, and many of them just couldn't sleep. Many of them were so sleep deprived that there was no point in even doing a sleep study. They could tell me they didn't sleep at all. So I had a population that was very different than the group of patients who had been originally described, which were overweight males after heart surgery who stopped breathing in the ICU when they were sitting bolt upright.

Because I had a group of patients who had much milder disease, they provided me with a lot of challenges. For instance, if you don't have sleep apnea, what do you do to help them? If they sleep for many hours but don't get into deeper phases of sleep, what should I do to help them? Ultimately, there are no medicines that actually replicate normal sleep. There are things that coax us into sleep and to some extent copy the light sleep, but nothing that really gets us into deep sleep. So I was left with a lot of frustration, a lot of patients who I felt I could probably make them better if I could make their sleep better.

Mostly my question was why is it that everyone I do a sleep study on, and now I've stopped doing them just on my headache patients and I'm doing them on anybody who comes in who'll let me do a sleep study, and I wind up doing sleep studies on 8 year olds and 88 year olds, and they're all abnormal. To me that was shocking, Number 1, and Number 2, very upsetting because I had very little to offer. I had sleeping pills, and I had C-PAP masks, pressure masks that you strap on your face, which are obviously not normal. It's what we had, but it really won't help someone who doesn't stop breathing. All that mask does is push air in to try to keep the airway open.

About five years into doing all these sleep studies I had a young 18 year old who had a sleep study that showed she was in light sleep, which means she was sleeping, but she wasn't getting into the phases where she made repairs to her body. She was sleeping for 10 hours, but no deep sleep was recorded, and that was shocking, and she was otherwise a normal 18 year old. She wound up having a B12 deficiency. The only reason why I tested that was because she asked me what she should do now that she was so tired, and I really just said, who does tired labs? I really had no idea what they were, and she turned out to have a B12 that was very low.

Because her sleep study was so abnormal, and because the B12 was so low, for the first time I began to think about wouldn't this be an exciting idea that we could give back a vitamin which would be a raw material that these cells in the brain stem need in order to make the transitions into deeper sleep. So this would be something we could give the patient back again, and they might sleep normally. It was just a totally foreign idea, and I began to measure B12 levels on my patients.

Soon after that one of my patients mentioned Vitamin D and that her doctor had measured her Vitamin D, gave her Vitamin D, her wrist pain got better. Because I was already drawing blood I threw in the Vitamin D level, not really being that interested in it, thinking it had to do with bone pain, because I was as misinformed as everyone else. Then over a period of about four months I began to realize that every single person I did a Vitamin D level on it was low.

Then by complete accident I happened to give a low dose, but in two patients who were wearing C-PAP masks successfully, who had pretty high D levels, and they got better. They came back and said, this C-PAP mask didn't really do anything for me. It did not take my headaches away, but that little message that you sent me about the Vitamin D made my sleep better within about three weeks. Two people came back in a week and told me that. Then after that very few other few other people got better.

There was a long process of trying to figure out why these two guys got better. Why is it that the dosing is so wrong? Then after that there's a huge body of literature that shows that Vitamin D affects the parts of the brain stem that fascinate me about the control of keeping the airway open and keeping the timing of sleep correct. So there was a linkage in the literature, scientific literature, that was well documented that apparently had been completely ignored. It was already there, but no one had written about sleep and why it would be within this bigger picture of what Vitamin D does for us as an endocrine hormone.

Dr. Gould: I want to interrupt you there for a couple reasons. First of all, that's an incredible linking of sleep and Vitamin D, but I want to just sort of let my listeners understand what's so important about sleep. I know this is tough, because this is a shorter interview here, but I would love you to tell from a neurologist's point of view what sleep is. What's so important about it? I know this is a tough one, because I'll get you to sort of explain how this sort of comes out in the long run, but if you want to just generally talk about sleep, and then towards the end of what sleep does then we can talk about the release of hormones, because I think that where I'm seeing a lot of my patients who actually have sleep disorders is that the biggest issue is they're not necessarily understanding that the control of their entire bodies and the repair is so related to sleep. I guess we'll call it the elevator pitch on why sleep is so important and what happens when we don't have it.

