

Michael Roesslein: We're recording. Hey, everyone. Welcome to another episode of our Wellness Optimization Series here at Rebel Health Tribe. Today, I am joined by a special guest, Dr. Al Danenberg. Dr. Al, thanks for joining us.

Dr. Al Danenberg...: Oh, thank you for the opportunity, Michael. I appreciate it.

Michael Roesslein: Yeah, it's going to be fun. A lot of unique topics here.

For those just starting watching these videos, we started them when the COVID thing started and people wanted information around that, so we started talking around all things related to viral infections, to COVID specifically, to every different angle on it we could possibly talk about, and then it just morphed into general presentations on different aspects of building health that seem a little bit more relevant to everybody now. Health is now a new interest of millions of people, on how they can become more resilient.

Dr. Al is a doctor predominantly of the mouth, and we're going to talk about how that doesn't just mean the mouth, and how the oral health relates to the rest of our health, and the rest of our health relates to the oral health, and the loop there, systemic inflammation, resilience, and some other interesting topics along that. It's going to be unique and fun, and we'll have a little bit at the end. Dr. Al has an incredible healing journey of his own that he's on that we're going to talk about a little bit at the end, too, so stick around for that.

We will start out with my question, simplest question, is, how and why did you become a dentist?

Dr. Al Danenberg...: Great question. You see, I'm 73 years old today, not today, but I am 73 years old now, so you're taking me back a long time. Way back, way before you were even born, and I was thinking about what I wanted to do with my life, I thought I wanted to become a medical doctor, or certainly something in the medical field.

When I was in college, I had an opportunity. This is strange, but this is the way it worked. I had an opportunity to actually work with a dental laboratory that actually did a lot of dentures, bridges, and that kind of thing, and they did it for a whole bunch of dentists. I was living in the Washington, D.C., area, and this job that I had was taking these dental appliances from the lab to the dentists that were ordering it for their patients and then back to the lab again. I met, I don't know, 30, 40, 50 fantastic people that were dentists, and they impressed me about what they did, how they helped patients, their lifestyle. I appreciated it. I wanted to go into some medical field, so I diverged from my thought of going into becoming a medical doctor and then going into dentistry.

Crazy things happen for crazy reasons. I went into that, went through my college training into dental school, loved dental school, but especially loved gum disease, which is a specialty of dentistry called periodontology, so I went to a specialized training after dental school to become a periodontist. That's the early 1970s. Got out of that, went to the Air Force for a couple years as a chief periodontist in Charleston, South Carolina, and began a practice. Since 1974, I have been a periodontist.

Michael Roesslein: The whole time in Charleston?

Dr. Al Danenber...: As a practicing periodontist, yes.

Michael Roesslein: Interesting. Our audience is, a range of familiarity, but generally familiar with the term biological dentistry or holistic dentistry. I learned some things before we went on air that I didn't know that we can share with them. But I'm guessing that biological dentistry is not the way you were originally trained, so when did that come onto your radar that there was a different way to do things, and how did that happen?

Dr. Al Danenber...: First of all, yes, biological dentistry is not taught in dental school. It's not taught in medical school. I got maybe a full eight hours of lecture on what the different vitamins were in our nutrition, and that's all I learned about nutrition and that part of functional medicine. Very interesting, because it just didn't exist.

How I got started in biological dentistry? First of all, biological dentistry is not a specialty of dentistry. This is something that everybody needs to know. That is, any dentist who is licensed in any state as a dentist can also call himself or herself a biological dentist. There is no training required because it's not a legal term. There's no licensure for it. Unfortunately, it is not regulated by any organization. You have to be careful if you're googling biological dentist because anybody can give you the impression that they're trained, but they're not.

What you need to do, and I wrote an article about this, 10 questions you need to ask your dentist to see if they're really a biological dentist, but you can ask dentists questions that a good biologically trained dentist should know. If they don't give you a good answer, I would call it quits and find somebody else. Word of mouth is good. Certainly, you can look on the internet and look at maybe their bios and what kind of continuing education courses they've taken. That's what you might need to do.

Nonetheless, I didn't know about biological dentistry. I didn't get excited about biological dentistry until I had a life-threatening event. I had a stroke at the age of 59. That's way back in 2000-something, 2008 maybe. I can't remember the exact date, something in that time frame. I had a stroke. Pretty bad, obviously. I recovered very quickly. That stroke was with a lifestyle that I didn't know that was bad, but it was bad. I was eating a lot of junk food. I weighed 187 pounds. I was 5'7", so that's a little chunky.

My doctors saved my life, put me on seven medicines to take for the rest of my life. That didn't make sense to me. I asked them what caused my stroke. They had no idea. They said, "Eat healthier and live a better lifestyle." That didn't mean anything to me. But I did do some research with the American Heart Association, American Cancer Society, American Diabetes Association to try to figure out what they recommended for lifestyle and diet because I figured something was wrong and I needed to get the answers. I thought I was getting the answers, but of course you know those are not the sources for right answers. But I didn't know where else to go.

Fast forward from the age of 59 to, actually, the age of 66, I found a course at the Kripalu Center for Yoga & Health. It was a five-day course on nutrition for healthcare professionals. I thought this was ideal, and I was just going to learn everything that I was learning, put it all together,

and I knew I was doing well. At that time, I was still about 185-ish pounds and still on my seven medications.

