Wellness Mama Podcast Episode 28

Can Cavities Remineralize?

Interview with Dr. Judene Benoit

Show Notes: http://wellnessmama.com/podcast/can-cavities-remineralize/

Years ago, I wrote about how I remineralized a small cavity in one of my teeth and I never expected the response it would get.

Now, there are dozens of comments from readers who have remineralized their own teeth, and dozens more from readers and dental professionals who claim this isn't possible. I wanted to get to the bottom of this. I knew what worked for me, but wanted a dentist to really delve in and explain if remineralization is actually possible, and if so, how it works and the science behind it.

A Dentist's Perspective on Remineralization

I was elated to meet Dr. Judene Benoit who uses a specialized approach to dentistry that combines the research and knowledge she learned in dental school with a holistic research-based approach to oral health. She has helped many people remineralize teeth and is the author of the book How to Stop Cavities: A Natural Approach to Prevention and Remineralization.

In this podcast, she and I delve into the difference between healing and remineralization and when each one happens as well as:

- Can cavities remineralize?
- How the body remineralizes
- How large cavities can't actually "heal" to completely regrow their normal shape, but they can stop decay, remineralize and actually become stronger (without the need for a filling)
- Ways we can prevent tooth decay
- What cavities cannot be reversed
- The connection between oral health and overall health
- What diet and lifestyle factors to optimize for better oral health
- What Matrix Metalloproteinases are and why you need them (in moderation)
- How bacterial balance in the mouth impacts oral health and how to create good bacteria in the mouth
- The ways that hormones impact risk of tooth decay
- Is Oil Pulling safe?

Resources we Mention

- Book: How to Stop Cavities (or on Amazon)
- Dr. Judene's website: JudeneDDS.com
- Article: How to Remineralize Teeth Naturally
- Recipe: Homemade Remineralizing Toothpaste
- Tutorial: What is Oil Pulling and Coconut Oil Pulling
- Tutorial: Coconut Oil Pulling Chews
- Dr. Judene on Facebook

Katie: Hi and welcome to the Wellness Mama podcast. I'm Katie from WellnessMama.com. Today's fun fact, in 1994 an inmate in a West Virginia prison braided floss into a rope and used it to scale the wall to escape. Today's guest would probably recommend using floss but in a different way. Dr. Judene Benoit is a dentist in

Ontario, Canada. She's passionate about helping people improve their teeth and their lives using simple natural techniques. She uses a blended approach to dentistry combining information taught in dental school with research from scientific dental journals and her love of whole food and whole person holistic thinking to get real result and has great success with so many people. Dr. Judene, thanks for being here.

Dr. Judene: Thanks for having me.

Katie: I'm so excited. I want to jump right in because I love the topic of world health. I'm fascinated by it. And a few years ago I wrote an article that detailed how I have reversed a small cavity that I had naturally and this was verified by my dentist, but since I've written that post I've had dozens of people write me to tell me how they've reversed cavities as well. But the interesting part is there are a lot of dental health professionals, especially a lot of hygienists who I believe absolutely want to help people that have commented on that post that it is not possible to heal a tooth and that I must be either making it up or lying. And I've also heard from dentists, in that same post, who said that they understand the body's ability to reverse dental decay. And I know that you've done a lot of research on this and you're definitely considered an expert and I'm not. So I would love to have you really delve into this. Is it possible to heal cavities, and if so who's right in this argument?

Dr. Judene: Absolutely. It is definitely possible to remineralize cavities. I think the discrepancy between people who say it's not possible to reverse and heal cavities and people who say it is, it all comes down to the terminology used. The terms reversed cavity and healed cavity are a proper dental terms, but they're only used when referring to a cavity that is so, so small that a hole hasn't actually even happened in the tooth yet. So a small, very small amount of minerals have been removed, demineralization, and then those small amount of minerals are replaced by remineralization. And this is what properly is called a reversed or healed cavity. But most people don't really think of that

as even a cavity. To them it just seems like prevention of cavities. There was no hole to begin with, no hole in the end, it's just seems a whole lot like prevention.

