The Oral Microbiome:

A Special Interview with Dr. Gerry Curatola

By Dr. Joseph Mercola

DM: Dr. Joseph Mercola

GC: Dr. Gerry Curatola

DM: Many people don’t realize the profound importance of the health of your mouth to your total body health. Hi, this is Dr. Mercola, helping you take control of your health. Today I’m joined by Dr. Gerry Curatola, who has profound experience in biological dentistry and [who founded] Rejuvenation Dentistry. He will help us answer that question today. He’s been doing this for over 30 years and is internationally recognized. So, welcome and thank you for joining us.

GC: Thank you for having me, Joe.

DM: Okay. You know, it’s always useful for our viewers to have a perspective and a background on how you first became interested in this. Because most clinicians when they enter professional school, either dental or medical, they’re typically pretty well brainwashed and accept the standard information, certainly as I did. And then they have some epiphany and something turns them around. They start to wake up to the truth. Why don’t you walk us through your journey?

GC: Yeah. You know what’s interesting is that there are those who have this innate love of the healing process. They’re true healers. They come from every discipline, including your own as an osteopath. And for me, I chose to become a dentist at six years old.

DM: Wow.

GC: It was really a childhood calling. But when I was in dental school, it was very… Even though we had a lot of the, you know. We go through the four years of osteopathic medical or dental schools. That education is a four-year process. But in that process, dentistry became increasingly mechanical in the later years. The mechanical aspects of dentistry were the drill them, fill them, and bill them. As a matter of fact, I think you had on Dr. Boyd, a pediatric dentist.

DM: Sure. He’s at the Children’s Memorial in Chicago.

GC: Yeah. He’s a great guy. He had the same epiphany I did. We didn’t want to be a mechanic of teeth; we really wanted to be a physician of the mouth. That set me on a journey. From the moment I graduated from dental school, I enrolled in the country’s first master’s program in holistic health. It was being given at a private institute in New York. My desire and my focus have always been to look at the mouth as the gateway to total body wellness.

DM: Did you have some initial conversion experience though that catalyzed this interest? How did you wake up to the truth?

GC: Well, when I graduated from dental school in 1983 from New York University, that’s when I enrolled in this program. We were both passionate about looking for other healing modalities that could
be adjunctive and complementary. It used to be called alternative medicine; now we call it integrative medicine. It’s interesting how everything is evolving. And even the patient’s consciousness is much more open to incorporating homeopathic remedies, nutritional remedies, and naturopathic remedies.

And then beyond that, I became very disturbed that I was a member of a profession that its organized component, the American Dental Association, is still saying it’s okay to put mercury in teeth. In addition to that, all of the research that was emerging about fluoridation made it very clear that this wasn’t the panacea for all dental [inaudible 04:12]. As a matter of fact, it’s responsible for a lot of other problems that we’re dealing with today.

DM: Sure. Why don’t you help us understand the influence of oral health and how it impacts our entire body or systemic health?

GC: Well, we have a plethora of research, and I mean thousands of studies now, that have linked oral disease to systemic disease. Time magazine back in 2004 had a cover that said that inflammation is this ravaging force, and it’s chronic low-grade inflammation, which is exactly what gum disease and much of oral diseases is. It’s a chronic low-grade inflammation. This inflammation has very, very deleterious effects on just about every major organ system – from Alzheimer’s in the brain to stroke, heart disease, and diabetes.

I mean, I can give you all the statistics as well if you like. But you can have up to a ten times greater chance for heart attack from its relation to advanced periodontal disease or gum disease. By the way, that’s usually the heart attack that has actually a 90 percent chance of being fatal. If you get a heart attack related to periodontal or gum disease, we’re pretty sure it’s going to kill you. That’s a pretty serious statistic with one of the nation’s number one ravaging causes of mortality.

