The Possible Benefits of Nebulized Hydrogen Peroxide on Respiratory Infections: A Special Interview With Dr. Thomas Levy

By Dr. Joseph Mercola

Dr. Joseph Mercola:

Welcome everyone. This is Dr. Mercola, helping you take control of your health in these especially challenging times. Today we're in for a real treat because we're going to talk about my absolute, unquestionably most favorite intervention for any viral illness, including COVID-19. We're going to discuss that with Dr. Thomas Levy, who is well-known for his work with vitamin C. He's a board-certified cardiologist but he's ventured into natural medicine for probably decades now, and the reason we're interviewing him again today is not for a book, well, it is for a book, his new book, but in some ways I don't look at it as a book because it's a gift to humanity because he's not selling the book, he's giving it away for free. Some of you probably have already received your copy, but for those who haven't, you're certainly going to want to pick up a copy and read this because it's full of valuable information. We're going to dive deep into it, so welcome and thank you for joining us today, Dr. Levy.

Dr. Thomas Levy:

Always a pleasure to be here, sir.

Dr. Joseph Mercola:

All right. So, the interesting – I'm just going to give another little preface to what our conversation. As you mentioned in the book, conventional medicine has absolutely no consistently successful intervention for any chronic or any viral illness, they just don't, and they will be the first to admit it. Thankfully, we do. That's the peroxide is – there are others, but nebulized peroxide appears to be the most effective intervention and you and I are on the same page with that. Not only for just about any virus, but certainly, as I mentioned, COVID-19.

Dr. Joseph Mercola:

We've talked about this in the past and I'm curious what motivated you to put this book together, and then secondarily as an extension of that initial question, why did you decide to give it away for free? My guess is because if you tried to sell it anyway they would've censored it because it's too good information. But what is your story?

Dr. Thomas Levy:

Well, probably about a year and a half ago I was doing the research for my magnesium book and I had always suffered my whole life with sinuses, and chronic colds, and coughing, et cetera, and I stumbled across in my research, nebulization with magnesium chloride and that really sparked my interest. So, I took a lateral dive into nebulization and I said, "Son of a gun, this makes a lot of sense to try to see if I can find something or some combination of nebulization that could help me with these chronic oral pharynx and nasal pharynx and sinus problems I've had all my life." And in the course of that one of the things I nebulized with was hydrogen peroxide, and I just

noticed incredible changes in my health, incredible changes in my chronic problems almost immediately.

Dr. Thomas Levy:

So, finishing up the work with magnesium and publishing that book, I then dove more deeply, if you will, into nebulization and just about the time the pandemic hit was when I really had, to me, my most compelling compilation of evidence for what the nebulization with hydrogen peroxide can do, and as I point out in the book, this is for not just COVID, it's for any respiratory virus. I make the assertion, and I don't generally make assertions that I can't back up, and the assertion is, "Nobody needs to suffer with a cold or the flu again," unless you start some of these things already after something like that has taken hold. If you start to notice the beginning symptoms of this, the nebulization, along with other things when you have them available, but the whole point of this too is be able to have something that can operate for the world as a monotherapy.

Dr. Thomas Levy:

That brought me to number two, I said – and of course you've written about it extensively, Joe, all the political ramifications in addition to the medical ramifications of this pandemic are frightening, to say the least. The point I make in the book is without even getting into the pros and cons, however many pros there might be of vaccinations, I said, "Why vaccinate something that you can prevent or easily cure after you have it?" And as far as giving the book away, to me that was a no-brainer. I mean, I'm a flawed human being like everybody else, I'm not trying to pat myself on the back, but I want to stop this pandemic. For a number of reasons the fact that it's incredibly cheap, inconsequentially cheap, highly effective, available across the planet.

Dr. Thomas Levy:

Now, remember there's a lot of countries where you can't get supplements like vitamin C and you can't get ozone, and you can't get any of these other wonderful things. So, it doesn't matter really in terms of just curing COVID if those are not available to a native in Africa at his local little clinic. Of course, it's simple, okay? It doesn't require the intervention of a hospital, a clinic, a physician or even a health care provider. It's about as simple as you can get. I want to see this pandemic shut down, and not only do I want to see it shut down, I want everybody to realize that this is the optimal tool against any further hanky-panky that takes place in our world with viruses.

Dr. Joseph Mercola:

Yes, thanks. By the time this interview airs, it seems obvious that the pandemic is receding quite dramatically and even the most lockdown states are going to probably transition to opening up again. So, for this intervention, I mean, for this pandemic it probably is limiting to it, there are still people coming down with this, almost there's no question. But I just want to emphasize two points you mentioned. One is that a realization I had and understanding after interviewing Dr. Vladimir Zelenko who is most well-known for popularizing the hydroxychloroquine intervention. I asked him how many, because he is deep in the trenches, he's treated thousands of patients with COVID, and I asked him how many long-haulers had he seen, and he said, "Really the only patients with long-hauler syndrome-" And there is an important point for this tangent, "-were those who failed to get treated with a successful intervention within the first few days."

And it's because the virus has had time to replicate, and multiply and then persisting causes damage.

Dr. Joseph Mercola:

So, the reason I mention that is you made a point about using this early on, and it became so clear to me after [inaudible 00:07:22] and I read your book and seeing that you have got – you just can't understand this treatment intellectually or academically, you have to make a commitment to it. Get your nebulizer, and we'll talk about that later in the conversation, and have it ready for you, available, so that you're locked and loaded because the moment you notice a sniffle, or a cough, or the very first symptom you don't let it go, you treat it then and literally you probably only need two or three treatments and it's it, and you won't get sick, and that's the best time to treat it. So get locked and loaded, order your nebulizer, have it available, even try it a few times so you understand it and make the dilutions that are required to do so if there's any confusion you've got plenty of time to clear it up, not when you're nervous, and sick, and seeking, and anxious to try to get this intervention going.

Dr. Thomas Levy:

What I would phrase that as, Joe, is “same-day resolution,” okay? This is something that's almost unheard of in any type of medicine for an infection to be resolved the same day, but that's absolutely what we're talking about here. It can be done so easily, and as you said, why wait for something to advance? Why wait until you start developing systemic muscle aches and pain to say, "Oh well, it just wasn't a little sniffle, it was the beginning of the flu. Let me attack it now." Having said that, that is when the hydrogen peroxide nebulization goes from monotherapy to perfect adjunct to any other therapy that you have, okay? And I want to emphasize that because to the best of my knowledge, and I've done quite a bit of research on this, I see no circumstance in which hydrogen peroxide nebulization interferes with or lessens the impact of any other positive intervention. When vitamin C is available, as outlined in the book, peroxide and vitamin C are the perfect physiological partners. They absolutely work hand in hand and with the doses of high-dose vitamin C that appear to rapidly resolve infections it's because the hydrogen peroxide is bullets in the gun that's called vitamin C.