Dr. Gominak: Okay. That's a very good question, Joel. I have to tell you that the first part of this is to understand that humans are here, animals are here, living things are here, on the planet with no users' manual. That's a very different concept than the way I present myself as a physician. I walk in the room. I have a white coat on. I try to present myself as being all-knowing, but in actual fact medicine is an observation, and therefore it's always changing. Our interpretation of it is always changing. What I'm going to tell you about my interpretation of what we do in sleep is based on for 10 years listening to people who don't sleep normally, and then putting it together.

In my view, the body is being used up for 18 hours, and then we lay down, and we repair. We make every chemical we need. We make little packets of each chemical, insulin, serotonin, dopamine, our own Xanax like chemicals. We make little packets with those chemicals, and we store them in the cell so that after 8 hours of sleeping we can wake up, and we have all the chemicals we need to be awake for another 16 or 18 hours. That is not the way we are told about sleep, because currently the best anybody says about sleep is we really don't know what it's for. From my point of view, I know what it's for. We either use the body up, or we repair it. If we don't repair it, and we don't make the chemicals we need, we all feel terrible. My practice is filled with people who have not slept normally for 2, 5, 10, 30 years. Then I watch what happens to them if they don't go into the reparative phases of sleep.

In retrospect, my view of it is all the repair mechanisms that we describe in medicine, whether it's how does the pancreas make enough insulin to last the whole day? How does my GI tract work? How does it repair itself? How do nerves repair themselves? Everything that I've read about how we repair the body probably only happens while we're sleeping. There's a very important reason for that. When you open up certain proteins in each cell that enable a cell to repair itself, so it has to make repair chemicals,

and it has to make proteins, and it has to build things within that cell. In order to build itself again, you actually have to open up processes that would allow the cell to actually, if it were not tightly supervised, if the brain weren't paying complete attention to that process, if you let it go a little unsupervised that cell could decide it not only wanted to repair itself, but it wanted to grow an entire human being.

That means these repair processes open up the potential for growth and then cancer and things that would go haywire, every single night. So I think the entire brain is extremely involved in supervising every single piece of the body's repair. Every part of the brain has an assigned toenail, knee, internal organ, that it is responsible for supervising the repair processes while we are sleeping. If you do not have that every night, the body begins to age faster than the people around you. This is now an epidemic, and most of our population is aging faster.

Dr. Gould: That brings up a couple of great points. First of all I just want to point out that when we talk about cancer what we're talking about is a bunch of cells that aren't supposed to be growing in the right location that start to grow. That's a basic description of it. The sleep actually helps our immune system to also protect us from those type of issues by taking care of our white blood cells. The connection with the Vitamin D as well as the repair mechanism for our chromosomes, do you think that's highly related to sleep, or is that a coincidence?

Dr. Gominak: They're absolutely related. The hardest part about Vitamin D is that it is active on multiple levels. So if you open a textbook, or if you look in the internet, and you ask, "What is the mechanism of Vitamin D?" you will actually see that Vitamin D and A and several other things are pivotal to going into the nucleus of the cell, the actual DNA protective mechanism that keeps the DNA coiled and quiet until we need it is opened. The A and D and several other cofactors sit on the actual chromosomes and help to express certain proteins. That's one mechanism.

It turns out that Vitamin D has multiple layers of mechanisms. It's a single chemical that actually does something different for a red blood cell than it does a brain cell, and there are Vitamin D receptors in certain cells in the brain stem where the Vitamin D probably has a slightly different affect than this expression of proteins. That means that Vitamin D is affecting the body in multiple different ways, which is one of the reasons why it's such a confusing literature.

The thing that I feel is different about my viewpoint is I went into this literature asking, is this possibly why the entire planet stopped sleeping normally when electricity arrived 50 years ago? The question that I posed was different.