What we’ve also looked at is diabetes. [It’s] very, very interesting. [There’s a] 700 percent higher incidence of having the ability to develop type 2 diabetes. What we’re looking at again is the inflammatory effects, basically bacteria that are out of balance, and I’ll talk about that. It’s the same bacteria in the mouth that are benign and even beneficial in a balanced state. They flip a pathogenic switch, and now you have the same bacteria that cause tooth decay and gum disease entering into the circulatory system and causing the liver to release C-reactive proteins, which has inflammatory effects in the entire circulatory system.

There’s a very, very close connection. As I said, the mouth is the gateway to total body wellness. That is an accurate statement that’s well-accepted today.

DM: Terrific. What are some of the strategies that you use to optimize oral health? And what basically does your Rejuvenation Dentistry consist of?

GC: Joe, Rejuvenation Dentistry was a model that I have created in 2006, a model for the future practice of dentistry, recognizing that dentists often see patients more frequently than most of the healthcare practitioners. They come in for regular checkups and cleanings. And we should be screening. There are millions of Americans walking around right now who have diabetes and are even unaware of it. In the mouth, we can diagnose a host of systemic problems. There are some estimates that up to 80 percent of systemic disease have manifestations in the mouth – everything from blood problems, even leukemia, diabetes, other fungal and bacterial infections that have systemic components.

What we’re looking at now is promoting oral health is really critical to achieving total body wellness. It’s been sort of honestly, the 800-pound gorilla that’s been left out of the wellness room. But I do have to say, Joe, that you have been on the frontline of recognizing oral health. I really appreciate all of the pieces that you’ve posted on your website, which I encourage your viewers to go through – just on oral health,
just on the issues related to fluoridation, the issues related to mercury, and the issue related to these types of toxicities that prevent someone from being well.

But let’s just take a moment and talk about the oral microbiome, this ecology of the mouth, which is essential to total body wellness. What we know is that you and I are here today and we’re 90 percent bacteria and 10 percent human cells. This interesting…

**DM:** That’s at least the DNA content. By volume and mass, our cells are outnumbered. But they’re DNA content.

**GC:** The DNA content is 100 times greater. The volume of bacteria in and on our body outnumbers our human cells by 10 to 1. Our DNA is actually 100 to 1. We are basically a container of bacteria, which we traditionally looked at as invaders.

[---- 10:00 ----]

**DM:** Yeah. I have not seen that data before. Because everything I’ve reviewed said the DNA is 10 to 1. I’d love to see your studies on that.

**GC:** There’s a great YouTube video by a brilliant Princeton University professor. Her name is Bonnie Bassler. And Bonnie did a great Ted Talk on How Bacteria Talk.

**DM:** I think I saw that.

**GC:** Yes, she gives the graphics on 10 to 1 number and 100 to 1 is a genetic information. It’s really interesting, the whole theory of the mitochondria in our cells being bacterial in origin. We were… There’s even that biblical story of how God created man. He took the dust of the earth and he breathed into it. Actually I think it’s the Hebrew version. He took the firm soil, which he filled with microbes. It was all microbes. Are we bacterial beings in origin? That’s a major theory today.

But getting back to how that relates to new approaches promoting health, we need to recognize that the way we achieve oral health is really about promoting balance. When we’re out of balance, we have basically an overgrowth of bacteria that flick a switch and become pathogens, especially when they’re being bombarded with antimicrobials, alcohol mouthwashes, and all those. This bug-killing approach is not only going to affect your health, it’s harmful.

**DM:** Terrific. What strategies do you do to upgrade the oral microbiome? Because that obviously has a real important influence on our gut microbiome, which many experts believe is our second brain, because of the massive intercommunication between the brain and the gut.

**GC:** Yeah, you’re absolutely right. It is amazing. It’s almost like… Remember, when we were young and they have those Jacques Cousteau underwater adventure? We’re doing Jacques Cousteau exploration right in our guts right now. We’re recognizing that there are bacteria in our guts that tell us to be fat, that make us skinny, and that determine the color of our eyes, IQ, and all kinds of things. The oral microbiome, while connected to the gut microbiome, is also very different and unique. That is because it’s got a protective component that protects us from deadly viruses and bacteria in the environment around us.