Dr. Thomas Levy:

It's an incredible, wonderful interplay of factors that Mother Nature has put inside us. In every sense of the word the peroxide is nature's natural antibiotic. So, God forbid they ever develop a pathogen that's resistant to hydrogen peroxide that will just take down the whole world, including the idiots who created it.

Dr. Joseph Mercola:

Yeah. There's a magnificent synergy between the two, for sure. The beautiful thing of hydrogen peroxide is that it's a molecule that was designed from the get-go to be in your body and is in virtually every cell in your body. Your body needs it, requires it, it's a powerful signaling molecule and there are actually organelles or structures within your cells that utilize it to kill pathogens directly. That's how your body fights infection, it uses peroxide. We use it to create this oxidative stress to kill the pathogens.

Dr. Thomas Levy:

One of the interesting things, at least interesting to me, especially in the course of doing this research, is that up to 5% of the oxygen that you inhale gets incorporated into producing new hydrogen peroxide inside your body. Also, contrary to much scientific thought, except in the wrong microenvironment, hydrogen peroxide is very stable. It doesn't do a lot of spontaneously breaking down or spontaneous oxidation, any spontaneous reduction. So, it actually serves as an incredible storage form for oxygen in your body, and that's actually what sort of happens once you activate hydrogen peroxide is you activate – I mean, there's nothing in your body, pathologically speaking, that oxygen is not good for. As it's also outlined, and this is what makes peroxide beyond a perfect agent, is it not only kills pathogens extremely efficiently, of all variety, virus, fungus, protozoa, bacteria, you name it, but it leaves behind as metabolic byproducts, water and oxygen.

Dr. Thomas Levy:

And I will submit to you in my opinion water and oxygen are the two most important molecules in the body. I mean, obviously there are a lot more important molecules, but those are the top two, I would say. It also introduces the concept of when you've had an infection and you have an agent such as the hydrogen peroxide, it comes along and resolves the infection, what then is the most optimal thing to have for your body? Well, you want to heal the damaged tissue to whatever degree the infection damaged in mucosa, damaged other cells, the two most important things to repairing that are hydration, aka water, also hydration dilutes the acidity of an infection. So you make an area more hydrated, less acidic and then you bring along oxygen, which is absolutely, I don't think there's any contest on this, the most important direct healing agent in the body. So, it's very clear, at least clear to me, and it should be clear I think to everybody, that the best way to refer to hydrogen peroxide is nature's naturally designed antibiotic.

Dr. Joseph Mercola:

Yes indeed, and I'm a huge fan of oxygen myself. So much so that I have a hard shell hyperbaric chamber in my house and once a week, and that just happened to be this morning, I engage in a one and a half hour session where I get three atmospheres of 100% oxygen and reap the benefits. But like anything, you don't want to do it excessively, but it's certainly on an intermittent period, is a magnificent tool to help you. We absolutely need oxygen. So, I'm wondering if you would mind reviewing the mechanism of how hydrogen peroxide works or how we believe it works, because there's a wide variety of pathways that it can impact.

Dr. Thomas Levy:

Well, that's a great question. I don't think we know how many different ways peroxide works, but I think the prominent and near, only significant way it works with regard to pathogens, not with regard to other metabolic functions that you talked about, but with regard to pathogens is something called the Fenton reaction inside the cell, or inside the pathogen, either place. Sometimes in the pathogen, sometimes in the cell. Now, what the Fenton reaction is, is a way of getting hydrogen peroxide to break down into what's called the hydroxyl radical, which is the most potent oxidizing agent known to science. It's so potent it doesn't migrate, it immediately oxidizes whatever it's next to the moment it's formed.

Dr. Thomas Levy:

Now, for those who haven't seen my other work, or lectures, or books, in a nutshell oxidation is disease and limiting and reducing oxidation brings you back to health. I mean, that might sound like an oversimplification, but not so much. So now you have a situation where you have hydrogen peroxide in the cell. Normally the hydrogen peroxide is at low levels inside the cell because of an enzyme called catalase. Well, as it turns out in infections and infected cells the catalase levels are low and the hydrogen peroxide levels are elevated. Well, now you need in order for that peroxide to break down the hydroxyl radical the donation of an electron. So it's actually an antioxidant impact that causes the powerful pro-oxidant impact of the breakdown of the peroxide. As it turns out, the most important donor of this electron is vitamin C, but the vitamin C requires the intervention of ionic iron to make the transfer of that electron from the vitamin C to the peroxide, to form the hydroxyl radical.

Dr. Thomas Levy:

So vitamin C comes into the cell, donates an electron to ferrous iron, ferric, Fe3+, turns it into ferrous, Fe2+, and that ferrous 2+ is uniquely, chemically designed to release the electron to the peroxide. Now, this is where the really incredible genius of nature comes in because it's very clear that reaction will cause oxidative stress. Now, what you want when you want to kill a pathogen or kill an infected cell is you want to continue the influx and the power of that oxidative action until there's so much oxidative stress that the cell ruptures and dies, and the pathogen disrupts, you name it. So, you need unlimited supplies of vitamin C, unlimited supplies of iron and unlimited supplies of peroxide. That's the only way to keep a reaction going indefinitely until it does the task that you want.

Dr. Thomas Levy:

Well, the vitamin C, very nicely, this is why high-dose vitamin C given intravenously is a powerful anti-pathogen because it not only gets inside the cell, but here's a biggie, outside of the cell in the extracellular space it powerfully promotes the production of new hydrogen peroxide, which because of its small non-ionic nature is able to diffuse into the cell. So at the same time the vitamin C goes into the cell it produces more peroxide that goes into the cell, and then the third part of the equation, the hydrogen peroxide works to mobilize iron from the storage forms inside the cell of ferritin. So, there you have all three components, electron donor, electron transfer, electron receiver, the peroxide. The production of hydroxyl radical and this proceeds until you get complete resolution of the infection.