When there's been enough demineralization and to actually cause a hole in the tooth, which most people see as an actual cavity, that cannot be reversed or healed in proper dental terms. The missing tooth structure is not replaced. It's like if you accidentally cut your fingertip off, the missing fingertip cannot grow back. You can't say that cutting your fingertip off is reversed. It's like it's just doesn't happen that the missing tooth structure grows back. So that's why dental professionals they would probably say that once a hole is in a tooth it cannot be properly termed reversed or healed.

But, what most people in the general public want when they say they want a reversed or healed cavity, what they're referring to is they want a cavity to be remineralized. And the proper dental term for this is arrested decay. So when you have a cavity like when you have a hole in your tooth, it can't be completely reversed or the tooth grows back, but it can be remineralized and the cavity can become arrested. And this is what I think most people want. People don't really care whether the tooth grows back or not. They want a health tooth that is strong and, ideally, doesn't need a restoration and this absolutely does occur when there's been a hole in the tooth.

So cavities are either active or arrested. An active cavity is when there's continual damage occurring, continual loss of minerals. And the cavity is progressing, this is never a good thing. An arrested cavity was once an active cavity but the minerals have been replaced, not the missing tooth structure. Remember, that doesn't happen, the tooth does not grow back. But, the minerals are replaced and the cavity is remineralized and it's no longer progressing. And usually it does not need a restoration and this is always a good thing. So cavities are not necessarily bad. An active cavity is bad. An arrested cavity is great. Usually when people talk about cavities, they're talking about active cavities, but really an arrested cavity is a great diagnosis.

And every dentist knows that cavities can be remineralized and arrested. This is what we're taught in dental school. And many dental professionals spend much of their working hours promoting the remineralization of teeth and cavities, usually by way of oral hygiene techniques and fluoride. There are a lot of other ways to remineralize teeth and cavities, many of which are natural ways.

So to clarify I think it's the words reversed and healed. When properly used in dental terminology it's for very, very, very small cavities that most people don't even recognize as cavities. What you want to be saying in proper dental terms is you want a cavity to be remineralized and you want the cavity to become arrested, arrested decay. And also, just to clarify, dentin remineralization can and does definitely occur. Dentin is the part of the tooth that is underneath enamel and it makes up the majority of a tooth. I know there's some debate out there about whether dentin can remineralize, but it is an absolute fact that dentin can remineralize. Dentists are taught this in dental school, but problems or confusions can arise if one says that dentin cavities can be reversed, because they cannot be truly reversed where the tooth grows back. But dentin can be remineralized and arrested decay can occur within the dentin. Does this makes sense?

Katie: That makes perfect sense. I actually probably when I go back and change that post to be more accurate with the wording, because I think you're right. That's probably where the confusion is. And so just to make sure I fully understand, it's like if you have like scaffolding and you were building something and part of it was broken off, you could still put bricks on top of that and make it strong. It just would never be the same shape as it was before. Is that kind of what it works with the cavity that they won't grow back to the same shape that it was originally, but it can grow a layer of mineral on top and be strong again?

Dr. Judene: Absolutely. Yeah, yeah. Like a finger, like a fingertip. Like if you accidentally cut your fingertip off, you would say the skin around it is healed. You're

happy, the skin is hard, it's not susceptible to an infection and it's functioning just like normal. But the actual fingertip does not grow back and it's the same with cavities.

Katie: That makes perfect sense. But since that is possible for it to gain its strength back there's no reason, just like if your finger was cut off it could heal and stop bleeding. There's no reason to assume that a cavity will always continue to get worse and that it always has to be restored. Is that right?

Dr. Judene: Oh, for sure. Actually, there's a lot of research out there that shows that remineralized cavities are actually stronger and more resistant to cavities than the rest of the tooth.