**GC:** It’s interesting, when we look at the oral microbiome, it’s an essential component of the salivary immune system, it aids in digestion, and it even makes vitamins. We are looking at ways to promote oral microbiome homeostasis. When we do that, we see amazing things happen, so amazing that you might not get the flu this winter. You might have a healthier immune system. Especially with the crazy news of Ebola coming to the United States and all these types of things, we’re recognizing that immune competence is a very important first line of defense, and that immune competence starts in the mouth.
I’d like to say we could use prebiotics in the mouth. You could use combiotics. The reason why prebiotics work in the gut is that combiotics work there, too, like salmonella and E.coli.

In the mouth, it’s unique. Our oral microbiome’s first function is defense and the second function is the beginning of digestion. This important protective beneficial oral microbiome behooves us not to try and kill the bad bugs and really this “good bug vs. bad bug war” thing. And really the bad bugs are good bugs gone wild. The Streptococcus mutans bacteria live in our mouth. Porphyromonas gingivalis and Actinomyces, they live in our mouth. Just like H.pylori live in the gut. Staphylococcus aureus live on our skin, and pneumococcus bacteria live in our lungs.

It’s when they’re out of balance that really the pathogens have been redefined since the Human Microbiome Project (HMP) in 2002. Pathogens are now being recognized as resident microbes that are out of balance. When they’re under attack, they hunker down, they flick a switch. They took plaque off the tusk of a mastodon frozen at a glacier. We put it in a petri dish at body temperature, and we found that bacteria start to open up and flourish. They paid a high evolutionary price to be there once in our mouth and in our gut. What we’re recognizing is that they basically keep us alive.

I have been kind of tooting the horn about getting out of the pesticide business. You know, I’m also speaking about natural pesticides. Not just triclosan, clorhexidina, and those types, but also tea tree oil, palm seed oil, and other antimicrobial oils that albeit they’re herbal, they have a potent disturbing effect on the oral microbiome.

DM: That would include things like oregano oil, too?

GC: Yeah, oregano oil as well.

DM: So your recommendation and review of their influence on oral health would be to avoid them?

GC: Yes. We need to get out of the pesticide business. Pesticides can be natural. I mean, I use peppermint oil on plants in my garden. It’s a natural pesticide; it’s not toxic at least. But tea tree oil is [inaudible 17:15]. Here’s a rule of thumb for all of the viewers: if it’s not good for your pets, it’s not going to be good for you generally. I always tell people, you know.

Tea tree oil became very popular in daily products because of its potent antimicrobial effect. It came from a plant in Australia. It’s got a lot of… I mean, with the exception of short-term use, like a spot treatment on a zit on your face, I can accept that because there’s already an imbalance there. But in the mouth, you don’t want to do the scorched earth policy or nuking all the bacteria and hoping the good bugs come back. What we found in our research is that good bugs basically have a harder chance of setting up a healthy-balanced microbiome when you disturb them, denature them, or dehydrate them with alcohol-based products.

DM: That’s a pretty impressive and powerful recommendation. Clearly the reason why people use these products even though they’re natural is to decrease their risk of plaque, gingivitis, and dental disease. What do you recommend as an alternative?

GC: Well, what we found is, nutritionals and homeopathics are great. And then we used a combination of homeopathic tissue salts – silica, calcarea fluorica (calc fluor) or calcium fluoride, calcium phosphate, and calcium carbonate. These have amazing beneficial effects in a homeopathic preparation with tissue salt, whereas the chemical formulation of sodium fluoride as we know is toxic. And toothpaste has a poison warning for having sodium fluoride. Did you know why there’s a poison warning, by the way? Why there’s a poison warning on toothpaste?

DM: Well, we’re traditionally taught that it’s because of the concentration of the fluoride.
GC: It happened in the 1980s. Procter & Gamble launched a product, Crest Pro-Health, I believe. A lot of people didn’t realize this. The Internet wasn’t around, but the…

DM: Actually the Internet was around; the Web wasn’t around. Internet was developed in ‘68.