Dr. Joseph Mercola:

Yeah. Thank you for sharing that because it is really important to help to understand at a molecular level what's going on. Traditionally when you look at the Fenton reaction reviewed in chemistry or about chemistry books, it's not – vitamin C, I don't recall ever seeing it mentioned in the Fenton reaction, it's simply iron and peroxide. So, it's an important distinction that you make, and a really important one, because biologically that's how it's going to work. When I wrote my book for EMF (electromagnetic field) I did two years of studying on this and a deep dive because this is part of the reason that EMFs are also toxic.

Dr. Joseph Mercola:

So I encountered the hydroxyl radical and the reason it tends not to last too ... Well, it doesn't last too long, it has a very short half-life, it's 10 to the minus nine seconds, and because it doesn't live so long it can only travel so far. There's this movement called Brownian motion, which just moves randomly, but if you're only alive for a millionth of a second or less, then you can't go very far. Typically you go to the distance of a protein or two, which is really short space.

Dr. Joseph Mercola:

So, this is why the structures from the cell, like the macrophages and the lysosomes that can concentrate this, and then literally go to the pathogen directly and engulf it, and then live within that space, because as you mentioned, it cannot travel far. So it generates these toxic hydroxyl radicals and obliterates the pathogen. So it's just an unbelievably clever yet highly sophisticated strategies that our bodies have developed to defeat things at a safe and effective manner.

Dr. Thomas Levy:

You know something else too, that evolves so perfectly into this next point, which is what are the primary pathogen-killing immune cells? That's the macrophages and the polymorphonuclear leukocytes, and monocytes. What do these cells have in enormous quantity? They bring both components, they bring vitamin C and hydrogen peroxide in massive amounts to the site of the inflammation, aka infection. So it's such a beautifully incredibly balanced system that we have. That's why I say god forbid a pathogen ever comes along, artificial or otherwise, that has some way of doing us in by avoiding hydrogen peroxide because this is the body's natural mechanism and we can't survive without it. There are a lot of important molecules in the body. I mean, there's all the vitamins and minerals, and everything else, and magnesium of course, but I tell you what. In terms of quantity and in terms of the type of impact they have in both causing oxidative stress when it's needed and causing antioxidant impact when it's needed, I think your four most important molecules in the body are water, oxygen, vitamin C and hydrogen peroxide. There are a lot of other important molecules, but I tell you what, you can't get by at all without any of those four.

Dr. Joseph Mercola:

That's for sure. So, I don't want to beat the dead horse on this but we've really gone over the benefit and utility of nebulized peroxide for treating these viral infections, but interestingly it has other benefits. One I was surprised to find out, and disappointed, because personally my mother passed away a few years ago and she was a lifelong smoker, stopped maybe five or 10 years before she died, but still had a side effect of smoking that many people develop, which is COPD, or chronic obstructive pulmonary disease or emphysema. It appears that, and I didn't know, I could've used this therapy for her, it could've helped so much because it's a powerful intervention for someone with emphysema.

Dr. Thomas Levy:

Well, I'll tell you what. Just from a selfish, personal point of view, as ecstatic as I was to come across this therapy at the age of 69, just like you said, I was almost immediately depressed that all the years that I'd suffered had I been able to come across this therapy so much earlier. But not only of course, while it doesn't repair, to my knowledge it doesn't repair emphysematous air sacs, okay, in terms of their anatomy, the thing that keeps most of those patients, as you well know,

suffering are the chronic infections and the chronic mucus production, and the aggravation, and the coughing. So I've already had a lot of feedback from chronic lung patients who are pretty much ecstatic that they were able to incorporate this into their long-term medical treatment protocol.

Dr. Thomas Levy:

So, also too in the course of this research, we all know medicine is not going to embrace anything that doesn't generate a lot of money, that's a given, but as it turns out there is a gradual trend toward the administration of more medications by nebulization. Obviously they don't focus much of vitamins and minerals and stuff like that, but they're starting to administer appropriate antibiotics by inhalation for different lung infections and certainly this decreases massively the chance of significant negative reactions to prescribe drugs because you're taking a phenomenally lesser amount, you're delivering it exactly where you want it to go.

Dr. Thomas Levy:

So even without the phenomenal things we're talking about here, just the increased utilization of nebulization offers an enormous amount of benefit to an enormous number of people, because I mean, I think except for a kid who had asthma in the emergency room, I never witnessed nebulization my entire internal medicine training. When I did my respiratory medicine rotation, I certainly didn't see anybody as an outpatient getting anything nebulization other than anti-asthmatic agents for asthma, that was it.

Dr. Joseph Mercola:

Yes. So, even if you nebulize with simple normal saline, 0.9% sodium chloride solution, you would get past it. There are also some other benefits of nebulized peroxide therapy that I want to go into but maybe we can take a side step here and discuss the actual preparation of the product, because this is where we have one minor disagreement with respect to the concentration, but it's really important when you dilute this, if you choose to dilute it, that you dilute it not with distilled water or purified water but with normal saline. Just the normal saline is going to give you benefits. So why don't you [inaudible 00:25:33].

Dr. Thomas Levy:

That's a very good point, and I know growing up without really any knowledge of medicine or anything like that, I always knew from my mother and my grandmother that doing little, light gargling with saltwater solution was tremendous for helping resolve an early cold or cough. So, it brought to mind the importance of the chloride anion. I say this because also in the course of my research on the magnesium book, and this really blew me away when I first saw it, in an in vitro experiment they show that certain viruses were encouraged in their replication by magnesium sulfate but depressed in their replication by magnesium chloride. I immediately said to myself, "Well, we just never pay attention to the anion."

Dr. Thomas Levy:

Whenever we talk about mineral supplementation we pretty much just focus on the cation, which is important and usually the dominant factor, but this is another reason, too, why in my book my recommendations when you take magnesium for the purpose of minimizing your chances of

infection with virus is to go with the magnesium chloride. They actually have some very old literature, but in my opinion being old doesn't disqualify you for anything, they showed that many cases, in this case I think it was about 15 cases were reported of acute and subacute polio being resolved simply with oral magnesium chloride solution. A lot of the old docs back in the day in France and in Europe used magnesium chloride for a lot of different infectious conditions, for dealing with wounds in the soldiers who had been injured with infected limbs.