Katie: That's awesome and it makes sense. Same with broken bones. So how does this remineralization actually take place? Are there internal factors that the body needs internally to create that or is it external factors like brushing and flossing or both. Like are there things to specifically do or avoid?

Dr. Judene: Well, what I was taught in dental school is that it was both external and internal factors. Bacteria plus a susceptible individual equals disease and that combination is the same for so many diseases and health conditions.

Take for example, someone sneezes on an airplane. The same bacteria or virus is spread amongst many people but some people get sick, some people don't. What's necessary? It's the bacteria or virus plus a susceptible individual that equals the sickness. And that's the same with cavities. The cavity-causing bacteria plus a susceptible individual equals a cavity. And are there specific things to do or not do? Yes and no. Also for the no, no there's not one or two things that must be done or must not be done to remineralize teeth and cavities.

Remineralized teeth is for everyone. It is a natural and innate process that occurs in every single one of us and it's usually happening most of the time. Otherwise none of us would have any teeth left. Our bodies are designed to remineralize our teeth. That is one of the main functions of our saliva. And for the yes part, for sure there are a lot of things that one can do, or not do, that will help or hinder remineralization.

In my book I talked about both external and internal things that people can do. There's so many things. For example - just a quick example - making sure that you have plenty of saliva available to remineralize and things like allergies, mouth breathing, certain foods and even stress can negatively affect the saliva, which would hinder the ability to have a teeth remineralized.

Katie: That's fascinating. Yeah and my background is obviously not in dental health but in the nutrition side and so I've always found that fascinating, the research on how obviously it makes sense. When you have enough minerals and vitamins in your body those are also present in your saliva and then they're present in your teeth as well. And I love that you take that holistic approach to supporting the body internally and externally, both, and giving it that double dose of being able to heal.

So what about prevention though? Obviously it seems much easier to prevent a cavity or any health problem rather than to fix it. So, what are some things that people can be doing? Obviously brushing and flossing, but are there other things from a dental side that they can be doing to prevent?

Dr. Judene: Oh, for sure. Absolutely preventing is way easier than working to remineralize a cavity. Actually the process of prevention and remineralization is the same and it's on a continuum. So if you have a tiny bit of demineralization and that those missing minerals are quickly replaced with remineralization, this might be known as prevention. They say you have a little bit more minerals lost, a little bit more

demineralization, that's replaced with remineralization. This would be maybe known in proper dental terms as a reversed or healed cavity, no hole occurred. But there was the demineralization and remineralization.

Then say you have even more demineralization occurs and you have a hole in the tooth and minerals are replaced, not the tooth structure but the minerals, this would be known as an arrested cavity. So, yeah. It's the same process. If you want to remineralize your cavities or if you want to prevent, it's really all the same things that you do. But, definitely the more demineralization that has occurred the harder it is to replace those missing minerals. And the less likely it will actually happen. The safest route to take is to prevent a cavity from happening in the first place. The bigger the cavity, the less likely it will remineralize and that is never good. The cavity could grow, the tooth might end up breaking, needing root canal or extraction. Focusing on remineralization so that a cavity doesn't form in the first place is the best route to take.

Katie: That makes so much sense. And you mentioned obviously there's a difference between active decay and then an arrested cavity. So how can a person tell if they still have an active cavity or if it's started to remineralize? Is that something a dentist would be able to tell them pretty easily or is there a way to tell that at home?

Dr. Judene: Really it's not possible to tell at home. Determining the difference between active and arrested decay requires a complex assessment of many factors and the diagnosis can only be made by a dentist.

One of the important factors distinguishing active from arrested cavities is softness, but this is not softness to your finger. This is only determined by a dental tool called an explorer. So an active cavity is soft and arrested cavity is hard when touched with a dental explorer. But even using a dental explorer is a delicate endeavor. If it is pushed

too heavily on a tooth that is in the process of remineralizing, but not fully remineralized the explorer can actually break through and destroy the remineralized areas.