GC: That’s right. I forgot.

DM: Because I was on the Internet in the ‘70s.

GC: Al Gore invented it in the ‘80s or the ‘70s rather. But the Web wasn’t around, so the access to information was a lot more difficult. One of the things that happened was Procter & Gamble came out with a product that was fluorescent blue with sparkles and it was bubble gum flavored. Children were eating the toothpaste. A little known fact was that fluoride fatalities in children went up 280 percent. Basically there was enough fluoride in a full-sized tube to kill two children under five.

DM: Wow.

GC: It was a scary thing. It took the Food and Drug Administration (FDA) almost 10 years. But they finally mandated a poison warning be placed on toothpaste in 1998. They issued the poison warning, which says that children should be supervised only a pea-sized amount. If more than that is swallowed, contact Poison Control Center immediately. It’s buried on the back of the tube. But a lot of savvy patients now, consumers who are reading the tubes, are saying, “Why is there a poison warning on toothpaste?” Well, that’s why. Fluoride was toxic way back in the ‘60s when they started doing this. But when they made it taste so good, children were eating it.

Another statistic, by the way, right now is that 4 out of 10 adolescent children have teeth damaged by fluoride – 4 out of 10 American children with teeth damaged by fluoride. The very thing why they have fluorosis damage, the very thing we were giving fluoride to make stronger and protect them from. We have 41 percent of adolescent children with fluorosis damage. We have a real runaway train with fluoride in water, fluoride in food products, fluoride in rinses, and fluoride in toothpaste. But a lot of dentists like myself are becoming … Certainly I knew way back that, “Hey, this is not adding up.”

One of the things about fluoride, by the way, is that it was promoted because it stimulates remineralization of teeth. What they didn’t look at is what type of mineral is left in that tooth. It’s a mineral known as fluorapatite that goes from hydroxyapatite to fluorapatite. Fluoride is highly reactive. Fluorapatite is very hard. It’s like a porcelain plate. This glass jar I can’t scratch it. But if I bang it on this counter, it would break in a million pieces. We have teeth and bones that are now fluorapatite.

Skeletal fluorosis has also become a big concern. We have an exponential rate of hip fractures. A lot of doctors and scientists have been pointing to the fact that teeth and bones are less flexible as fluorapatite than hydroxyapatite. This is aside from all the controversy in terms of fluoridated water lowering IQ, kidney disease, cancer, and all of these different things. But the basic premise that the American Dental Association (ADA) stands behind is that it promotes remineralization. I say to that, what type of mineral are we making and how good is that in the long term?

DM: And bone is a dynamic equilibrium. If you’ve been exposed to high amounts of fluoride and you’re one of these adolescents who have dental fluorosis, my guess… Well, I don’t know. How long would it take if you eliminate the fluoride and got on a good, healthy, and nutritional program for that fluorapatite to essentially be replaced with the healthy version?
GC: One of the most depressing facts about fluoride is that it’s almost like radiation; you can minimize the damage. Certainly a good nutritional protocol like you provide is essential for rebuilding new bone. But the fluoride that’s in there is more or less there and it doesn’t even really have a half-life. So, minimizing the effects of that and certainly detoxing. But I don’t really have the answer for eliminating fluoride from the body. I do hope there is a way, but it can’t be chelated out the way heavy metals can be.

DM: No. But once it’s integrated into the bone matrix, can’t it be replaced with the calcium in exchange for the fluoride over time? Because our cells are continually regenerating. Or is the enamel in the bone something different, that it stays there much longer than our normal turnover of our cells?

GC: The residual component of fluorapatite is a major medical concern and dental concern. I’m not aware of how it can be chelated out. It has such a strong affinity to the apatite crystal molecule that fluorapatite just kind of comes together immediately. What’s also interesting about fluoride is… Our teeth and bones are made of hydroxyapatite. The hydroxy is the OH− from the water molecule and the apatite mineral is the other component. What happens is fluorapatite knocks out the hydroxy very quickly. It’s highly reactive.