Dr. Thomas Levy:

So, coming around full circle, yes, absolutely, the literature shows that water by itself does aggravate, it can cause an irritating cough if you nebulize it by itself. So yes, it makes all the sense in the world, even though that wasn't among my initial recommendations because the hydrogen peroxide is basically in a solution of water, and when you're diluting you're adding a little more water, but there's absolutely no reason not to make the dilution, whatever you decide that dilution to be, in a normal saline solution.

Dr. Joseph Mercola:

Okay, great. So, we'll talk about the concentration disagreement in a little bit, but I think we can go back to some of the other uses that nebulized peroxide therapy has. One of them is really intriguing, and I think you were the first person to identify this benefit, and that's its effect or impact on the gut microbiome. So, why don't you tell us how you learned about this and what's going on here?

Dr. Thomas Levy:

Well, I'll tell you what, a light went on in my brain. I didn't understand it, but a light went on in my brain the first time I nebulized. At this time it was like regular old, over the counter 3% peroxide, just experimenting around. The next morning I had the most incredibly normal, well-formed bowel movement in my life. I mean, I won't go into the details of what it was like before, but this was the most perfect it had ever been, and it was so perfect I said, "Good grief. What is going on here?" And then I thought about it, I said, "Well, the only thing I did different was the peroxide nebulization the day before." And that got me to thinking about, “All disease is oxidation versus reduction.” All disease is how much toxins you can deliver to keep something oxidized, to keep the physiology deranged. What is the primary source of toxins in the body for most people? It's chronic infections, in the form sometimes of tonsils, teeth, gums, et cetera, but I also remembered that I had for much of my life a chronic sore throat. Not chronic sore throat, chronic cough, okay?

Dr. Thomas Levy:

When that lessened I said, "Wait a second. If I have bugs in my throat, what am I doing 24/7? I'm swallowing pathogens, I'm swallowing toxins and they're going to negatively impact the gut, just like they would negatively impact anything else." That's when I realized or I feel pretty strongly that I realized, that in many ways what you swallow is the single most important factor in the health of your gut. Since all of this came out I have a couple docs who I have, what you say, I don't have a clinical practice but I have an arm's length practice through many docs around the world and they have gotten back with me. Again, I don't want anybody listening to think that this is for sure what's going to happen with them, but there's one doc, got back, he said, "Boy, the

same thing happened to me that you described." Another doc said the same thing happened. Then this other doc who's in a clinical practice said, "You know, I've a couple 35-year-old ladies with chronic irritable bowel syndrome for many years now. They've done everything under the sun, they can't make it better." And he got them both of hydrogen peroxide nebulization and immediately they felt better and within a week they felt normal.

Dr. Thomas Levy:

Now, there can be all sort of nuances with regard to the symptomatology. I don't want to oversimplify what's going on with the gut, I know it's a very complex thing, but bottom line is what keeps any tissue in a state "is disease", is increased pro-oxidant factors coming in, and the degree to which you can stop those pro-oxidant factors. One of probably the most amazing things that came to me on this is I've never had a leaky gut in the traditional sense of the word, but with regard to my bowel habits changing in less than 12 hours, I said that really tells me intuitively how readily a leaky gut can heal if you stop the 24/7 onslaught of new toxins and pathogens getting dumped into the gut.

Dr. Joseph Mercola:

What's your speculation as to the pathway for the peroxide to get to the gut? Because you would think maybe to swallow it might be the more effective strategy, but when you're inhaling it with the nebulized approach it's obviously going to your lungs and traveling through your bloodstream and hitting the gut that way systemically, through the circulation.

Dr. Thomas Levy:

No, I don't think your nebulization is directly putting a clinically significant amount of peroxide in and around the gut. Its primary role is it's killing the pathogens that chronically grow there. There's a-

Dr. Joseph Mercola:

[crosstalk 00:32:54].

Dr. Thomas Levy:

Right. There's a concept in the book called chronic pathogen colonization, where those bugs are, because they're chronic and they're low-grade, they're covered with something called biofilms that you're well-familiar with and if you don't have a specific agent to break up that biofilm, and modern medicine does not have one at all, but peroxide uniquely – not completely uniquely, there are some other agents, but almost uniquely destroys the biofilm quickly and then kills the pathogens underneath. So when you reset your aerodigestive tract in your nose and throat, knock out the pathogens, well then you're no longer swallowing those toxins and pathogens on a daily basis [crosstalk 00:33:37].

Dr. Joseph Mercola:

Oh, that makes a lot more sense now. Thank you. That is a brilliant observation and that's the way science and medicine specifically advance, is through clinicians observing something and then carefully analyzing what could be a result of their observations. So thank you for that finding and sharing it with [crosstalk 00:34:01].

Dr. Thomas Levy:

Well, you know, something else I said to my friends, and I also mention it briefly in the book, that if it wasn't for the fact that we're in the middle of a pandemic that I feel hydrogen peroxide nebulization can completely end, that would not be the main part of the book. The main part of the book would be how to reset your gut.

Dr. Joseph Mercola:

Mm-hmm (affirmative). Yeah, because it's so crucial to staying healthy. There are very few clinicians who would argue with that. So, now, another indication and which you allude to in the book, is the most common infectious disease in the world is gum disease, periodontitis. So, why don't you expand on that observation?

Dr. Thomas Levy:

Well, yes. When you look at the literature and look at the diseases that periodontitis has been "associated" with, which is just another piece of garbage. There are so many things that they say are associated with, it's cause and effect because there are a lot of conditions with periodontitis, like particularly in the case of asthma, just one example only. When you have someone who has severe asthma and they have advanced periodontitis you start to resolve the periodontitis, their asthma gets better, the periodontitis flares again, the asthma gets worse. I mean, I don't know how much more you need to have for a cause and effect, but this thing that's unique about periodontitis is the nature of the pathogens, often a bug called Porphyromonas gingivalis, which is an especially noxious pathogen, they're now finding this pathogen by advanced PCR (polymerase chain reaction) testing to be present in many different tissues in the body and to be present in the tissues that are diseased.

Dr. Thomas Levy:

They've identified this bug in Alzheimer's tissue, okay? And in different neurological tissues. It's been identified in the coronary artery linings of patients who have coronary artery disease. We cardiologists say inflammation causes coronary artery disease. Well, that's true, but nobody seems to ask well, “Where the heck does the inflammation come from? Do you just spontaneously have an attack of inflammation somewhere?” No, it's when you see a certain area with bugs, their metabolism knocks out the antioxidant levels and the vitamin C levels. The immune system comes in, as we mentioned before, to try to replace that vitamin C and antioxidant status. The chronic immune response becomes the disease, that's all coronary artery disease is, is a chronic immune response that's never extinguished because the seeding of bugs from the mouth is never extinguished.