For a cavity that's only visible in an x-ray, it is even more complex to distinguish between active and arrested states. Really the only way to know if a cavity is arrested when it can only be seen in an x-ray is to take periodic x-rays. If the cavity grows a tiny bit, it is an active and progressing cavity. If it never grows at all it can be concluded that it is arrested. There are some other dental technologies available in some dental offices that use methods other than radiation that can sometimes be used instead of or in addition to x-rays to monitor these types of cavities.

Katie: Very cool. I always tell people obviously consult with your dentist if you have any oral health problem and go to regular check-ups, but are there some cavities that cannot be remineralized and that someone should absolutely not even try to remineralize and you just get restoration for it or?

Dr. Judene: Yeah, for sure. Yeah. Actually in my book I have three different categories and I give like a little chart, so people can hopefully find where their cavity lays. And there are some cavities that should be considered to be not possible to remineralize and someone should get a filling put in because if they don't then they're really, really likely looking at having an extraction or losing the tooth or having some major damage happen in that tooth.

Again, the bigger the cavity, the more likely it will not remineralize and particularly one of the biggest determinants of whether successful remineralization will happen or not is exposure to saliva. So if a cavity is completely hidden to saliva, like if it's in between the teeth, these are very, very challenging to remineralize and a cavity that's like medium to large size that's already challenging to remineralize in the first place and then it's in a

challenging location like in between the teeth where it has no exposure to saliva, this is the cavity that someone should get restored.

A cavity that has significant exposure to saliva is more likely to remineralize, because the saliva contains the minerals that are going to do the remineralizing. Yeah. And another area of really be careful with is recurrent decay. So cavities that are found around an existing restoration, those are very, very challenging to remineralize as well. Because often it might just be that the restoration is faulty, there's some margins that are having problems around the restoration. Unless it's just staining, if it's an actual cavity around an existing filling, that's very challenging to be remineralize as well.

Katie: Good to know. And I know I've seen some fascinating research on the connection between oral health and overall health and I have friends with heart problems that are always told to take antibiotic before even a routine cleaning to protect their heart, which it indicates that there maybe is indeed a connection there. So can you talk about this and explain why oral health is so much more important than many people think and why we should be working to prevent these problems as much as possible?

Dr. Judene: For sure. Yeah, yeah. Gum disease is commonly promoted, actually linked with oral health and that's awesome. And what I would like to bring to light is the connection that cavities have with overall health. Did you know that in 1995, the Journal of American Nutrition published a study that showed children age 6 to 11 months who were malnourished had a higher incidence of cavities in both their deciduous and permanent teeth? So it's their baby teeth and their adult teeth. So babies, 6 to 11 months who were malnourished had higher rates of cavities in their adult teeth. Isn't that amazing?

Katie: Wow.

Dr. Judene: And the study showed that even the children who experienced just one episode of malnutrition, just one, had a higher incidence of cavities in the future. I just post my mind.

Katie: Wow. That is amazing. So, basically it's like I think of this with all aspects of health supporting the body in one way to help your teeth for instance supports it in so many other ways as well and that's especially amazing. So these children had it even in their adult teeth even at that young.

Dr. Judene: Right. Yeah, yeah. It's a great opportunity for parents to, like I always say, parents can give their children one of the greatest gifts, strong teeth that can last their entire life by setting them up for success when they're young.

Katie: That makes so much sense, that it's during those developmental years when your body is still fully creating all that. That makes so much sense. And I wanted to ask you about this, because it's something I've only recently even discovered and hope I don't butcher the pronunciation but, can you talk about matrix metalloproteinases and what those are and how do they factor into oral health?

Dr. Judene: For sure. Yes. Yeah, you said it right.

Katie: Awesome.