I took this course. It turned out that it was a course on primal nutrition and lifestyle, lo and behold. I never even knew the term. I learned about that. I learned about a paleo diet. Again, I never knew anything about that. Then I started to realize this made sense, and I called my wife. After the five days, I was getting home. I said, "Let's think about this, but I'd like to make some changes."

My wife and I bumped heads a little bit. She gave me 30 days to make some changes. We cleared out all the, basically, non-paleo foods from our refrigerator, freezer, cupboards, and we had seven bags of food to take to the food bank. We had no food. We learned how to buy healthy organic and pasture raised and wild caught, and all kinds of things were coming very quickly. I realized that this was making a difference in the way I felt.

Within two years of that, I had lost over 30 pounds. I got off all seven medications. I knew that there was a biological process here that none of the medical people that I talked to, and I was seeing my doctors all along, could even relate to. They just knew none of this knowledge, and this is the case today.

I started to incorporate the concepts of paleo diet and lifestyle with the way I treated my periodontal patients, and I was getting great results because I helped change their diets for the ones that were interested. I did more education. I became a certified functional medicine practitioner, certified primal health coach. I did more training to actually learn what all of this meant biologically. Certainly, it relates to the mouth, and we can talk much more about that, because whatever happens in the mouth can happen in the rest of the body, but that's not the starting place.

Once I got all of this together, I wrote a book. I started lecturing. I was known on the internet as the nutritional periodontist, and I started to see results way farther advanced than any of my colleagues could get with traditional periodontics. That's how I got into biological periodontics. Again, there's no legal term, licensed term as a biological dentist. But that's how I approached it, and it's been successful ever since.

Michael Roesslein: Quite the ride.

Dr. Al Danenber...: Yeah, it's been enlightening.

Michael Roesslein: Then it ended up saving your life later on, but we'll get to that later.

Dr. Al Danenber...: Yeah, let's not drop the ball on that yet.

Michael Roesslein: Yeah. That's something I caught in there that you cleared up for me before we came on air, is that there is really no biological dentist. There's no biological dentist certification or extensive training. I'd always known of the organization the IAOMT. That was the one I usually would send out. You've created a training for the IABDM, which is another organization. I was always under the assumption that any dentist I found on those websites had undergone some sort of test or certification, so can you clear up around that?

Dr. Al Danenber...: It is true that people seek out those organizations to get more education, and they do offer phenomenal CE courses that are there to educate the dentist. Over time, you learn enough that you can become a biologically trained dentist. Again, it's not a legal term and it's not a licensed term, but you can call yourself whatever you feel like you want to call yourself, as long as it's not against the legalities of your state's licensure.

The most important thing is that there was no licensed term or an organization that regulated the term of biological dentistry. Now, the International Academy of Biological Dentistry and Medicine, IABDM, actually has a certification program, which is their biological program, but it's not critical that you have to take that to become a member. The same thing with IAOMT. You can become a member, pay your dues, become a member, go to the meetings, enjoy their courses, but you don't have to prove yourself to be that level of a dentist.

If you want me to mention what I'm doing with the IABDM, so I saw a need-

Michael Roesslein: Yeah, sure. Now would be a good time.

Dr. Al Danenber...: I saw a need for something biological but nutritional. Sadly enough, there are a lot of biological dentists that had no concept of nutrition, and certainly no concept of gut health. To me, you can't call yourself a biological dentist if you don't understand gut health, as we'll talk about in a moment, and the reason why.

I was offered to be the chair of periodontics for the IABDM. I accepted that. They wanted me to do some material for them, and I created this program which is a four one-and-a-half-hour recorded program for their new certification, and that designation is the Certified Biological Nutritional Dental Professional. It's currently being offered. It just started to be offered to dentists, dental hygienists, and dental staff. To get them understanding the biology and nutrition and how it affects the mouth and the rest of the body.

Michael Roesslein: Yeah, I was surprised to hear you say that biological dentists, most of them don't know anything about the gut health.

Dr. Al Danenber...: Yeah. Let me tell you why. If you saw a biological dentist, and this is the average biological dentist, there are excellent biological dentists out there, by the way, but the average person calling themselves a biological dentist probably is very involved with biocompatibility of materials in the mouth. Absolutely critical. They're not doing mercury fillings. They're generally not doing fluoride treatments. They generally are not doing root canals, and if they do it, it's only in a very specific type of case where there's no potential or very minimal potential of infection in the bone. They're looking at that biological sense, and that makes sense to me.

But they look at the infection of gum disease, for example, as a bacterial infection that needs to be brought under control, and most biological dentists use a variety of antimicrobial products to kill off bacteria, to the point where you're literally killing everything. There's no antibiotic that only kills this bacteria and everything else is okay. Most antibiotics, if not all, are basically indiscriminate. They will kill everything. Some things they'll kill in a greater intensity than others, but they will just kill things, and they'll kill a lot of good stuff.

The problem is that there is no bacteria, or there is extremely few bacteria, that are really pathogenic. Most bacteria that are potentially pathogenic live in a state of balance. Let's look at the mouth. The mouth has maybe 700 species of bacteria, or less, and that bacteria is in a state of balance. If you look at any one of the bacterium in that group of bacteria, you could say, "This is causing periodontal disease." Well, that and maybe a few others.

If they became overwhelming in population, overgrowing, they will cause a virulent infection. It's true. But that bacterium is actually in balance with other bacteria. If you remove, let's say, *P. gingivalis*, and kill it completely if you could, and let the rest of the bacteria live its life, other bacteria will go out of control because the *P. gingivalis*, because of what it was, kept everything under toe. Everything works with themselves in a state of homeostasis.