Dr. Thomas Levy:

So, the periodontitis also gets throughout the body and also directly leads to infected teeth, and this makes it more diabolical because once your advanced periodontal disease gets deep enough inside the bone that you start getting actual abscesses at the root tips. You have then developed the most elegant way to disseminate toxins and pathogens throughout the body that there is, it's called chewing. The moment you chew on an abscess infected tooth you literally squeeze those pathogens and toxins into the lymphatic supply, into the venous blood supply, and they literally disseminate everywhere in the body. We don't have this data yet, but I firmly believe once they

start looking for pathogens in different diseases there won't be a chronic disease where you won't find the pathogens, and that's because if you have a one-time oxidative in cell, some sort of toxin, it does a certain amount of oxidative damage, but there's no more new oxidative stress coming in place. Good diet and good antioxidant therapy will not only stop the damage, it will resolve it and you'll cure the condition, but we know that's not the case with nearly all chronic disease and it's because they have a source of ongoing new oxidative stress on a daily basis in excess of the antioxidant impact you can afford that tissue.

Dr. Thomas Levy:

As my beloved, to me beloved, mentor, Dr. Hal Huggins, told me 25 years ago when I first started getting into all of this stuff, I was puzzling about this, not precisely this situation but another one, and he looked at me a little frustrated and he said, "Tom," I said, "Yes, sir." Said, "You can't dry off while you're still in the shower." I said, "Oh, I think I get it." And there's a lot of truth in that. We think good medicine has to evolve, stopping what's causing it, at the same time working on repairing the damage that's done. A lot of "integrative" medicine still doesn't look at the new oxidative stress coming in, although they do look at repair of the damage much more effectively than modern medicine, which doesn't recognize either of these features, either the damage done or the continued promotion of new damage.

Dr. Joseph Mercola:

Well, that story certainly resonates with me because last year, right before the shutdown started, it was like the middle of March, maybe the first or second week, I took a trip to Sanoviv, which is a health hospital in Mexico, probably the best one in Mexico, an extensive evaluation done, and especially they have a whole dental department there, an extraordinarily good dental department, and I was really surprised to find that despite having a really good lifestyle and I eat a pretty good diet by most standards, I had pretty severe periodontitis, but not only that, that periodontitis had progressed, as you mention, to a periapical abscess that literally killed the tooth, so I had to have two teeth extracted. They weren't able to do it there, I had to go back to Florida, where I live, and then going through the – you couldn't fly anywhere, everything was shut down and I had to figure out how I was going to find a dentist.

Dr. Thomas Levy:

Bad time to get sick, absolutely.

Dr. Joseph Mercola:

Yeah, yeah. So anyway, I got taken care of and I was just really surprised that I had periodontitis. It was yeah, mild to severe. It's all resolved now and the way I did it I think is a little bit better than the peroxide, but I definitely want your feedback on this, is the dentist made a customized tray for me that I had and they fit my lower and upper jaw, and I had the ability to connect that to an ozone generator and then an aspirator, the same aspirator the dentists use, so that I could put it in there, run the ozone gas on the gums and then suck out the extra one, because you don't want to breathe ozone. It works really well. I do it once or twice a week now for 10 minutes.

Dr. Thomas Levy:

Well, what I would say there, the input that I would be inclined to give you, is that we know by gum biopsies that periodontitis, not surprisingly when considering what we've all discussed already today, not surprisingly has virtually zero vitamin C in the tissues, okay? You've absolutely completely nuked the vitamin C stores in the tissues. This is the one main, I won't call it fault or drawback, but maybe I'll call it "deficiency" of things like ozone and other bio-oxidative therapies is they're highly effective at killing the pathogen but they've got nothing to do with restoring the antioxidant vitamin C status that resulted from the pathogen being present. All of these viruses we get acutely, we rapidly destroy our vitamin C stores, things like Ebola where people die of hemorrhage, that's really just a fulminant acute scurvy and in fact it's my opinion that long-haul COVID is simply because of the fact that you so effectively nuked a large amount of your nutrients and vitamin C that unless you undergo an accelerated plan of restitution, not a maintenance plan but an accelerated plan of restitution, you're never going to get back to base one.

Dr. Thomas Levy:

So same thing with periodontitis. You're not a smoker, and let me tell you, talk to any dentist and they'll tell you they've never seen a smoker with normal gums, just doesn't occur. But the point is is what that smoke is doing is just metabolizing the vitamin C rapidly. So, I would humbly submit to you that in whatever you do, you should consider supplementing more vitamin C on a regular basis, either in the liposomal form or in intermittent oral form. I mean, there's no other way to restore vitamin C balance in your body than with vitamin C.

Dr. Joseph Mercola:

Yeah, that makes perfect sense, and especially it aligns precisely with your earlier discussion of how the mechanism of how peroxide works, it works synergistically with the vitamin C. You really ideally need both together to get the most benefit from it.

Dr. Thomas Levy:

Yes, sir.

Dr. Joseph Mercola:

If you're not using ozone for the periodontitis, how would you administer the hydrogen peroxide? Because I guess you could inhale it through your mouth, it has to be through your mouth because if it gets through your nose it's not going to hit the gums.

Dr. Thomas Levy:

Well, it's interesting. I have limited experience but extremely positive experience with even advanced periodontitis and what I'm going to tell you about. That is water irrigation, WaterPik. You get a – actually, the warmer the better. Best not to use cold water, and usually you can use piping hot water because by the time it gets to the machine it's just down to a pleasant warmth. Use that and actually based on what we've talked about, I didn't think about this until right now, but you could probably make it a nice warm saline solution rather than just water. Then it's never been a question of measurement, just like a couple tablespoons of 3% hydrogen peroxide inside the tank that has about a cup or two of water, and this is, if you will, the magic. When those pathogens get knocked out quick, and I have seen when you have advanced periodontitis you no

longer have the little mountains of gum tissue between the teeth, you have little flat line, they've just resorbed completely. Even in that type of gum I've seen new gum grow in quite nicely in a couple weeks.