Dr. Gould: This is probably a perfect opportunity just to get back to the D. We'll finish up with the sleep. Without proper sleep our bodies basically go into dysfunction, and it can affect anyone differently. Part of what you're saying also is that for people who are getting terrible sleep that if they have genetic predisposition to a certain type of disease that, because their bodies aren't healthy, that disease is going to get expressed. An easy example is that I have Crohn's disease. We talked that I probably had a Vitamin D deficiency my entire life, since I grew up in Canada, and it's pretty dark up there, and I

didn't eat much, other than probably candies and cookies. So my ability to fight it off, or my ability for my intestines and my whole system to work probably were interrupted by having a low Vitamin D, and in my case also sleep issues as well that were probably related.

Dr. Gominak: Yes. They are related. I like what you said. One of the difficult parts is that when you take someone's sleep away they only manifest the diseases they have a genetic predilection for. That means you can't think of it as we're going to make you not sleep, and then everybody will get the same thing. They don't. they'll get things that run in their family. That's kind of complicated.

Dr. Gould: I think that this is both the most complex thing in the world and also the most simple. The whole story is that we talked about, so if we're chronically Vitamin D deficient as a population, and we talked in a previous podcast episode about how the farther you get away from the 30th parallel the more disease that you have, and it's probably related to Vitamin D. What you have done is you've recommended supplementing people's Vitamin D until they get up to what we would consider an evolutionary level, as if we actually lived outside. Let's just talk about the Vitamin D, because it's a hormone it has to be calibrated or titrated, as we say in the medical field. You had recommended to your patients a zone to be in. What is that zone?

Dr. Gominak: The zone is 60-80, and that's a blood measurement. That grows out of asking more than 2,000 people how do you feel? How's your sleep? There has been no single article before our published article that asked that question. It has been very consistent now over five years that when you ask a patient how they feel, and once their Vitamin D crosses 60 their sleep is different. Almost everyone at the beginning can tell a difference in how they feel. So between 60 and 80 the patient's sleep is good. Within the first year probably at least three quarters of the patients will be able to recognize when their sleep changes if their Vitamin D goes too high or too low.

Dr. Gould: I just want to break in there. For the average person, I went to my doctor, and I said, "I'm turning a certain age, and I want to get whatever tests I need to get done." I specifically asked about my Vitamin D. What was interesting is that he said, "Your Vitamin D is normal. You're great." I asked him, "What is normal?" He said, "You're 20." I had already been taking Vitamin D supplements at that point in time. So that was me with taking some supplements. We're talking that the ideal would probably be somewhere between 60 to 80.

Dr. Gominak: Yes. You were really badly off.

Dr. Gould: Yes. Not only that, but the most important part of that is that my doctor, he's a good guy, but he's basing what he's telling me on what he sees out there in the literature. He says, "No, your D is fine." He thinks that that's okay. The take home message for me is that not only do we have a problem that we're deficient of Vitamin D, but we have a medical industry that doesn't necessarily know what to tell you. When I ask my patients, and I say, "Tell me about your Vitamin D," and they say, "I'm fine. I take supplements." I say, "What are you taking?" "I take 1,000 international units." Everyone has a very

unusual idea of what good D is and what their D's supposed to be, but this is seemingly one of the most critical things in the current modern health.

Dr. Gominak: I agree with you.

Dr. Gould: We're going to go on just a bit here. We talked about the whole idea that these are modern sicknesses. These are the restless leg syndrome, the fibromyalgia, migraines, stuff that you're seeing on a regular basis. We didn't see this 40 years ago or 50 years ago, did we?

Dr. Gominak: I don't think that they were epidemic 30 or 40 or 50 years ago. The way I present this to my patients, because I got so paranoid at the beginning of this, because every week I would come up with something else that was linked to Vitamin D deficiency, and not only would my patients think that's weird, I think it's weird. So I kept thinking there's no way that all of these things can be linked to Vitamin D deficiency, but they are. What I came up with as an explanation was I don't have a drug to give you to keep that hand from growing out of your chest. I don't see any patients come into the office with a hand growing out of their chest. I don't have any patients like that. Therefore, the only thing that medicine really reacts to and makes up stories about is what walks in the door.