Dental plaque, which is the plaque around your teeth... This is going to blow your mind. Dental plaque is healthy.

Michael Roesslein: I've heard you say that before, so I was ready.

Dr. Al Danenber...: Yeah, okay. You were ready. Dental plaque is healthy, until it's not healthy. Dental plaque is a healthy biofilm in the body. How do I know that? Well, let's look at the big picture and look at human skeletal remains from 10,000 to 20,000 years ago. If you look at jawbones from 10,000 or 20,000 years ago, you will see calculus around the roots of the teeth. Calculus is nothing more than calcified dental plaque, or tartar, that is sitting in these jaw remnants.

Now, if you look at the bone structure, it's relatively healthy, and you look at the teeth, it's relatively healthy, meaning there's no active periodontal disease. There's no active tooth decay, but there's gobs and gobs of dental plaque that have calcified into calculus, or tartar. That tells you that that's not an abnormal film.

As a matter of fact, dental plaque serves three major purposes. It acts as a gatekeeper, allowing minerals that are in solution in the saliva to get through the dental plaque, and it distributes it as necessary into the root surface to remineralize the tooth 24 hours a day, seven days a week, if necessary. The bacteria that make up the dental plaque actually produce a variety of types of hydrogen peroxide, and if there are any pathogenic bacteria in the mouth that needs or tries to get through the dental plaque into the gum, tooth, root space, this hydrogen peroxide kills it. Then the other thing that dental plaque does is it actually incorporates a variety of chemical buffers that maintain an acid level of 5.5 or higher, meaning that it helps prevent acids getting into the root to demineralize or cause tooth decay.

Dental plaque is healthy. If you strip off the dental plaque continuously, or use chemicals in your mouth that destroy it, you will have a very susceptible area where the gum margin meets the tooth of acid and variety of types of bacteria that can actually infect the area. In fact, dental plaque is healthy.

The biggest problem I see with biological dentists is that they use these antimicrobial products to kill everything, and now you have a mouth devoid of a garden of bacteria. Although you won't have infection if the bacteria is gone, but you've changed the entire milieu of microbiome in the body when you're doing this and it also gets into other systems of the body. It's not a

healthy environment. You do not want to kill bacteria unless it's acute infection and that's the only method. If you do that, you must repopulate the bacteria right away, and you have to understand how to do that.

Michael Roesslein: Trying to keep up with you, if you can see this.

Dr. Al Danenber...: I'll want a copy just to make sure.

Michael Roesslein: Daily stripping the dental plaque, then, not a good idea.

Dr. Al Danenber...: Not a good idea.

Michael Roesslein: That's a modern thing that's probably not ideal.

Dr. Al Danenber...: No. This is very controversial. I'm going to get... Well, I'm not going to get a lot of phone calls, because they don't have my phone number. But basically, you go to the dental office and they use this disclosing tablet, especially for kids, it's a red dye, it's a vegetable dye, that stains the dental plaque red. You were taught how to scrub your mouth, floss and toothbrush and whatever, until that red is all completely gone. Theoretically, you want to do it all the time, and if you can't do it all the time, they are more than happy to give you chemicals, like xylitol and a variety of other chemicals, that prevent the elemental plaque called pellicle from forming on the surface of the root.

Yeah, you will have no plaque. Yeah, you will have no bacteria that cause tooth decay maybe. You theoretically are going to remove a lot of pathogenic bacteria in your mouth. But you're going to remove everything in your mouth, and you're going to be susceptible to a whole lot of things. That has a lot to do with the COVID that we can talk about. It's just affecting and dysfunctioning your immune system. That's not what you want to do.

Michael Roesslein: Just another way we're getting things wrong. All right.

I'm just going down my checklist. So you mentioned the COVID in this. I had said before we went on air that the inflammation starts in the mouth, spreads to the rest of the body-

Dr. Al Danenber...: I have a bone to pick.

Michael Roesslein: You corrected me that that's backwards and that's the wrong part of this; I'm catching it mid-cycle. There is a lot of evidence now in research coming out about COVID specifically that those with underlying systemic inflammation and chronic low-grade inflammation and inflammatory conditions are seeing much more severe symptoms, higher fatality rates, all of that stuff. So I thought I would come in here and be like, "How do we reduce the oral inflammation to save people from having another thing that's causing inflammation?" But you corrected me on it, so can you give us the-

Dr. Al Danenber...: Well, actually, you're 50% correct, but 50% incorrect. Here is my take. This is from my kind of research, not personal research with patients but research using PubMed and all those literature sources. Here's what is going on.

The gut is the center of almost every chronic disease. Hippocrates, 4,000 or so years ago, said something about the gut is the source of all disease, and he actually was relatively or maybe

100% correct. When there is gut dysbiosis, and gut dysbiosis is not just because you eat junky food and you have bad microbiome growing in your gut, gut dysbiosis, unfortunately occurs with a myriad of things affecting it. Chemicals that you're ingesting or breathing, or even putting on your skin that absorbs, can get into your gut microbiome and affect it. Dirty electromagnetic fields, for example, certainly affect the gut microbiome and the epithelial barrier. Stress, emotional stress, big factor. Poor sleep habits, a big factor. Too much exercise with oxidative stress, a big factor. Not enough exercise is a big factor.

There are a variety of elements that can change the microbiome in the gut, but once that balance is out of whack, then a series of things happen. The microbiome, as you know, Kiran explained it so beautifully, the microbiome is just everywhere around all mucus membrane tissue, and it communicates with that epithelial barrier where the immune system actually resides and it tells the immune system something is wrong. The immune system gets excited and starts to throw off all kinds of chemicals that help to either phagocytize and/or kill some of these invading pathogenic or overgrown bacteria.