Dr. Thomas Levy:

So basically when you take the ongoing infective presence out of there they will regenerate rapidly, especially in your case if you're not smoking. You're not doing some ongoing silly thing that's just, in my opinion, almost suicidal. Also, I might add, we talk about smoking in heart disease. I'm going to tell you, and this is my opinion, I wrote a book about it, the primary reason smokers have such a high incidence of heart disease is because all of them have induced periodontitis that has the type of pathogen that metastasizes to the coronary artery lining.

Dr. Joseph Mercola:

That's a profound insight.

Dr. Thomas Levy:

And let me tell you, there's some research that's overwhelming. In one particular study they do something called – in terms of, it's like a atherectomy, atherectomy. So, they had patients with no coronary artery disease undergo atherectomies, which is like a Roto-Rooter to pull out, carve out obstructive plaque and then analyze the plaque. Well, in 36 out of 36 patients, which I think is pretty close to 100%, Joe.

Dr. Joseph Mercola:

It doesn't get much closer than that.

Dr. Thomas Levy:

36 out of 36 had the hugest wide array of periodontal pathogens imaginable inside. Some up to 50 different species, and mind you, they also took specimens from normal coronary arteries, so this wasn't some sort of contamination. In the book, “Hidden Epidemic,” that talks about what you ended up having, which was the asymptomatic abscesses of a couple teeth, that I will submit to you is the primary reason for all heart disease and the vast majority of breast cancer because the same teeth lymphatically drain into the breast. It's all toxins and when you consider toxins, it's all toxins and the pathogens provide the most toxins.

Dr. Joseph Mercola:

That's really insightful. I'm sure that information can help a lot of people out there to understand this.

Dr. Thomas Levy:

Well, I tell you what, anybody who writes in. Well, you can get my email address, I don't care, that's fine, and anybody after getting the other book we're talking about, I'm more than happy to send them a free ebook on “Hidden Epidemic” because it should've been called, as it turns out, “hidden pandemic,” but I wrote it before that-

Dr. Joseph Mercola:

[crosstalk 00:48:01].

Dr. Thomas Levy:

-wrote it before that term became popular.

Dr. Joseph Mercola:

Unlike the fake one. Well, it's a bastardized definition that the World Health Organization changed the definition not too long ago. You're of course referring to periodontitis, it's something that very few clinicians have a deep appreciation of, and certainly to the extent that you just described.

Dr. Thomas Levy:

Well, I mean, I don't know many docs, internal medicine doctors, I mean, they go through this quick routine of physical examination and maybe, maybe not, they ask you to open your mouth to what? Look at the back of your throat, stick your tongue [crosstalk 00:48:36]. I don't, practically none of them I can comfortably say pull your lip up and take a look at the health of your gums. That's probably the most important part of that oral examination.

Dr. Joseph Mercola:

Yeah, that is. I can remember very clearly from my medical school training, I think it was Bates, was a big red book, eight and a half by 11 pages, and I don't remember any description of doing an oral cavity examination in that book.

Dr. Thomas Levy:

You know what though? Here's a very interesting little factoid. In terms of history I think you remember the movie “Ben-Hur” with Charlton Heston [crosstalk 00:49:16].

Dr. Joseph Mercola:

That was a while ago. We're dating ourselves.

Dr. Thomas Levy:

We're dating ourselves. Well, I just looked up the old movies. Well, Charlton Heston was slogging in the mud pit to make new bricks, that was the duty of the slaves, and they were looking for a gladiator. Well, they want a gladiator to be healthy, right? Well, what do they do to Charlton Heston when they walked up to him? They took him and they pulled his lip up to look at his gums.

Dr. Joseph Mercola:

Yeah.

Dr. Thomas Levy:

Same thing they do to horses.

Dr. Joseph Mercola:

Yeah.

Dr. Thomas Levy:

But the whole point is, is this is not new information. It's newly appreciated but it's not new.

Dr. Joseph Mercola:

Yeah. It's so simple to do. It's astounding that it's not integrated consistently and regularly, and taught to medical students to appreciate the value of this observation.

Dr. Thomas Levy:

Well, the other thing too, slightly switching gears is what we've already talked about, the peroxide nebulization. For many people who, I don't know, are interested in trying to try something new, I think, and it remains to be determined what the optimal maintenance regimen would be.

Dr. Joseph Mercola:

Yes.

Dr. Thomas Levy:

But I think that the peroxide nebulization should be a routine part of any treatment protocol for any medical condition because of the positive impact it has on the microbiome, and the leaky gut, all of which make any chronic disease you have worse.

Dr. Joseph Mercola:

Yes. So let's extend that recommendation so that those few of us, like me, who really don't have any chronic medical condition and are virtually free from chronic disease. So in that case you think it's wise to do a few times a week or what's your current belief on this?

Dr. Thomas Levy:

I think that's exactly right, two or three times a week. Although I will say this, only using obviously myself as my guide, so I'm not going to say the whole world is like me, don't anybody think that I'm trying to generalize my personal experience to the whole world, but I also find that if I skip it for two to three days, guess what happens? The bowel movement is less perfect. So in me, that's a feedback.

Dr. Joseph Mercola:

Yes.

Dr. Thomas Levy:

Okay? And it also indicates to me how quickly in this current environment of pathogens everywhere you can go from a normal nasal oropharynx to a newly colonized oropharynx. It's disturbing but it's good when you know that you have something that can deal with it.

Dr. Joseph Mercola:

Yeah. Really brilliant observation, so thank you for making that. It actually inspires me to do it more regularly. Since reading your book, I've increased the frequency I do it from virtually never to the moment of the sniffle or a sneeze or something that I'm going to get it out, but that's only still a few times a month, but I think I'm going to have to up it to a few times a week now.

Dr. Thomas Levy:

The thing is too is I talk about oh, if you have something, well, do it for 10 or 15 minutes. No, for this maintenance we're talking about just one, two, three minutes.

Dr. Joseph Mercola:

Yeah.

Dr. Thomas Levy:

That's all you need for the maintenance because if there is something going on it's a very low titer, very early, and you knock it out quickly. Also, I would submit to you this is a good way to if you're unfortunate enough to have a positive COVID test, doing this nebulization and then rinsing your nares, your nose, with saline solution so that you blow your nose after you're through is a good way to very rapidly turn that test to normal, especially if you're not dealing with any significant infection because as soon as you eliminate the virus presence where there's sampling in the nose, it's not possible to any longer have a positive test.

Dr. Joseph Mercola:

Well, for clarification there's two types of tests, and the one you're referring to is the PCR antigen test. That still can be bastardized.