The other thing my office isn't filled with are patients with syphilis, patients with diphtheria, patients with tuberculosis, patients with polio, patients that would have filled my office in 1910 we have actually cured those illnesses. So what I actually am observing is this patient population. I'm sitting there. They make appointments. They walk in, and I ask them what's bothering them, and there's a whole list and then over the last 50 years we think that that list is "normal" because it's so common.

I realized in about the third month of reading about the Vitamin D that I actually thought it was normal and laudable medicine the internist sending me a patient who's 40 years old who's on four pills. I thought that was good medicine. There's a little something for antidepressant, something for reflux. They're on a little because their feet hurt, or their back hurts. They're on something else for their allergies. I realized that as a 40 year old myself when I was 40, I didn't take any pills. Not only that, I as a 60 year old really don't want to take any pills. I really don't want to go see the doctor. That means there really is a weird assumption that I think it's normal that a human being at 40 years old should have daily headache, back pain, allergies, problems with their bowels, and reflux, and be pretty depressed and anxious. Yet I think that's normal because it is so common.

Now I think of it in a different way, and I think these are all the things that have resulted in the population because we missed something. We really did cure polio and diphtheria and syphilis, but we missed this one thing that is pivotal, and therefore the population that is around me, including me, is suffering from things that are all connected like spokes on a wheel to this one major hormone that we missed that turns out to run sleep. We have also left sleep for last, because doctors are human. We are unconscious during the time we're sleeping. We haven't really had a window into it. So the D and the sleep have been left for last.

Dr. Gould: This is like the last frontier. What's really funny is that when I was sleeping I would wake up every morning feeling a certain way, and what I realized after getting my D up higher is that when you're used to crummy sleep, when you're used to the way you feel, it seems normal. This is normal to a lot of people how they feel.

This is a perfect opportunity to discuss, the way I describe this is we took an incredibly highly evolved mammal, the human, and we put it into a beautiful air-conditioned, gilded cage. It's getting in the sick in the same way that when we take a whale and put it into captivity it's going to get sick too, because it doesn't have the actual conditions that it grew up on evolutionarily speaking. All these modern diseases, these are a result of taking this human animal out of its environment and putting it into a way more comfortable one.

I don't want to go back to living in a cave, but I feel completely different even three, four weeks into having myself treated for sleep apnea. I'm now getting a full night's sleep, and I'm getting my Vitamin D up. Just my feeling alone is pretty incredible. The issue that has come up is this sounds so wacky that it could just be something as simple as this, but it's kind of true. What do your colleagues think about this idea that maybe we don't have to give a pill for every single thing according to what the pharmaceutical companies want us to do? What do your colleagues think about what you're doing?

Dr. Gominak: I think the way you presented that you became interested in this because you weren't feeling well, that is the pivotal place. Number 1, I've hit a wall with my colleagues, and now I don't even try to talk to them about it, but when someone doesn't feel well, especially when they don't sleep, so when a physician doesn't sleep well, and they stumble on my literature, or they're sending me patients and I send them information back, what I'm doing with their patient is something that they wonder about about their own health, they become very interested in it. It really has to be through their own physical experience of not sleeping well, and those people are then invested in kind of breaking out of this idea that all of medicine has already been discovered.

All of us who go to medical school think that everything we learned there was the truth. Oddly, for the physicians, I'm 60, my physicians in my age group thought that fibromyalgia, chronic fatigue, and sleep apnea were really made up diagnoses. A lot of us thought they were just totally created out of nothing, because they weren't in our medical school classes. Because there hasn't really been a good firm pathophysiology, or how does sleep apnea really arise? How does fibromyalgia arise? Nobody really knows that. I think I do, but what's written about it is so unsatisfying to the patient and to the physicians that we still kind of left those as, I kind of believe in them and I kind of don't.

As soon as you have nonrestorative sleep yourself, there is a huge drive to try to figure that out. You realize that your illness is related to that, and all of a sudden it becomes the most important thing you could possibly learn about. My colleagues that are suffering from it are very motivated, and they will sit and listen. The ones that have missed that idea, or just last night I was asking another physician, a guy who's wearing a C-PAP mask and has never thought further past that, hasn't thought about the fact that my cat doesn't wear a C-PAP mask, neither do the squirrels. Nobody else is wearing a C-

PAP mask except human beings. Only doctors would come up with something that crazy.