Fluoride on the periodic table, which is fluorine… A lot of people don’t realize fluoride is a made-up word, too. But fluorine is highly reactive. It’s all the way on the end if you go back to your high school chemistry periodic table. It’s highly reactive.

DM: I realize that it’s not easy and may be impossible to chelate out. But my understanding was that the bone is a dynamic state between osteoclast and osteoblast. Can’t the osteoclast go in there eventually and digest those cells that contain the fluorapatite and build new cells that don’t have it? I mean, especially if you’re putting them under healthy forces like… Well, in the case of building bone density, not necessarily in your mouth, but strength-training would be one that would activate it.

GC: Yes.

DM: Or interventions like Power Plate, which cause activation of the osteoblast.

GC: Absolutely. I agree. But my point is that there is still a residual component even though we’re constantly remodeling and building new bone, and it is a dynamic process. Elimination of mercury – not mercury… In mercury, we know there is a protocol. We do have some good chelators to get mercury out. It’s a pretty long process as well.

[----- 30:00 -----]

DM: But it works.

GC: But it does work. You’re absolutely right. Fluoride is harder, but I do agree with you. For example, I do Invisalign therapy in people with crowded mouths. One of the things that I do with the Invisalign trace is constant deposition of new bone with osteoblast, and elimination and cleanup of old bone with osteoclast. That activity is constantly going on. But again, maybe that’s an area of research that should be looked at further.

DM: It just reinforces the importance of getting fluoride out of your life or your exposure to it and minimizing it as much as possible. It’s one of the reasons why we’re so committed in our Health Liberty campaigns to include the Fluoride Action Network and their efforts to eliminate it from the United States. They have so far been able to remove it or catalyze it from 200 communities in North America, including Portland, which was going to introduce into their water supply last year. They’re the 24th largest city in the United States and they’re the largest city that is non-fluoridated in the United States – Portland.
GC: There’s a bill before the New York City Council to ban water fluoridation in New York City. And Dublin, Ireland just banned water fluoridation last week.

DM: Yeah, that’s a good thing. I was at the Fluoride Action 2014 Conference in Washington D.C. last month. The fluoride poster girl was there, so I got a chance to meet her.

GC: Great.

DM: But why don’t we go back to the oral microbiome for a moment. About two weeks ago, I was travelling to Chicago and had a diverted flight. My normal five-hour flight took 15 hours. I think the stress kind of catalyzed some challenges. I wound up getting some serious pain in the tooth that was adjacent to two previous ones right in the bridge, two previous teeth that were removed. It was the tooth that was holding the bridge – a partial, I’m sorry, not a bridge. It was really painful.

Of course, thankfully, I saw my dentist, Dr. Lina Garcia. She put me on ozone. I mean, she just essential took a 30-gauge needle treatment and irrigated the entire base of the tooth with ozone over the next five days. It was like a miracle. The total... The pain absolutely disappeared. I’m wondering if you could comment on your use of ozone in dentistry and also how it might influence the oral microbiome.

GC: First, I want to say that I think ozone is a good thing when it’s used properly; when it’s overused, it’s a bad thing. What Dr. Garcia did is... Basically what I believe occurred – and I’m doing a post-mortem here – is that you had a little imbalance and you had a flare up. Probably you had an isolated area where you had a couple of pathogens that started to create some havoc, which tells me that the microvilli had a little bit of an imbalance. You may have been a little rundown. You may have been travelling a lot. You’re in an airplane, which is a pressurized cabin. If you do have something growing, that’s where it’ll occur.

When you do have a focal flare up, meaning not generalized on a focal area, ozone is great because it does two things: it brings oxygen and it also kills pathogens. She was able to clean out, so to speak, the flare up around that tooth and allow it to heal. Did she give you anything post-operatively after the ozone?

DM: No. I did some intrarectal ozone, but nothing. I mean, that was enough. Five days of treatment was enough to eradicate it. And that was I think at least a week ago, maybe coming up to two weeks now or a week and a half, and still no pain at all. It just seems to have done the trick.