Dr. Judene: Matrix metalloproteinases or MMPs are a group of enzymes responsible for destroying damaged proteins like collagen and gelatin found in skin, bones, connective tissue, and teeth. Matrix metalloproteinases are found in saliva and in the dentin of teeth. And while it may seem like MMPs are bad, going around destroying collagen and gelatin, they're actually really part of the healthy process of growing and healing.

So I like to compare them to a gardener. If you have a beautiful garden, you need to have someone go around and trim off the dead leaves and the dead flowers. And when the gardener does this it actually allows the plant and the flowers to grow better. And this is the same with matrix metalloproteinases. So when bacterial acids caused demineralization in the tooth, this is damage and the damage is cleared by MMPs, matrix metalloproteinases. And this process of clearing the damage is absolutely necessary for healthy healing of the teeth.

However, now picture the gardener's boss is away and he just continues cutting off the dead leaves and the dead flowers, but also the live flowers and pretty soon the whole garden is cut away. So this can happen, in the body, if matrix metalloproteinases are not inhibited. So there needs to be a proper balance between MMPs and their inhibitors, MMP inhibitors. If there is too many MMPs and too little MMP inhibitors then the dentin is continually removed. And actually this is related to how fast dentin cavities progress. So the balance between MMPs and MMP inhibitors is correlated to the speed of cavity progression.

So in dentistry, there are some MMP inhibitors already being used. These are things like Periostat or low-dose doxycycline and chlorhexidine or Peridex. These are any dental professional would be familiar with these. There are some other ways that we can ensure a proper balance between MMPs and MMP inhibitors. For example, some natural MMP inhibitors have been found in avocado and green tea. And having a neutral pH in your mouth, so not having an acidic mouth is very important, because acidity has been shown to activate MMPs when they otherwise should not be activated. Damage would occur when there's nothing. So like the MMPs will be clearing the dentin in the teeth when there really is no damage that should be cleared in the first place.

And then another really important part of MMPs is how they're activated naturally in the body. So free radicals. I know we hear a lot about free radicals being bad, but our

bodies naturally produce free radicals and part of the function of free radicals is to signal the activation of matrix metalloproteinases. And that's a good thing. Like I said, MMPs are a good thing but they need to be balanced. Okay. So if we have an excess of free radicals from say pesticides, nutritional deficiencies, stress, alcohol, smoking, etc., this is going to activate MMPs when they really shouldn't be. Also we need antioxidants to balance off the free radicals to help with achieving an optimal balance of MMPs. So antioxidants are found in fruits, vegetables, supplements, herbs and spices, all that good stuff.

Katie: That's fascinating.

Dr. Judene: Thanks.

Katie: Yeah. And that makes sense that things like green tea then, which is also rich in antioxidants would be so beneficial for stimulating that in the body. I love that. That's an area that I've just started learning about and it's so fascinating. And it really brings back that point with everything in the body, it's all about the balance and keeping things in a proper ratio.

What about bacteria in the mouth? And I've had a theory for a long time and I've read some literature on this that the mouth has almost its own microbiome, just like we have a gut microbiome and a skin microbiome and I feel like that's an area we're just starting to fully understand. So obviously they've identified certain bacteria like the Streptococcus mutans that contributes to cavities. But how do other bacteria play a role in oral health then? Are there things we can do to support a healthy bacterial balance in the mouth?

Dr. Judene: Oh, you're absolutely right. The mouth does have microbiome just like the gut does. People are familiar with the good bacteria and the bad bacteria in the gut, and

the same goes for the mouth. There are the good bacteria and there are the bad bacteria in the mouth.

So usually, when bacteria first colonize the teeth, so when they first erupt into the mouth they're colonized by bacteria. Bacteria like they set up to live there forever and they usually do. It's the same bacteria. Even though brushing and flossing and mouthwashes will remove some bacteria, it's the same type of bacteria that grow back again and again and again. So that's like a colonization of the teeth. So definitely it's beneficial for children, parents that they can help their children have their mouth colonized with good bacteria that are not cavity-causing and then that's, again, it's going to set them up for success in the future.