What is happening is the immune system is just getting overworked because the dysbiosis continues, and it only continues because all the irritants that are causing it have never been stopped. The gut dysbiosis continues, the immune system gets out of control, it gets weakened, and then the epithelial barrier develops some little holes around it. The openings between the one-cell-layer-thick epithelial barrier allow for the junk in the lumen of the gut, that should only go through the rectum and get out of your body, now starts to leak into your bloodstream. The immune system continues to overreact, creating systemic inflammation, and that systemic inflammation goes out the rest of your body.

One of the stops is the mouth. The mouth is on the continuum of this expression of chronic and systemic inflammation from the gut. What it does in the mouth is, because the immune system now is compromised, it's not controlling the bacterial garden in the mouth, and the bacteria in the mouth start to break down in their homeostatic situation and some of the pathogenic bacteria have a more opportune time to overgrow. If you're eating poorer foods, it starts to feed these pathogenic bacteria, and then the pathogenic bacteria creates their own infection. If you develop periodontal disease, you have developed it because you had a dysbiotic gut.

The dentist, especially a biologically trained dentist, is the perfect healthcare professional because they look in the mouth all the time and they can see signs of inflammation that can alert them to other systemic diseases as well as a bad gut, and they can refer that patient, if they're not treating that situation, to other medical professionals to treat it correctly and properly. But once that bacterial infection causes gum disease and gets under the gum into the bone, it starts to penetrate into the circulatory system. It also starts to affect the lymph system, and it also travels through the myelin sheaths of nerves. It doesn't even touch the circulatory system. When it spreads, it spreads unbeknownst to everybody, and then all of a sudden you get other problems.

What you mentioned, Michael, in the beginning, yes, 50% is a problem with the mouth. As a matter of fact, if you treat the mouth and you don't even treat the gut, you'll get a better result because you're reducing that huge inflammatory load, but you have to treat the gut and have to treat the mouth if you want to get the healthy result.

Michael Roesslein: Treat both, not just one.

Dr. Al Danenber...: Absolutely. I will mention also that once you have this infection in the mouth, you mentioned it, you have a vicious cycle. The bacteria just communicates among itself. Now, once you have this infection in the mouth, it can go back and forth. Although, it's interesting. A lot of the bacteria, especially the virulent bacteria in the mouth causing gum disease, can penetrate red blood cells, become dormant, and then travel through the circulatory system and deposit in other organ systems. But it has been thought, and studies have tried to suggest, that bacteria in the mouth can directly go to the gut, causing gut dysbiosis. I don't believe that's the case for the most part, and here's the reason why.

A lot of the studies are mouse studies or rat studies, and these studies put *P. gingivalis*, which is that big, very virulent bacterium that causes severe periodontal disease. They put it in the mouth of mice, and the mice swallow it, gets into the gut, and it causes gut dysbiosis. Yeah, it's true. It will do that in the rat and in the mouse. But the stomach acid in the rat and the mouse is like 3.7, and the *P. gingivalis* isn't killed yet. The human stomach has a pH of 1.0 to 1.3, and it kills *P. gingivalis* and it kills most other bacteria. Some don't get killed, and some of the metabolites of these bacteria or chemokines that are created are actually still getting through.

Still, the bacteria are, if not killed, they are attenuated significantly. They're not a major factor, but they get into the gut in a variety of other ways. They can get into the gut by traveling through the lymph, traveling through the myelin sheath and maybe embedding themselves into cells like red blood cells and getting into other organ systems, and then, from their dormant stage, become active.

Michael Roesslein: They are clever.

Dr. Al Danenber...: They are clever. We can be more clever, but they are clever.

Michael Roesslein: I'd like to leave the audience with some tips and suggestions from your arsenal as far as when you run into people with this cascade happening. What would be some simple tips and suggestions that you might give to start out for people?

Dr. Al Danenber...: Well, it's absolutely true that you have to clean your mouth appropriately, because studies have shown that 92% of the adult population, at least, has some form of gingivitis or gingiva inflammation, which is an early stage of gum disease. I'll give you an example. Most people, when they go to the dentist and they get their teeth cleaned by the hygienist, the patient will say to the hygienist, "How do they look?" The hygienist will say, "Yeah, it looks really good. There's just a little bleeding here or a little bleeding there."

Well, guess what, a little bleeding is infection. It's not good. You do have gum disease if you have bleeding. If you were a man shaving in front of a mirror or if you're a woman putting on your makeup in front of a mirror, and all of a sudden you saw a drop of blood drip out of your ear, would you be concerned? I think you might be. But if you are brushing or flossing, and it's a little pink and it's not a big deal, and your dental hygienist said it's just bleeding a little bit, you're not even concerned. But the gum tissue should never, ever bleed unless you cut it.

If you take a nail scrub brush and scrubbed your cuticles and you're cleaning your fingers, and all of a sudden you get droplets of blood around your cuticle, would you be concerned? That



tissue should never bleed. The gum tissue should never bleed. It's very tough, and it will only bleed if it's inflamed. It's only inflamed, or 99% it's inflamed, because of an infection. So what do I tell my patients-

Michael Roesslein: What does cleaning mouth appropriately mean to you?