Dr. Thomas Levy:

Well, yeah. [crosstalk 00:53:27] going incredibly-

Dr. Joseph Mercola:

[crosstalk 00:53:29] cycle threshold factor. Before when they were going 45 almost 100% of them were positive, and now it came back down 25, 30 range that is more accurate. I want to dive now into the details of how we implement this, because as I mentioned and alluded to earlier, there is some disagreement between yourself and me and some of the others. Just to give you a chronology, I'm late to the party. Probably the first one clinician that we know was either Dr. David Brownstein or Dr. Frank Shallenberger. They were doing this in the '90s, in the '90s. Then Dr. Rob Rowen picked it up, and then you picked it up, and then I followed your lead after talking to Dr. Rowen prior to you and started recommending. I've recommended it at least a few dozen times now and I don't think I've yet to see it fail once. I mean, and like you mentioned earlier, it works instantly. Usually in the first, second, or third treatment they are better, they stopped coughing, their whole life is changing.

Dr. Joseph Mercola:

So anyway, I want to get back to details. I mentioned the chronology of the implementation of this. So Dr. Shallenberger and Dr. Brownstein have come to a different conclusion than your recommendation, which is using the straight 3%. They're using much lower concentrations. Dr. Brownstein is about .04%, and Dr. Rowen is about maybe a little higher, .1%, but .1%, so literally about 30 times lower than your recommendation. We actually had an email correspondence between all four of us, and it seemed to be a consistent response that none of the others were supporting your high dose. So, not that it's necessarily dangerous, but it's like anything in life. There's a Goldilocks dose, there's a sweet spot, there's this therapeutic window where it's going to be above the MED, the minimum effective dose, but you don't want to have any side effects or unnecessary side effects. So, I'll let you take it from here, but in my belief I think .1% is the sweet spot. All the incredible observations of people improving dramatically were with .1%.

Dr. Thomas Levy:

First of all, with regard to Dr. David Brownstein, who I want to say I have tremendous respect for and he's done some great deal. He's cured a lot of people. If you look at his article, he talks about his .04%.

Dr. Joseph Mercola:

.04%.

Dr. Thomas Levy:

Okay. And say when it doesn't work well, then we'll follow with a little IV, or maybe this time we'll add a little iodine. I don't think there's any evidence really that .04% nebulization as a monotherapy is going to get the job done, and that's the overwhelming message from this book, is I want something that anybody on the planet can resolve without having to add vitamin C, without having to add iodine, without having availability of ozone. When you start taking the concentration down, you're going to get less anti-pathogenic impact by definition. That combined with the fact that, gosh, for a year now I've been getting incredible amount of feedback, I've had no negative feedback. Most people use 3%, some get too much tingling in the nose and they'll go down to 1.5%, or even 1%.

Dr. Thomas Levy:

So the point is along with what we see in the book, with what's worked out in the physiology, and also we're talking about self-limited. Okay, I think it's a whole different thing as to what concentration you might want to use for the maintenance therapy that we're talking about, but I think there's no good reason at all not to take your first shot at 3% when you're already having symptoms, or if you have a COVID positive test. I see no reason to dance lightly, especially in the fact that we have no negative feedback yet.

Dr. Thomas Levy:

Also, a recent article came out and showed that people who routinely gargle with 3% peroxide over a many-month period. Now, of course when you're gargling, whether you're getting a much more concentrated contact with the peroxide with that tissue than you are in nebulization, and they show zero microscopic abnormalities in the tissue after a six-month period. Now, the other

point I would make is the other thing is these – well, the overwhelming point is I don't think the low concentration does it by itself. That's the most important point. If you're in a hospital, a good hospital, not one of the typical ones, that will give you a bunch of modalities then sure, use the different concentration of peroxide, but I have yet to see other than extremely self-limited mucosal irritation of the nose and throat, any long-term and especially when you're talking about "Hey, we're just going to hit this hard for a couple days." Now, long-term maintenance therapy, yeah, experiment with something that causes zero irritation at all, but if you think or you feel that there's an active infection trying to gain a foothold, I see no reason not to hammer it with 3%.

Dr. Joseph Mercola:

Yeah. My only caution on that, and I have no problems with someone who wants to implement that strategy, but I think you might be blinded to the amount of feedback from your population that you're making this recommendation to, because I know that [crosstalk 00:59:14].

Dr. Thomas Levy:

Well, I will say this, Joe. I never fail – I'm sorry, go ahead.

Dr. Joseph Mercola:

Let me just finish, because I was one of those people. I did, after our interview last year I decided to use the 3% concentration. I noticed profound irritation in my upper airways. It just didn't feel right. So, if anyone uses this, I would caution to be sensitive of that because at the lower concentration you don't feel anything. There is nothing, there is no unnatural feeling at all. So, I think it's just straightforward. So, [inaudible 00:59:44] that because normally if your body is giving you feedback there's an irritation, probably it's a signal that it's too much.

Dr. Thomas Levy:

Well, the only thing I would add to that is when you start feeling a substantial amount of irritation it's because you've killed the pathogens. The pathogens basically take up or deal with the peroxide that you're dealing with. In the book and in my articles, and in my interviews I never advise somebody to tolerate symptoms that they find uncomfortable. I always say find a concentration of whatever you're nebulizing that's comfortable, but that said, I still think when you clearly have an infection, hit it hard the first few times. I don't think you're going to do any damage. The other thing I wanted to mention about feedback is, I think you appreciate this, Joe, is that when you feel better you generally don't tell anybody.

Dr. Joseph Mercola:

Right.

Dr. Thomas Levy:

When you feel worse, you tell everybody. I mean, if there's negative impact, I'm going to hear about it.

Dr. Joseph Mercola:

Okay, fair enough. So, the last two points that I want to discuss, and they're really, really important ones, is the nebulizer itself. Now, Dr. Brownstein and I are pretty rigid about recommending to getting a plug-in nebulizer, that's one you plug in the wall, not one of those typically powered by batteries, although some of the plug-ins do have that capacity, usually it's a very expensive battery, like a $60 to $70 battery. So, it's just the more powerful way to do it, and it just seems to be the way to go. So, I would recommend not using the handheld battery-powered ones that you get for $25 on Amazon. I've tried like a half a dozen and they've all been miserable failures. So I don't recommend that at all, so you have to do your homework. There's a big challenge in many of these companies, Amazon being one of them, or some of these other ones that require prescription from a doctor, but I've had a lot of people say when they ask for the prescription say Dr. Mercola recommended it and they get [crosstalk 01:01:41].