It is possible to recolonize the mouth with new bacteria, although it can be very, very challenging. Most studies indicate that there needs to be very frequent exposure to new bacteria in order to recolonize the mouth. And there actually tests available in some dental offices to test for whether you have a high level of Streptococcus mutans. That's the main cavity-causing bacteria and it can be beneficial like if you do have a high level and you're working at recolonizing your mouth by having frequent, frequent exposure to good bacteria. The good bacteria will be able to hopefully recolonize the teeth and kill off some of the cavity causing bacteria. So all those probiotics and probiotic-rich foods are actually beneficial to protecting your mouth as well.

Katie: That's fascinating. Yeah. You get another reason to make sure you're including probiotic-rich foods very often in your meals. That's so fascinating.

Dr. Judene: Yeah.

Katie: What about hormones and pH? You mentioned those a little bit, especially how cortisol can affect the pH in the mouth and affect oral health. And I've always thought

this is fascinating also, because I use a fertility monitor to monitor my cycle because I don't take any artificial hormones and one of the sensors, it measure the electrolytes and saliva in the mouth, because there are changes in that through a woman's cycle. Her saliva changes, certain electrolytes in there change depending on what part of her cycle. So obviously there is a hormone connection there. Can you talk about how hormones and pH affects the mouth as well?

Dr. Judene: For sure. Yeah. Actually in my book I talk about three hormones that have extensive research regarding the link with cavities. So I'll just go through those.
So one is thyroid. Thyroid hormones and cavities are related. So as thyroid function and thyroid hormones decrease, incidence of cavities increases. This is because a decrease in thyroid hormones are associated with an increase in acidity of the saliva and a decrease in protein content of the saliva, which can lower the buffering capabilities of the saliva. So buffering capability is how well the saliva can neutralize an acid.

Another hormone that has been extensively researched its link with cavities is estrogen. So as estrogen levels increase, incidence of cavities increases. Estrogen receptors are located in the mouth, in the gums, and salivary glands. Also, studies have shown that estrogen levels can increase dentin formation. Although it is not known the exact mechanism of action by which this occurs.

I find this interesting. In 1979, the Journal of Community Dentistry and Oral Epidemiology published a study looking at birth control and incidence of cavities. The researchers did not come to a definitive conclusion, but they did have a couple of interesting findings. All of the women on birth control had significantly higher decayed, missing, and filled teeth than women not taking birth control. Also the group of women taking birth control for the longest amount of time, which in the study was only 3.36 years, had significantly higher decayed, missing, and filled teeth.

And another hormone like you mentioned, cortisol and the stress hormones like adrenaline have been correlated with cavities as well. So as the stress hormones increase, incidents of cavities increases. When you're in an emergency situation the stress hormones shut down any unnecessary functions that will not help with the emergency or stressful situation. Things like digestion, liver filtration and blood flow into teeth and salivary glands is shut down or slowed and this is actually a really great process. We don't want our bodies to be focusing on protecting our teeth from bacterial acids when we are asking for a raise at work or competing in a sporting event. When a stressful event is over, that's when you want lots of blood flow into the teeth, which is necessary for dentin remineralization and we want lots of blood flow into the salivary glands to have lots of saliva. People who are chronically stressed out are going to have teeth that are chronically more susceptible to cavities.

Katie: That makes a lot of sense as well and yeah, another reason that's so important to balance the stress hormones. And you've mentioned minerals and saliva several times. So can you talk about what minerals we need to have in our saliva and the best way to make sure that we have those in our bodies?