Dr. Al Danenber...: Yes, so I'm going to tell you. What I would tell my patients to do is brush and clean your mouth appropriately, and here's what I would suggest. Take a soft nylon toothbrush, nothing hard, and put it at where the gum meets the tooth horizontally, and brush horizontally softly, but brush horizontally on the outside and the inside of your teeth. Now, that will remove any unhealthy dental plaque, but you're not scrubbing so hard you're not going to remove the underlying layer called the pellicle from the dental plaque, and you're doing okay. Any unhealthy dental plaque will be removed.

Flossing is good, but it's not great. Flossing is good to remove food particles that get stuck between the contacts of the teeth, like meat fiber, that kind of thing. Fruit fibers that get stuck between the teeth, flossing is good. But most people, when they floss, they get very aggressive. They floss under the gum, they saw the floss a little bit, and they cut the gum. At first, it hurts, and then as you go along, it doesn't hurt so much more, but you've actually cut a groove that has healed as a groove, and now it's a receptacle for other bacteria just to sit and grow. Dental floss under the gum is very unhealthy.

The way to clean between the teeth is to use these little silicone brushes, very tiny brushes that go between the teeth that you can clean in and out. One brand that I really love is called TePe, T-E-P-E. The TePe soft pick interdental cleaner is what they are, will brush the surface of the gum where the tooth root meets the gum between the teeth. Because these little silicone fibers sweep away the excess unhealthy plaque, it's very effective. Now, what's interesting is it is also very diagnostic. If you use these little brushes, especially between back teeth, and you get a little bit of bleeding, it is going to tell you you have infection, and you should make sure that your dentist knows that.

Then the other thing to do in cleaning your mouth is to clean the surface of your tongue. The top part of your tongue is loaded with a lot of gram-negative bacteria. You do not want to kill this bacteria, and I'll tell you why in a moment. You want to get rid of the excess bacteria and the food particles that are breaking down that are creating an odor. Most mouth odor comes from the top of the tongue.

You take a spoon, invert the spoon, and go as far back in your mouth as you can on your tongue until you feel like you're going to gag, and then press the spoon on the surface of the tongue and pull the spoon forward. You'll see that there is a milky film liquid that accumulates in the base of the spoon, and that is loaded with bacteria and food remnants. Obviously, you'll throw that away, and you can do that a couple times a day, first thing in the morning-

Michael Roesslein: So it's similar to the Ayurvedic practice of tongue scraping.

Dr. Al Danenber...: It's exactly tongue scraping, but you don't have to buy a tongue scraper. Just use a regular spoon. A spoon is effective because of its concavity. By inverting it, it's even more effective than a tongue scraper, so that works.

I do want to tell you about this bacteria on the tongue. Gram-negative bacteria on the tongue is critical for the biological pathway which is called nitrate-nitrite-nitric oxide pathway. Let me just tell you quickly about that. This is a biological pathway that, when you're eating food, especially certain types of greens that you're eating that have natural nitrates in them, it's absorbed in the duodenum, and maybe 60% gets absorbed in your salivary glands. As you salivate, this biologically active nitrate is in your saliva, and the gram-negative bacteria on the top of your tongue actually creates a chemical reaction and causes the nitrate to change chemically into nitrite. Then you swallow that normally and it gets into your gut, and eventually the majority starts to change into nitric oxide, which helps with cardiovascular health and blood pressure control.

Now, there was an article that was written by a few cardiologists a few years ago for cardiologists, and it basically said if you're a cardiologist and you are prescribing blood pressure medication for your patients and you're not getting the result that you think you should, make sure that they're not on an antimicrobial mouthwash that they use every day, because the antimicrobial mouthwash will kill this gram-negative bacteria on the top of your tongue and it will prevent the natural pathway of nitrate to nitrite to nitric oxide, and you'll have a lower level of natural nitric oxide, and lowering your nitric oxide level will increase your blood pressure. In fact, if you're using antimicrobial mouthwashes every day, you have the potential for higher blood pressure. Not a smart thing.

Michael Roesslein: The burning mouthwash is the glowing green bottles.

Dr. Al Danenber...: Yeah, but essential oils will do that, anything that is going to be-

Michael Roesslein: Anything that kills.

Dr. Al Danenber...: Yeah, anything that kills, so you've got to be very careful. There is no reason to use a mouthwash anyhow if you're cleaning your mouth properly and you get your gut microbiome in good shape and you're eating a nutrient-dense, anti-inflammatory diet. You're in good shape. That's a lot to ask, though.

Michael Roesslein: That is. So dietary-wise, the TePe soft pick you like, the inverted-spoon tongue scraping. Anything else you'd like to throw in there before we shift gears?

Dr. Al Danenber...: No. Actually, if you were doing that, you would amaze your dental hygienist, because you're going to do phenomenal things for yourself and your mouth. Again, if you take care of your gut, you will eliminate a lot of gum disease, if not all.

Michael Roesslein: So even oral health begins in the gut.

Dr. Al Danenber...: Oral health begins in the gut. There are a lot of people that brush and floss extremely well, and they keep going to their dentist every six months and they still have gum disease, or they still have recurrent tooth decay. The reason is your mouth microbiome is out of whack, it's out of balance, and it's generally the result of an unhealthy gut and an innutritious diet.

Michael Roesslein: All right. Thank you for that great breakdown. The last question about dentistry I have is, are there... We talked about the two different organizations, IABDM, and you

have a certified biological nutritional dental professional course that you just created for them that the dentists can go through. There's also the IAOMT. Both of these will have databases of dentists, and people can search. Now, are there some questions that you might recommend that somebody ask or look on a website, or how do I identify a dentist on one of these websites that might actually be a good choice?