You know what's interesting about that? I don't actually make fun of a patient who has to have their C-PAP mask on. They've become addicted to it, yet I'm not derisive of them. That's a very interesting thing, because I'm derisive, all of medicine is derisive of the people who need sleeping pills, as though there's something badly wrong with them. There's something inherently weak about them. We don't treat people who use C-PAP masks in the same way, yet we should.

Dr. Gould: Interesting. The thing I'm seeing here, I'm seeing two types of patients in my practice, which is interesting. I'm seeing the female patient who's done everything and feels terrible, and when I come in and look in their mouth and I see all this obvious signs to me of sleep apnea, because the signs in the mouth they jump out at you if someone's been sick for a while. They are so grateful and so interested they can't wait to do a sleep study, and they can't believe that no one's ever suggested this before, because their sleep is terrible, and they admit it.

The second thing that kind of scares me is I've got plenty of patients who are already on a C-PAP, and the way the medical system works is that once you get a C-PAP you're out the door, and nobody's checking on you. I'm screening these patients with their C-PAP machines, and I can tell you that a lot of them are not functional. They're not calibrated correctly. I'm seeing all kinds of stuff that kind of scares me.

So the whole idea that you get diagnosed with sleep apnea, you get a C-PAP machine, you're stuck with it your entire life, and no one ever checks you again I think is crazy and ridiculous. There is so many things that I've just discovered in the last little while that are actually crazy and ridiculous. This whole situation with sleep apnea and, again, Vitamin D.

I want to turn things just real quick. We talked about this is tough one, because it's really complex. What struck me when I heard you first speak is you said, "Vitamins, I don't care about vitamins." I thought the same thing. I'm interested in real stuff, and I think that vitamins are flaky and silly, but what I want to share with my listeners is the whole permanent winter idea that if our bodies are deficient of sleep and Vitamin D our bodies think that we're in a whole different time zone. We're hibernating. I guess, maybe this is going to be tough for you to explain, but if you could explain the whole Vitamin D and why you need B vitamins as well.

First of all, I just want to take this opportunity to say that this show is for informational purposes. Do not go out and do anything crazy. Please consult with your physician or your dentist or me, even email me, before you do anything crazy. However, you can out into the sun and get Vitamin D safely if you know how to do it. I'm not worried about that. Tell us about the difference between somebody who's D deprived versus somebody who's got full D, and what's the difference between their digestive system and how they are as a human?

Dr. Gominak: The first interesting part is that the linkage of Vitamin D to multiple systems in the body, and how it fits together to explain how every animal on the planet can put up with a winter and a summer was all summarized by a gentleman named Walter Stump, who was a steroid chemist. He started publishing in the late 80s, and he has 20 years of articles that describe why we would have a hormone that we make on our skin that in humans is absorbed through the skin, but in all other furry animals, so pigs and humans absorb it through the skin, probably reptiles do too, but mammals that are furry actually lick the Vitamin D that's made in their fur, so it actually goes in orally, which is one of the confusing aspects. This is a hormone. We make it on our skin. We actually make it, but it can come in orally.

The first original mistake was made because we do most of our experimentation on rats, because rats are nocturnal that means they have actually adapted a Vitamin D receptor that can take a similar hormone, it's not the same, but it's similar. It's called D2, unfortunately it's still being given as a prescription, but D2 is made by a fungus that grows on grain. That means that we use these animals that could be kept in a cage inside as our model, missing the fact that 10 years later there was a similar but not identical chemical described on the skin of pigs that had been left in the sun. Dr. Stump took all of this information, put it together, and made a beautiful explanation for the reason why we have a hormone that is linked to our level of metabolism, i.e. it changes our thyroid hormone, it changes how much we eat, it is linked to whether or not we are in the mode to put on weight, just like bears.