Dr. Judene: Sure. So one of the most simple ways to talk about minerals is to talk about hydroxyapatite. So hydroxyapatite is what our teeth are composed of. Enamel and dentin are composed of something called hydroxyapatite. And hydroxyapatite is made of calcium phosphate and hydroxyl, which is OH. Okay, so OH like an oxygen and a hydrogen.

So we all remember from high school science class that different molecules have different binding affinities or the desire to bind to things. And when we have acidic saliva in our mouth that means that there is an abundance of hydrogen ions. And so hydrogen and OH, the hydroxyl, have a very strong binding affinity. They have a very high desire to bind together, because that forms HOH which is H2O which water, right?

So the hydrogen ions and the hydroxyl would rather form water than stay in the hydroxyapatite in our teeth.

So when we have acidic saliva, that's what happens is the hydroxyapatite minerals are broken apart and the hydroxyl forms water and the saliva as opposed to staying as a strong mineral component of saliva. So that's the connection, that's why you always . . . here you want to have neutral pH in your mouth, right? That's the connection there. However, there's also calcium and phosphate in hydroxyapatite in the teeth and when there's a deficiency of calcium and phosphate in the saliva, it will make the hydroxyapatite more likely to break apart.

So let's just say you have acidic saliva and a deficiency of calcium and phosphate, the hydroxyapatite is going to be so much more likely to break apart than if you had sufficient levels of the calcium and phosphate and a neutral saliva. And in fact studies have shown that even in the presence of a neutral mouth that a deficiency in minerals can lead to the dissolving of hydroxyapatite. For example, when a tooth is placed in distilled water which has no minerals in it, even at neutral pH because of the concentration difference between the minerals and the tooth and the minerals in the water, which is high mineral content in the tooth and low in the water, the minerals actually dissolve out of the tooth. And it's really not possible to look at just calcium and phosphate. Minerals are all related to each other, right? So you can't just say, "Oh, I need I need to focus on having adequate levels of calcium and phosphate and that's it." The minerals are completely interrelated and deficiency in one can lead to a deficiency in others and there's a whole host of things that affect the concentration minerals in our saliva. Like even digestion and stress, things like that can all negatively affect how much minerals we have in our saliva.

Katie: That is fascinating. Yeah. So I would assume again since I always go back to the nutrition side that your safety net there would just be to make sure you're always

consuming a wide variety of really nutrient dense foods, such as continually be supporting the body in that process of making saliva that's nutrient rich. Is that . . . ?

Dr. Judene: Yes, for sure. For sure.

Katie: Awesome. And another thing I'd love to get your take on, because it's a lot more controversial than I expected it to be when I wrote about it is oil pulling. This is something I've done off and on for years, basically after I found a few studies that showed that certain oils, especially coconut oil, did have an ability to inhibit the Streptococcus mutans bacteria. And so that's something I started back when I was working on remineralizing my own tooth. But I get a lot of questions about it as well. So I'd love to hear your take on oil pulling. Is it safe for people who have cavities and fillings? Are there people who should not do it? Or are there any cautions? Can you talk about oil pulling?

Dr. Judene: Sure. Yeah, I know a lot of people who have had great success with it. I don't know a lot of actual research studies that have been done relating to oil pulling. I mean if someone has some I would love to see them. I do know that coconut oil and coconut products have been correlated with decreasing levels of Streptococcus mutans, which is obviously really beneficial to decreasing cavities and so I think that it's great to try. I do know a lot of people have success with it. I'm not aware of any contraindications to doing it.

Katie: Okay. So it'd probably fall in that category of, "Check with your dentist but it's worth a try. It may not do anything, but it probably won't hurt you much either."

Dr. Judene: Yeah. Yeah. But again like I said, so if you have a high level of Streptococcus mutans, like cavity-causing bacteria, you want to decrease those levels because remember, high levels of bacteria plus a susceptible individual equals a cavity,

right? So I mean definitely I think that the more time something is spending in your mouth that's decreasing the cavity-causing bacteria the better, right? So oil pulling. I guess you do oil pulling with other oils besides coconut, right? I'm not aware of the studies that relate to other oils, I mean definitely it's possible. But I know for sure coconut, I mean if you're having coconut oil spend a lot of time in your mouth it's going to be really beneficial.