Dr. Al Danenber...: That's a great question. I wrote a blog about that, and here's what I'll do. I will send you a link to that-

Michael Roesslein: Send me that. I'll link it right below this video.

Dr. Al Danenber...: Yeah. That is actually suggesting 10 or 11 questions to ask your dentist that you're trying to develop a relationship with. Maybe you want to be their patient; maybe you don't. If they don't give you good answers, and I suggest what the answers should be, but if they don't give you good answers, go to somebody else, because you don't want to go to a dentist that, if you ask them, "Do you do nutritional counseling?" and they'll tell you, "Yeah, eat a plant-based diet," you need to go somewhere else. This is not a healthy biological dentist. They need to not only tell you what to eat; they need to do a three-day food journal for you to see what you are eating and make the proper changes. Very few dentists do that. But my dental program that IABDM is offering now does teach this program of how to do a three-day food journal and interpret it.

Michael Roesslein: Great. All right. We will link that blog. I've got a couple links I'm going to link below the video. If you look below this recording, you'll see a few links to some blog posts of Dr. Al's that I feel you guys should read. I've got the one you sent me that you've recently done on your journey and where it's at right now. We've got one that you just published regarding COVID, and then we'll put this, choosing a dentist. If there's anything else you'd like me to list there, I'd be happy to put them there.

Dr. Al Danenber...: Sure. Absolutely. Of course, you can look at the website and see if there's articles that you might like.

Michael Roesslein: And I can just link to the website, but I do want to highlight a few of them so that people can find them easier.

Then, finally, anybody in our industry, in our world right now, knows of your healing journey, at least in my circles, because you've been very public about it in sharing it. We're going to do, just so everybody knows, I don't want to... This deserves a lot more time than we're going to give to it right now, because we're going to have Dr. Al come back and be a guest on our new podcast, and we're going to talk exclusively about this, so it'll be a longer discussion. If you want to try to nutshell something that is not really nutshell-able, but I'll let you explain what you've been through, when it started, and just what it's been like and where you're at now, because it's really remarkable. I'll just butcher it if I try to do it, so the floor is yours.

Dr. Al Danenber...: As I told you, I had this stroke, I got very healthy, and by the age of 71, I thought I was the senior poster boy for primal health and lifestyle. I was lecturing around the country. As a matter of fact, in April of 2019, I was traveling from Charleston to Austin to speak at Paleo f(x), and I did that. But along the way, I was carrying my bag on my right shoulder,

especially from flight to flight in Atlanta airport, and it started to get sore on my right shoulder, which was strange. Didn't go away. I went to Paleo f(x), did my seminar, came back. The soreness didn't go away. Then it sort of went away, but then went to my back. Then it went from my back to my chest, and it was getting annoying.

Eventually, since I'm a hardhead anyhow, eventually I decided, "I need to go see my doctor." I had seen him for 35-plus years, so I knew him very well. I went to him in August of 2019, and I said, "I've got this soreness, and it's now in my chest. I don't know what's going on, but I don't feel good." He said, "Okay, let's do some blood tests." He did a whole bunch of blood tests. Everything came back normal, except a high-sensitivity CRP, C-reactive protein. It showed some systemic inflammation. Didn't say where it came from. Didn't say it was acute or chronic. It just said, "You've got inflammation."

He said, "Let's do an MRI." We do an MRI. He calls me on the phone, and of course there's a discussion, but basically he says, "I would be concerned if I were you. I think you have leukemia, lymphoma, or multiple myeloma." Now, wait a minute. I am the pillar of health, and I am. I really feel great, except this soreness. What the hell is going on?

He said, "Let's call in an oncologist. Let's do some more tests." We did a PET scan. I had a soft tissue mass on the side of my spine. We did a CT biopsy of that and a few other, more sophisticated cancer tests. It turns out that the PET scan was lit up with all kinds of radioactive glucose areas of active cancer all throughout my skeleton.

My diagnosis is IgA kappa light chain multiple myeloma. It's a very complicated name. It's an aggressive form of multiple myeloma. I have lytic lesions so much throughout my body that the radiologist can't count the number. They call it innumerable. My skeleton is so weak. That's the pain I had. I had a vertebral compression fracture, two cracked ribs, and a hairline fracture in my pelvis, and I had no idea, but that was causing my pain. My skeleton cannot support the weight of my body, and I can't twist. It's an incurable disease. I was given three to six months to live.

Michael Roesslein: When was that?

Dr. Al Danenber...: That was September 2018. In September 2019-

Michael Roesslein: So a lot longer than three to six months ago.

Dr. Al Danenber...: Oh yeah. It was rough. I was supposed to do chemotherapy, but I rejected completely chemotherapy because it would only destroy my immune system, destroy it, and my quality of life would be going downhill. It may be giving me more years to live, but eventually the chemotherapy wouldn't work, stem cells wouldn't be the ideal for me, and eventually I would die from the complications of multiple myeloma. But my quality of life would be going downhill. I couldn't sit comfortably with that.

I told my oncologist, who agreed with me, "I need to figure out a more natural way of trying to get my body healthy," and I created my unconventional cancer protocols and started on those protocols, and did extremely well. As a matter of fact, the disease didn't progress. I never went into remission, but it didn't progress. I did have some radiation in my sternum because I couldn't breathe well because of these cracked ribs and the lesion that was there, so I did have

that, just to stop the lesion from affecting my lungs. Other than that, no other treatment. Then we can fast-forward to sometime in August of 2019, and I am brushing and flossing my teeth-

Michael Roesslein: So almost a year.