As bears reach the end of the season they put on weight so that they can hibernate in the winter. They use the fat stores to get through the winter. That is run not voluntarily by the bear. The bear doesn't just decide its going to lay in the ground. There are hormonal frameworks that cause that bear to actually go into a sleep mode that lasts for months on end. Humans do the same thing, run by the same set of hormones. We actually get up every 24 hours, but in the past in order to survive long winters, periods of time when there would be no food for weeks on end were survivable because we would sleep for long periods, because we would actually use our fat stores in much the same way as a bear did.

Because we are no longer thinking of ourselves in that way, medicine has missed the fact that there is a hormone that connects all of that. One of the fascinating things for me is the gastroenterology literature that has moved in the last 30 years that I've been interested in neurology, they've been studying what happens in the GI tract, and during the last 10 years where I've been studying sleep they've been studying who are the bacteria that live in our colon. There's a whole body of literature that talks about the fact that the wrong intestinal bacteria are epidemic throughout all the developed countries, in the same patient populations that have sleep apnea. There's a link in terms of the appearance of when this epidemic occurred, and within the same populations, and there is multiple parts of the literature that substantiate the idea that many of the autoimmune diseases are patients who have the wrong bacteria in their colon.

The cause and effect has not been clear. What happened to me was I'm interested in D. I'm not interested in poop, but it turns out one of the things that doesn't get better when the D is perfect is the patients don't lose weight. They're still fat. I know that they

gain weight because they were D deficient, but when I get the D perfect for two years they still don't lose weight. Most of the patients who had irritable bowel at the end of two years they had perfect D levels, their sleep's better, they still have irritable bowel. That didn't get better. There were two or three things that were left over at the end of two years. The third one was terrible pain. Many of my patients had gotten better, yet they still had back pain, leg pain, knee pain, joint pain, muscle pain, a lot of pain that was unexplained.

By weird accident, one of my patients walked in with a book on a B vitamin. I still had no interest in vitamins. I still really was just interested in Vitamin D, but my patients were failing. There were still things that weren't fixed, and because she brought me this book I happened to say, this is interesting. It's a B vitamin that's linked to pain. It's a B vitamin that makes joint pain go away, and this B vitamin, called pantothenic acid, makes cortisol. That would link to all the joint pain that all my patients have that's unexplained. She says in this book that pantothenic acid is pivotal in sleep. It makes the patients sleep better.

I think, I like the idea, but why would the patients be B deficient? I'm still operating in the same mindset as everybody else. I eat well. I do what my doctor tells me. If you eat a good diet, you don't have to take B vitamins. I don't really like taking vitamins. I'm very self-conscious about giving them to my patients, because so many of my colleagues think I'm a wacko now. It leads down a road that happens to lead me to this B vitamin that turns out to be only probably made by our intestinal bacteria, which then becomes, this is weird here's a vitamin that's made by our intestinal bacteria, and all of us have the wrong ones, and we probably don't have any of that vitamin anymore.

So it leads me into a second set of vitamins, and another discovery, which is if the B vitamins are all made daily, or have to be eaten daily, and are peed out on that day and can't be stored, how does that bear lie in the ground for six months and not eat and not die? Because the bacteria that eat his colonic mucus that that bear makes as their food supply lives inside him as the normal bacterial culture, which has always sustained that species for billions of years over multiple months. Those bacteria make the B vitamins. What that means is humans were never made to take vitamins. The animals were all here before the doctors came.

The odd part that is we all are in fact vitamin deficient now, and it was a cascade like a domino effect of the D, turns out our D feeds the intestinal bacteria. They need our D to have a certain makeup of species. Those species that are high D summer species make us put our calories into muscle, so we can plant 40 acres and actually be able to pick 40 acres of cotton in the summer. In the winter the population changes, because there's a low D, and low D favors other bacteria that make us take the few calories we eat and put it into fat. So you can watch all the epidemics forming in unison, the obesity, the sleep apnea, the colonic microbiome, and the chronic pain all growing starting in the late 70s and becoming now epidemic. It's not just the US. It's any country where air-conditioning has arrived. The countries where they do not have electricity do not have these epidemics in the same amount.