GC: That’s terrific. Yeah, because it’s pathogens in the mouth that cause the damage. They will flare up periodically. As you said, you had a prosthetic appliance on that side. It’s the perfect area for a pathogen to hang out.

DM: Okay.

GC: How do they hang out? Well, it’s dark, it’s moist, and it’s hard for you to get to it with a toothbrush. It is an area that is going to... If there was going to be a problem area, it’s not going to be around our front tooth when we have good oral hygiene and no previous damage; it’s going to be in the back, which I assume it was.

DM: Yes.

GC: It’s around the molar, bicuspid, or something like that. Ozone has its place. I encourage and endorse using ozone for those isolated areas. But I would say to you, ozone treated the problem and eliminated the problem.

DM: Right.
GC: Now, I want to…

DM: Non-toxically.

GC: Right, non-toxically. Exactly. She didn’t put you on an antibiotic.

DM: Right.

GC: She didn’t put out your gut with antibiotics. She didn’t go in with topical antibiotics, which in some cases… I’m not an antibiotic fan, but in cases where there’s an overwhelming infection, you know. I’m not sitting here as a Christian scientist saying that I…

DM: Yeah. The lesser of two evils.

GC: Yeah, the lesser of two evils. Exactly. The one thing I did want to say is let’s talk about something that didn’t come up: what caused those pathogens to brew in the first place? If you are using antimicrobials on a regular basis in an oral care formulation that is loaded with antibacterial stuff, you are disturbing and denaturing your oral microbiome; keeping it from working at peak efficiency; and making the tendency for one of these.

Because the microbiome is like this: a thin, odorless film on your teeth. When it’s out of balance, Joe, it becomes thick, smelly, gooey, and all kinds of things start to go on in them – spirochetes and everything else. We think that that’s… We call that plaque.

DM: Sure.

GC: Plaque is an unhealthy expression of a normal, thin, and odorless oral microbiome film. When I give my lectures, I have the progression of this and how it goes out of balance. What we need to do is we need to promote this oral microbiome homeostasis, as I spoke about before, by taking almost a prebiotic approach – not probiotic to explain why it doesn’t work – with nutritionals and homeopathics in oral care formulas that are not detergent-based.

One of the things I didn’t speak about was the origin of toothpaste, basically being invented by soap markers over a hundred years ago. Toothpaste was flavored detergent for your mouth. We said in the ‘60s, “Gee, these studies from the Grand Rapids Fluoridation Study and everything show that fluoride can help remineralize teeth and prevent cavities.” We started throwing fluoride in as far back as I think the ‘60s – the late ‘50s with water fluoridation; the ‘60s fluoride in toothpaste; and by the ‘70s and ‘80s, we got into the bug-killing on top of that. We started with antimicrobials in toothpaste to kill plaque, you know, the Listerine kill germs on contact and Colgate.

DM: Sure.

GC: One of probably the worst developments was the launch of a product that had triclosan in it. The FDA banned triclosan in the ‘70s in products. Colgate did six-month studies in the Philippines and showed that triclosan can kill bacteria, as if that was a good thing. This was, with all due respect, prior to our new understanding of the oral microbiome. It took them a number of years, but the FDA relented and allowed triclosan to be put into toothpaste for you to put in your mouth.

Another study came out that showed that chlorinated tap water interacting with triclosan in the toothpaste causes a chloroform molecule to be formed. We have chloroform forming when you have the triclosan ingredient in toothpaste with chlorinated tap water. Pretty crazy stuff.

DM: Well, I’m wondering based on your earlier comments on the recommendation to avoid using these natural antimicrobials in the mouth, if we have a similar version of using toothpaste. Because in some
ways it’s doing a similar process and it’s not specifically removing or seeking to remove the entire process.

[----- 40:00 -----]

GC: Strip them of the grime, right.

DM: Right. I would really be interested in your comments on that.