Katie: That makes so much sense. And I love how you take such a holistic view of this and I think that's wonderful. I've seen a lot more dentists that seemed to be understanding this as a whole spectrum and not just brushing and flossing but that you do need to support your mouth in ways that support your body as well with reducing stress and eating a high nutrient diet and getting enough sleep and I loved that you tied it all together. I finished your book recently and loved it. It was so in-depth and detailed and research-backed, and would definitely recommend it. And I can't believe our time is flowing so much, but a question I always ask at the end to kind of pull everything back together is if someone who's just starting out and maybe has poor oral health or some small cavities that they'd like to remineralize, what would be the most important first three steps that you'd recommend?

Dr. Judene: Okay. Thanks for the comments about my book. I really appreciate that. So three steps. One I would say I always recommend pH strips to people. I think it's like a fun thing for kids to do. It's so well received by parents and adults and kids. So, yeah, I recommend buy some pH strips and you want to make sure that your mouth is always neutral or is close to neutral as possible for many reasons. Remember when you have an acidic mouth it can cause issues from an external and an internal point of view.

So a neutral pH is seven and anything under seven is acidic and anything above seven is alkaline, but you want to be around seven. And yeah, kids find it fun. When they get to spit on a piece of paper and watch it turn color like it's really well received. But it has

such powerful information in it. So often I see kids come into my office and I'll test their mouth pH right then and there and they have a really acidic mouth, like 5.5, for example. They'll have a pH of 5.5 and that is so acidic that the hydroxyapatite minerals are dissolving so quickly out of their teeth with a pH that low. And also remember I was saying with MMPs, right, the internal aspect of teeth too, having an acidic mouth will activate MMPs when they shouldn't be. So that's one powerful thing.

And the second thing I would say is for people to entertain the idea that they could benefit from changes to their diet ranging from small tweaks to perhaps a complete overhaul. And there's not one particular type of diet that I recommend. I think it's just something for people if they're already getting cavities and they want to naturally help try to remineralize them then changing something in their diet is a really great idea. And the third thing is that I want people to know that it is possible. It is possible to have the healthy mouth that you want and to celebrate your successes. Many people already have arrested decay in their mouths. I always tell people to open up and look in their mouths. If they see if they see any little brown spots and they're seeing a dentist regularly and their dentists didn't mention anything, then that brown spot's probably arrested decay. And in my book I called brown spot lesions, they are properly called, I call them medals of honor. I mean this is awesome. This is a sign that you had a cavity at some point and your body healed it up and it's a sign that teeth can heal and it's a great thing to celebrate.

Katie: Awesome. I love that and I want to echo again that I could not recommend your book highly enough. If you read her book, it's How to Stop Cavities: A Natural Approach to Prevention and Remineralization, and I will link to it on the show notes so that people can find it. I finished it reading recently and it's almost 300 pages. It's very in-depth and I thought it was awesome. You go into so much detail and I believe you also do consultations both via phone and Skype for anyone who may not be in Canada, so

people could reach out to you if they had specific questions on oral health problem and trying to figure out the best course of action?

Dr. Judene: Yes, yes.

Katie: Awesome. And I'll also include a link in the show notes to your website which is JudeneDDS.com and you have some great information there as well. So thank you so much for taking the time to be here and for all your research and for being willing to share with us.

Dr. Judene: Oh, thank you so much for having me. It's been really awesome.

Thank you so much for listening to this episode of the Wellness Mama podcast, where I provide simple answers for healthier families.
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Thanks as always for listening and for reading and for being on board with creating a future for our children that's healthier and happier. And until next time, have a healthy week.

If you have questions about anything we discussed, please leave a comment below.

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