Dr. Gould: I'm going to stop you there. I want to recap what you're saying here, but we're going to take a very short break for one second, and we're going to come right back, and I want us to review that. I want to give that point back to my listeners and make sure that I understand exactly what you're saying. Hang on for one quick second, and we'll be right back.

Dr. Gominak: Okay.

Dr. Gould: Apparently we are not going to be taking a break. Are you still there?

Dr. Gominak: I'm still here.

Dr. Gould: Okay. We're going to continue on. I'm not really sure what happened there, but to recap, what you're saying is as the sun gets lower in the sky, as humans our intestinal bacteria started to change for winter, and instead of burning calories and building muscle we started putting on fat, to the point at which when I go to the gym, and I see all these people who are trying to lose some weight. They're struggling to the best of their abilities, but their body would actually prefer to burn their muscle than give up the fat, because their intestines say, winter's coming. Your intestine doesn't know that you're taking a flight to Hawaii, and you want to look good in your bikini. Your body just says, if I lose this fat I'm going to die, so I've got to do everything in my power not to burn my fat. I'm going to burn the muscle before I burn fat.

Dr. Gominak: That's correct.

Dr. Gould: So when I say we're all stuck in permanent winter, basically because of our intestinal bacteria, the ones that should be producing vitamins that give us growth and strength, we're hanging on to the ones that cause us to store fat and, no matter how hard we try. I guess, again, I see those people in the gym, and now knowing what I know I feel terrible. I want to say, slow down, because everything you're doing is right. Exercise is great, but you've got the wrong chemicals. You've got the wrong stuff going on.

Dr. Gominak: That's true. And they get hurt, and they feel worse. They can't lose weight, and they get so discouraged, and they come into see me, and I, as the physician, here's what I have to say to them. "Your back hurts because you're fat. Your feet hurt because you're fat. Everything hurts because of you. You're doing it wrong."

Dr. Gould: It's all your fault.

Dr. Gominak: I think that is the wrong message, and I think that's a very discouraging message. I think that that's absolutely wrong. It's not their fault.

Dr. Gould: We get to this weird thing about sleep apnea, and it's like a shame thing. I just wrote an article about sleep apnea, and I had to admit, when I ask my patients, "Have you been tested for sleep apnea?" They just say, "I don't have it." It's a defensive mechanism, like I'm accusing them of being fat. It's really terrible.

I'm so glad that we sort of got to talk about this, because to me just the whole idea that we're all running around with the absolute wrong intestinal bacteria to make us the way we want to be, which is healthy, I don't think my intestines know that there's a 24 hour Ralph's around the corner from where I live, that I don't need to have extra fat stored on me, because I can just go down to In-N-Out Burger if I'm really desperate.

Dr. Gominak: Yes. Let me add one other thing that's really interesting. There are now really good articles that describe that these bacteria, the winter bacterial population, actually make these short chain fatty acids, these little tiny chemicals, that then go into our bloodstream, and they go up in our nose, and they hit these little receptors that makes us want high calorie, high fat, high carbohydrate foods. It actually changes our appetite.

Dr. Gould: I guess the whole food industry is playing on that with our sweet and salty and all that stuff. It's pretty incredible stuff. Your concept of this, does anyone else understand it? Is this a school of thought anywhere that this is going on? To me, it's so simple that it makes absolute perfect sense. Is there a school of thought? Is there a group of doctors who are saying, this is the way it is, let's focus on this?

Dr. Gominak: No. That's the short answer. I and Walter Stump wrote the first and only article hypothesizing the idea that Vitamin D was linked to sleep apnea. There are multiple clinical trials ongoing, and there are clinical trials that substantiate that now that are prospective trials. I will be publishing soon the second part of this, which is it's not D. It is the effect on the intestinal bacteria, and that you can correct the intestinal bacteria and get your intestinal bacteria back into the summer mode, but in order to do that you have to give it lots of Vitamin D and lots of Bs, all of the Bs together. That's a difficult concept, and it's a new idea. What I've stepped into is there are about five new ideas that are linked together, and that means that it's very difficult for routine medical doctors to understand it. The ones that are suffering, the doctors that are sick, see that they have many of these things occurring in their body, but at the moment no one else, I do have other doctors like you who have looked at this and said, I want to do that, but you and I and Dr. Park are beginning that group of physicians.