GC: Yeah. Well, you know, when I graduated from dental school in 1984, gum disease was an epidemic. There were estimates that over 80 percent of the American adult public had one stage of gum disease, ranging from gingivitis to advanced periodontitis. By the way, that statistic hasn’t changed.

The thing that drove me crazy in the ‘90s was what’s going on that this remains epidemic? I started looking at what we’re putting in our mouths. And I was like… When I was a kid, my mother would say if I said something dirty, she’d stick soap in my mouth. Mother’s brushing method, you know. It came to a point where I said, “We have to stop the insanity. Toothpaste is not supposed to be a detergent.”

DM: That’s interesting. Your clinical experience over the last 30 years suggests that toothpaste should be avoided and as a substitute for that have incredibly good nutritional program overall, systemically. But then also this oral rinse, which nourishes the oral microbiome.

GC: Exactly.

DM: Wow. That’s a radical concept.

GC: It really is. It really is. And you know, coconut oil pulling. I’m a coconut oil…

DM: Oh, yeah! I forgot to ask you.

GC: We’re coconut oil fans.

DM: Yeah. I do it twice a day.

GC: We’re all organic coconut oil fans. Oil pulling, which I studied 31 years ago, is a great… If you don’t want to use toothpaste right now and you don’t have a good nutritional that promotes oral microbiome homeostasis, coconut oil pulling is great. It’s great. The interesting thing would be… The comical part of this is that it’s been touted as this great new thing. And you know what, the coconut manufacturers are loving this. But really honestly, coconut oil pulling has a lipophilic effect on helping to eliminate an unhealthy biofilm and actually not do the damage that detergents do.

DM: Interesting.

GC: We make sodium lauryl sulphate (SLS) from coconuts. I mean, Tom’s of Maine (they have a natural detergent, by the way), their toothpaste, they say they use sodium lauryl sulphate or laureate sulphate from coconuts. It does have a detergent effect. The thing about coconut oil it does have a detergent effect, but there are so many vitamins and minerals in coconut that it is a lesser of evils.

DM: Okay.

GC: My point is also coconut oil, which Dr. Andrew Weil and I both agree, there’s no science that says it has all these benefits for curing disease. I think [curing the] disease is a byproduct of getting the body healthier, not doing oil pulling.
DM: Although 50 percent of the fatty acids are lauric acid, which is a well-documented potent antimicrobial.

GC: Exactly, yeah. And that is why it does have a mild detergent effect and it is better than using conventional toothpaste by far, much better than using toothpaste.

DM: Okay. What are your views on dental irrigation, specifically if you got the magnetic ones like the Hydro Floss? Some people like myself use a base, a strong base. I used to use sodium bicarbonate, but now I use potassium bicarbonate, because it seems to be a little bit healthier. So, irrigating with potassium bicarbonate, would that also disrupt the oral microbiome and is it something you would be opposed to?

GC: Yeah. You know what, you have to think of it as, you know. I made the mistake this summer in my garden of micromanaging things. And I actually... And you know, you're a brilliant guy. I have admired everything you've done. I’ve been a fan of your website. We're both passionate healers. But the flip side of that is we could micromanage.

Just let me tell you the story with my garden, which I micromanaged. I had a much smaller yield than I would have had had I let things happen (even though it is an organic garden, but just to use the term of speech) organically. In other words not micromanage so much, not try and make it so perfect, and let things, you know. I did a little too much pruning here and pruning there, thinking I was going to get a better yield. Part of the garden I left alone seemed to do better than the garden that I was on top of.

You got to think about that with your mouth. You really want to take an approach to nutritionally support. That’s why I love homeopathics and nutrition to promote oral microbiome homeostasis and let it do its thing. It is amazing what the body does. With the less we do, the more it can do. We just have to get it in our heads up here first.