Dr. Al Danenber...: A year, well beyond the three to six months. I'm brushing and flossing my teeth. I knew that I had potential for pathological fractures, because I had a few along the way and it was not comfortable. But I'm brushing and flossing my teeth, and my feet are planted on the floor, I'm looking in the mirror, and I twist to the left to throw the dental floss away. A 90-degree twist to the left, my right foot is planted on the floor, not realizing what I did, and instantly my right femur snaps in half. I crash to the ground, crack a few ribs, and split my right humerus in half.

Now, I am writhing in pain. Whatever pain you think is terrible, multiply it by 10. I cannot move. I am screaming for my wife. She comes in, runs into the room. She sees what's happening. She's an RN. A lot of stress here going on, and she calls EMS.

They get me to the hospital, and I'm ready to die. I am prepared to die. I knew that this disease was going to kill me, and I knew that quality of life was critical. Now that I've literally crushed my bones on my right side of my body, I felt there's no way that I'm going to survive this the way I want.

They fix my right femur because it would eventually have punctured my femoral artery and I would have bled to death. So they fixed my right femur. My right humerus is not set, and I am sent to a hospice hospital literally to die. That's the end of August 2019. I'm highly drugged with narcotics. I have a catheter. I have to use a bedpan. It is so demoralizing. Michael, you have no idea.

I'm in the hospice hospital, and that first week in September, Hurricane Dorian is coming to Charleston. It's only traveling at one mile an hour, but it has 180-some-mile-an-hour winds. That's very destructive, and the hospital is ordered to evacuate. The hospital doesn't know where to send me. My wife, as an RN, scampers to get a hospital bed in the house. They evacuate me to my house. The hurricane goes, and I am laying literally in a bed that I can't move. We get somebody to help me in the house, but I'm still under hospice.

My wife is brilliant and wonderful and she supports me, and she gave me some tough love and said, "You know, you're not a victim here. You're a survivor. You did so well with your protocols, and now you stopped them. You need to get your act together." She brought in a physical therapist. They started to work with me. Eventually, the catheter was gone. I started to walk with a walker. I rallied, and I revoked hospice at that time. I got significantly better rather quickly.

In October, I went back to my oncologist, and he's looking at me and he's talking to me. There were some new drugs that the FDA had just approved. These were not chemotherapy drugs. These were actually immunotherapy. They were human-based monoclonal antibodies to kill just the cancer cells of what I had, kind of unique. I started those and included those in my protocol.

Then we can fast-forward until May of 2020, and he wanted to see how the cancer was still progressing in my body. I had a PET scan when I was diagnosed. I had a PET scan in June of 2019, and now he's doing a new PET scan in May of 2020. He does a PET scan on a Friday morning, and that Friday night he calls me at home and says, "Al, make sure your wife is on speakerphone." He reads the radiology report, and it basically says there are no active cancer cells visible in the PET scan throughout your entire body.

Michael Roesslein: No lesions.

Dr. Al Danenber...: No lesions at all from the PET scan. Now, a PET scan has limitations. It can only look at medium to large-size clumps of cancer cells. But of all the other PET scans which were loaded with cancer cells, this was amazing. My oncologist was absolutely shocked because no patient that he is treating, and he's treated thousands of patients, is getting the result that I'm getting because no patient of his is doing protocols like I'm doing. So he's excited. I'm excited.

The reality is I still have some remnants of malignant proteins from my malignant plasma cells, but it could be my immune system now just needs to clean it out. I believe I have a very healthy immune system, although my disease theoretically means that I am at high risk because of a weakened immune system, but I've done things to improve that. We can get into that, because that's part of the beauty of these protocols.

But I've literally gone from the edge of death to thriving, and I feel great. I feel great. I think I look great. I exercise a little bit in the house. I walk about a mile a day outside. I'm thriving as an old fart of 73.

Michael Roesslein: No, it's been awesome to watch. For those who don't know, you've been posting about it the whole way through in a couple professional groups I'm in, so I always get privy to the updates. I remember when you broke your femur and you were in hospice, and then gradually the posts were less about that, and then all of a sudden you made the post that your scan was cancer-free. I actually jumped into some research on multiple myeloma when you posted that because it was my understanding with multiple myeloma that it was kind of like pancreatic cancer. It was in that ballpark of "It's possible to slow it down. It's possible to improve standard of living. It's not really that possible to get rid of it."

Dr. Al Danenber...: Well, even the newest treatment with immunotherapy, the one that I'm using right now, which is kind of cutting edge, I guess, there's only 1% of the population that takes that, that gets that, that actually becomes cancer-free. Now, I can't say I'm cancer-free because it takes a long time to be cancer-free, to say you're cancer-free, but-

Michael Roesslein: But it's semantics. You're doing really well.

Dr. Al Danenber...: I am feeling awesome. I do go to the cancer clinic every month, and I see cancer patients that are on infusion therapy. I'll give you an interesting sidelight to this, and that is I see these patients in the infusion clinic where they're doing chemotherapy and whatever, and sometimes the nurses give chocolate chip cookies to these patients while they're on chemotherapy. Nutrition is so far removed from treatment of cancer, and I just don't get it, because cancer is a disease of metabolic and mitochondrial dysfunction. It's not a genetic

damage that is going to cause you cancer no matter what you do. It doesn't work that way. The epigenetics of healthy diet and a healthy lifestyle can either upregulate or downregulate these cancer genes. It's just amazing to me that sugar, chocolate chip cookies are fed to active cancer patients on chemotherapy.