Dr. Thomas Levy:

Let me say this, Joe. I think, and I've actually got a fair amount of experience with this now, and I 100% agree. Make your investment in the tabletop model because A, it's more durable, B, you can use a wide variety of solutions because the little container can be easily cleaned and boiled, and you can mix some vinegar in there to clean it out easy. Very, very good price.

Dr. Joseph Mercola:

Under $100.

Dr. Thomas Levy:

Yeah. The only reason I see for having the handheld is if you do a lot of traveling, okay. You want to just have something in that you can take easily during your travels. But again, the point is, and I've already noted this, is that like any pro-oxidative agent, if you don't promptly clean a handheld mesh nebulizer, and I would be lazy, I would use it and I'd let the solution sit in there for a couple days before coming back to it. Well, guess what? Surprise, surprise, the mesh started rusting, okay? So they're very delicate machines but they still are kind of pricey. So make the handheld nebulizer your luxury. Only nebulize the peroxide, the dilution peroxide that you want, clean it quickly with water when you're finished, and the rest of the time use your tabletop nebulizer. Absolutely I agree, 100%.

Dr. Joseph Mercola:

Well, great. The tabletop nebulizer, for those who haven't seen or used it, is not, that's a bad term for it I would think because it implies it's really hard [crosstalk 01:03:20].

Dr. Thomas Levy:

It's an air compressor.

Dr. Joseph Mercola:

Yeah, but I mean, it literally is not much bigger than the handheld.

Dr. Thomas Levy:

Well, they have different sizes, but you're right, they do have a small one too.

Dr. Joseph Mercola:

Yeah. I like the PARI Trek one, and it really ... I travel with it, so it's easy to travel with and I will, in fact, it is part of my checklist now for traveling. I refuse to travel without it and peroxide, because I have no idea when I'm going to encounter someone I know or love where I'm traveling to is going to have, and I'll be using that for them. You're right because the peroxide, the oxidative solution that you're using is in a separate container, it's not in the actual compressor.

Dr. Thomas Levy:

Exactly.

Dr. Joseph Mercola:

So you can even leave it in there indefinitely, it's not going to do anything because it's not [crosstalk 01:03:58].

Dr. Thomas Levy:

And you can clean it, no problem. Exactly.

Dr. Joseph Mercola:

It's easy to do.

Dr. Thomas Levy:

Can't do that with the handhelds.

Dr. Joseph Mercola:

And the point that has to be incredibly emphasized, and I don't care if you hear me say it a dozen times, because it's that one person who gets it finally that you have to do this before you need it. You want to do this now. It's not something you go and scamper for the moment you feel stick. It's going to take too long to get. So you've got to do it now, get all set up, run through your dilutions, get everything going and then be prepared, locked and loaded. There's still benefit to do it, as you heard. It's probably not a bad idea to do it several times a week anyway, and neither of us are selling anything.

Dr. Thomas Levy:

Exactly.

Dr. Joseph Mercola:

This is water and peroxide, and a nebulizer which we have no conflict of interest, we don't, we have any relationship with these companies. So just do it and benefit yourself and your family.

Dr. Thomas Levy:

Also, a small point, every now and then I don't know why Amazon might say this item requires a prescription or a distributor, or this that and the other, other times not. You can also get them in, I think JustNebulizers.com and you can get them on eBay. So do any sort of reasonable search

on the web, you'll be able to get one easily, and as you said, for good grief, don't wait until you're sick. I mean, we're talking about for the cheap models a $30, a more expensive model $60 or $70. Get it and have it. I mean, just like you would have anything in your medicine cabinet. Have it there for when you need it.

Dr. Joseph Mercola:

And let me give you an idea. A birthday is coming up, a holiday, these are the best Christmas gifts or gifts you can get, generalized, that you can get. Tim Ferriss has this common question he asks many of his guests that he interviews. What's the best device you ever got for under $100? Well, I guarantee you, this is it for me. I mean, I don't know of any device for $100 that beats this dollar for dollar as a great investment. So, get some for the people that you love, not only for yourself, but spread and the wealth and the knowledge, and give them the tools they need to defeat these same viral illnesses.

Dr. Thomas Levy:

Yeah. I couldn't agree more, Joe, and I think this is obviously extremely important information.

Dr. Joseph Mercola:

Yeah.

Dr. Thomas Levy:

Just a little bit of planning ahead, not a whole lot, just a little bit of planning ahead.

Dr. Joseph Mercola:

Along those lines, a deep gratitude for taking the time, effort, and energy, because I know what it takes to write a book. We've both written quite a few, and it's not an easy venture. Just to give it away for free is very gracious of you, so thank you.

Dr. Thomas Levy:

If anybody wants to know what their price is for downloading the book, the price is, “Forward the link to as many people as possible.” That's the whole reason for this book, and that'll be more than enough payment to me, is if you do your small part to get that link out to your circle, your working people, your family, your friends, your groups and your email list, I can't imagine anybody being offended by the offer of a free book.

Dr. Joseph Mercola:

Well, I would have to revise that.

Dr. Thomas Levy:

Oh, okay.

Dr. Joseph Mercola:

The revision is that if you don't already have a nebulizer, you have to agree to commit to purchase one.

Dr. Thomas Levy:

That's good. I couldn't disagree with that, sir.

Dr. Joseph Mercola:

Otherwise, the book is worthless.

Dr. Thomas Levy:

Yeah.

Dr. Joseph Mercola:

You can't do anything with it. So, you've got to have the tool, and the tool is the best investment under $100 you can make. They last for a long time. The handheld ones might last a few times, but the more expensive better one is going to last you for years, if not longer.

Dr. Thomas Levy:

If not longer, yes sir.

Dr. Joseph Mercola:

All right. Well, thanks Tom. Appreciate everything. We'll obviously have links to your book and your site, and your background, and get everyone the information they need to avail themselves of this resource.

Dr. Thomas Levy:

My pleasure, Joe. Man, all I can say is you keep up your great work. We don't have enough brave principled persons like yourself out there, so keep up the good fight on all those fronts.

Dr. Joseph Mercola:

Well, thank you. Thank you for your kind words.

Dr. Thomas Levy:

All right. Take care. Bye-bye.