The thing you were talking about the rinsing and all, the potassium bicarbonate – by the way, sodium bicarbonate, for everyone who’s watching this, is very abrasive to teeth. People were brushing with sodium bicarbonate, and I wasn’t a fan of that because of the abrasive action. I do like the ability, if you have an acidic pH, to neutralize that. I love the alkalizing component of potassium bicarbonate. But again, if you want a great ingredient for an oral care rinse – Himalayan salt.

DM: Interesting.

GC: Himalayan salt

DM: You’re not concerned about too much or excessive sodium?

GC: No. As a matter of fact, sodium chloride or conventional table salt scavenges minerals from the body and actually increases blood pressure. [There are] so many studies on Himalayan salt. It has so many trace minerals that it has no effect on blood pressure whatsoever. And actually, you can use it in your food. There are a lot of these studies coming out that we sort of strip salt out of hypertensive’s diets. We really didn’t understand this important electrolyte balance that goes on.

Himalayan salt, I think it has 86 trace minerals. It’s the richest source of minerals and the purest salt on earth

DM: I just wanted to share one of my personal experiences, too. Because I have been challenged with plaque for a long time. I had so much so that I’m almost required to have monthly oral hygiene visits to clean it up. But it really improved quite dramatically once I started incorporating fermented vegetables into my diet. And you had made a comment that probiotics weren’t necessarily good, but the high levels of fermented vegetables seemed to certainly make a radical difference in the plaque.
GC: Yeah, fermented vegetables. I’m a disciple of Weston A. Price and I know you are as well a fan of his. He’s the Charles Darwin of nutrition. He was a dentist. He practiced from the early 1900s. He wrote *Nutrition and Physical Degeneration* in the ‘30s. He was way ahead of his time.

It’s really interesting, in the United States Surgeon General’s Oral Health Report in year 2000, they reported that oral disease doesn’t only cause debilitating problems – tooth decay and gum disease – linked to systemic problems, but it has a damaging epigenetic expression on physical deformities in subsequent generations.

Weston Price was the first one to find that. He was the first one to really, without even knowing about it, understand that bad nutrition could actually not only rot your mouth and cause problems but change the DNA, so that there are physical deformities and problems in subsequent generations as well. He found this in, of course, civilized diets – refined sugars and all those things. I mean, they were using a lot of corn syrup, margarine, and everything back in the ‘30s and ‘40s.

But the other interesting thing is the fermented vegetables – and I’m a fan of kombucha – not only that they have probiotics (which I think are mildly effective in the mouth but very beneficial for the gut microbiome), but in the mouth, I like the alkalinizing component of those fermented vegetables. It’s not so much a probiotic in the mouth; it’s more of supporting the oral microbiome and helping restore the homeostasis of that natural microbiome. Not dumping good bugs to outnumber the bad bugs and that kind of thing.

DM: I’m wondering if you could summarize it, give us some closing points, and maybe emphasize some elements that you’d like, so that we can really appreciate that and then we can have you get back to your practice.

GC: Great. The first thing I’d like to say is thank you so much for having me, Dr. Mercola. This has been really terrific. It’s important for everyone to know that if the eyes are the window to the soul, I’d say the smile is window to the spirit. You cannot smile if you don’t have teeth. I hope this is helpful for everyone.

You have to think about promoting balance. We’ve looked at organic gardening and the environment around us and even eating organic foods. I’d like everyone to think about doing organic gardening in the mouth. The way we do that is by taking a strong, healthy, and balanced nutritional protocol. I call it triple-A nutrition – alkalinizing, antioxidant-rich, and anti-inflammatory. People should know what nutritional factors are inflammatory. There are inflammatory triggers, whether it’s gluten, dairy, and a number of others. They can vary for different individuals.

But those three – the triple-A nutrition; eliminating harmful detergent-based products and alcohol mouthwashes; and understanding that the mouth is an important healthy organ that protects you and the rest of your body.

DM: Terrific. Well, thanks for all your pioneering work in this area and really being an early doctor of these important strategies to help improve our oral health and oral microbiome, which really are playing such a key role in our total health. You’ve been a real asset to the preventive health movement. I appreciate what you’re doing.

GC: Thank you so much.