Michael Roesslein: My son has had a couple seizures in his life, and when he was young, he had one. Well, he's had three. The first time, we were at, I think it's called Swedish National or Swedish General Hospital. It's in Chicago. It was late at night that I was there, and it took me a long time to get down to the city. Long story short, I had missed lunch, missed dinner trying to get down there trying to get to him in the hospital, and after 15 hours of not eating, he was stable, everything was fine, I was going to wander around to find out what food I could acquire at this time. The only food available in the hospital was McDonald's.

Dr. Al Danenber...: It's amazing.

Michael Roesslein: I was like, one, why is there a McDonald's in the hospital to begin with? Two, how is it the only thing that I could eat right now? It's because the McDonald's sponsors the hospitals. They give money. They donate money to the hospital, so then they get to put a McDonald's in the hospital. My only option was eating fast food. We can go on a long discussion about that.

Dr. Al Danenber...: Yeah. There's a big dental convention that is in Atlanta, a well-known dental convention for dentists and hygienists, and it's sponsored by the people that make Coca-Cola.

Michael Roesslein: Of course. Yeah. I've seen those, too, posts of "Happy Diabetes Month. Get your free Krispy Kreme donuts" and things. It's not facetious. Those are serious things-

Dr. Al Danenber...: Yeah. Go into the majority of dental offices around Halloween. What do they give? Yeah. Crazy.

Michael Roesslein: Anyways, that story is awesome. It's been awesome to watch. It's been awesome to read. I want to have you come back on the podcast, and we can talk more about what it was like to actually go through it. Instead of just summarizing the main points and the details and the victories and all of that, which are great, I want to really dive into the human experience of what you've been through, because we have a lot of people in our audience that have been through or are going through some pretty scary chronic health issues and acute health issues, and I think it's powerful medicine to hear from people who have been through and can relate.

Dr. Al Danenber...: I agree.

Michael Roesslein: We'll do that on the next conversation if you're open to it.

Dr. Al Danenber...: I'd love it. Oh yeah, I'd love it.

Michael Roesslein: That'll be fun.

Dr. Al Danenber...: Absolutely.

Michael Roesslein: We had to get some dental stuff and some inflammation things and some gut health into this one, but the next time we talk, it'll be all about that journey, because that's really what I'm going to try to do with the podcast. We see these doctors and these practitioners and these authors and all these people out there, and they know them for their book or their specialty on hormones or their thing that they do. A lot of times, they don't really know the people, and a lot of these people, I've gotten to actually get to know the people, and so I want to do a podcast about the people and why they do what they do and how they came to be doing it and what their own journey is and what challenges they've faced, and less about their medical specialty. We have enough of that information out there.

Dr. Al Danenber...: Yeah, it's everywhere. You're right, it's everywhere.

Michael Roesslein: We want to just have real conversations, so I think this will be a fun one.

Dr. Al Danenber...: I'd love it.

Michael Roesslein: I'll reach out. We'll record it. It'll be one of the first episodes we publish. I want to get it out there at the top of the list because I think it'll be really powerful. We will put relevant links below the video. We'll put your website. I'll put a link to the IABDM. Is that up now?

Dr. Al Danenber...: Yes.

Michael Roesslein: Is your course there?

Dr. Al Danenber...: Yeah, I'll send you a link-

Michael Roesslein: Now, that's for dentists, so that's not for everyone, but we could link to it-

Dr. Al Danenber...: Yeah, but I'll send you the link to that course also. Anybody that wants to look at it, they'll just take a look. If they want to see their dentist, they should say, "Hey, guy or gal, you need to..."

Michael Roesslein: Check this out.

Dr. Al Danenber...: "... get on this course." Yeah.

Michael Roesslein: All right, so we'll link to that. We'll link to the questions to ask when looking for a dentist, your cancer protocols, which you have shared along the way and updated along the way as they've changed. Whatever is the most recent iteration of that, I can put up.

Dr. Al Danenber...: Absolutely.

Michael Roesslein: We'll have a bunch of resources for you right below the video. Also, we get these transcribed, so they'll be able to read this too. Thanks a lot, Dr. Al. This was a lot of fun.

Dr. Al Danenber...: Thanks, Michael. I appreciate the opportunity. You have a great day.

Michael Roesslein: You too. I learned a lot, so thank you.



Dr. Al Danenber...: Well, thank you. That's an impressive statement because you're a pretty smart guy. I see that.

Michael Roesslein: Well, thank you. It's because I get to talk to a lot of really smart people, and I take notes.

Dr. Al Danenber...: I see that.

Michael Roesslein: No, it's rubbed off over the years.

Dr. Al Danenber...: And you draw pictures too. I love it. I see that.

Michael Roesslein: I do. I draw arrows to point sequences so that later I can-

Dr. Al Danenber...: I love it. I love it.

Michael Roesslein: It's my version of shorthand. Instead of saying converts to or creates-

Dr. Al Danenber...: It looks like a sophisticated flow diagram. I'm impressed.

Michael Roesslein: I'll take it. It's more just random, unorganized scribble, but I'll take it. I'll take the compliment. Thank you, doctor. We'll talk soon. Appreciate it. Have a great rest of your day.

Dr. Al Danenber...: And you be good too. Take care.

Michael Roesslein: I'll try. All right.

Dr. Al Danenber...: Thanks.