Dr. Gould: I'm so glad to hear that. We're approaching the end of the show, and I want to review a few things for people, because there were so many really important points going on here. First of all, just before we leave that one point, this is definitely something that I'm so interested in, and the idea that we can do this, we can change our physiology by just doing very simple stuff just blows my mind. Anybody out there listening, you probably at some point soon can come to my website and get a little more understanding of how this is done with more detail. I try to keep this show sort of more simple, just not to get too confusing.

Real quick, I just want to review. Basically our major issues are not getting enough sleep, because when we sleep that's when our bodies repair everything, and from that everything falls apart there. The Vitamin D is the critical piece of this, although it's much more complex. That'd be correct?

Dr. Gominak: That's correct, and let me just add that the last several years that I'm doing this I have become extremely respectful of these chemicals that I thought were trivial. I think,

vitamins can kill you. Vitamins can give you terrible pain. Vitamins can be the actual reason why people wind up in the hospital with a stroke. No one sees it that way but me, but that's because I'm thinking of the effect of the vitamin on the sleep. Vitamins are only good for you if you need them. They are not good for you if you don't need them.

Ultimately, all of us would like to go back to the state where, just like the bear, we had the right guys inside making all our Bs, and we really don't need to take anything. We will all need to take some D, because we do not live outside anymore, but we have to adjust that based on where we are on the planet, how much we go outside this year as opposed to last year, how old we are. Every decade we make less D for the same amount of sun exposure. Even if you keep up the same habitual sun exposure every summer, you will inevitably become D deficient in your 60s and 70s.

That means this was always linked to the things that we see in the aging population. It was a normal part of death of all animals. The sleep goes bad. They get constipated. They get a runny nose, and I got rheumatism. My back hurts when I wake up. Those were all things we saw in the elderly. Now they present in young people, but all of these things are correctable. When you use the sleep to correct every single thing that the brain has put off, what I see in my patients makes me think that the brain has a memory of the REM sleep and the slow wave sleep jobs, repair jobs that it put off over the last 20 years.

If you leave a person alone, and you just encourage them to sleep as much as they can, and you get the chemistry right, the body knows what to do, and it will slowly over time correct all the things that have been left off. I do think that are certain people who walk into my office who are in the final stages of cancer, where it's too late, but I don't think that's most of my population. Every single person who's ill in every way, even if you're in the final stages of cancer, you need the best sleep that anybody can give you. That's what you need. You need that and your doctor.

Dr. Gould: There you go. I'm going to want to close the show on that note, how important sleep is. It just makes sense. What did our grandparents tell us? Get a good night's sleep. How do you feel when you've really got a bad night's sleep? You feel terrible. Being used to really crummy sleep isn't the same as having good quality sleep, and I actually know the difference now.

First of all, I would love the right to get you back on the show to talk a little more specifically about some certain things we didn't even get to cover. This is such a fascinating topic, but I want to thank you so much for coming on the show. I'm with you, and I hope we can just wake up the world and say, not all the medicine is wrong, but let's focus on what we can improve without being crazy. Just be reasonable. Thank you so much, and I would love to have you back on the show again.

Dr. Gominak: Thank you, Dr. Gould. I think you're just wonderful, and you're going in the right direction. I'm happy to be a part of that movement. We're making our own movement towards not needing medicines and feeling good, because we sleep well.

Dr. Gould: Fantastic. Thank you so much. You have a great night, and get some good sleep. I know I will as well.

Dr. Gominak: Thank you. Good night.

Dr. Gould: Thank you. Good night. All right, everybody, thank you so much for tuning in. This has been Get Your Smile On with Dr. Joel Gould, your wellness dentist. I'm so excited about all the future things that I'm working on for this podcast, and I can't wait for you all to hear about the incredible things that are really not out there. Until next time, get your smile on, and we'll see you soon. Thank you.