Boosting Diabetes Control Through Oral Care Transcript

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Introduction and Dr. Hsu's Background

Welcome to another episode of reversing your Type 2 Diabetes Summit 2.0. This is your co-host, Dr. Will Hsu and I had the pleasure of introducing a friend and a colleague of mine also by the same last name, is about to shoot.

No relations but deep friendship, if you will. And Dr. Hsu is a ultimate professional who is a dentist, who has been seeing patients from all over the places and with all kinds of backgrounds for many, many years.

So I'm going to let Dr. Hsu introduce himself. Dr. Hsu. Hi, how are you? Good morning, everyone. My name's Yin Hsu Yes, Dr. Hsu said. As a matter of fact, I am a very long time patient of Dr. Hsu's, so I kind of the whole career.

I'm going up with Dr. Hsu as well. So personally, I'm. I got my first dental education from Taiwan, so I immigrant to this country pretty much ever after my graduate education.

And I renew and update my dental license here, study a little bit about public health. And then I start practicing also teaching part time at Tufts Dental School in Boston.

My main concern, my main interests start out with just restoration, how to rehab the patient and technology with all kind of advancements. We get a lot of fantastic replacement of the damage.

But again, you know, after you keep on doing those mechanics and also we see patients regularly and then you realize that some of the condition, you know, it's not just a replacement.

We have to get down to the root cause and then, of course, to dental speaking. Two major condition. One is dental caries, one is gum disease. That's why people are concerned.

And then especially on the the the gum disease disease front of the perspective, because at least 50% of our population come to dentist regularly. So I think by been doing this for more than, you know, 25, almost 30 years, you can see the progression of a patient's or a condition.

And plus, just like any other things, it goes up and down.

Oral Health, Gum Disease, and Systemic Inflammation

It has seasonal, you know, things he has patients, personal life change things a lot to do with patients lifestyle. And then and then we found out because the the most prevalent disease of humankind actually is a gum disease.

Pretty much we're thinking that more than probably a third of American population suffer from so-called gum disease, but they are precursor for that, which is the gingivitis, which is much more prevalent.

And then so when you have those low grade inflammation in or on the gums, if you stretch your gum tissue flat, that's it close to the size of your palm.

If you think about that, if you wash your hands, your palms start to bleed. I think that's kind of shocking. But that's what happens every day in the dose, a little minor inflammation.

And that recent study even tells us, especially for the A1C high patients, if simply to do what we call deep scaling rule planning or phase one gum therapy, we can drop at least 1% point in terms of A1C without taking any order medical treatment.

So Dr. Hsu that was so helpful as in sort of kind of the opening for us and for a lot of our listeners that they may not

even be aware of this link between oral health and systemic health.

Maybe we start with that. Why do people with diabetes, have to worry about their gum? Are they at a higher risk for developing oral health challenges?

Yes, absolutely. If you have those low grade inflammation on the gums, we know for sure is going to increase C-reactive protein. And also you can think about that a little bit more.

I mean, simply to look at at our gum tissue, our semi permeable membrane. So it's actually the first contact of the environment. And then if if we have a lot of inflammation that will increase the permeability of the that membrane and a lot of just like a leaky gut, I think the leaky gut to start out with the mouth and then you have more of home to the exposure and then more inflammation and those inflammation as far as I understand, understood the system of circulation go through your mouth probably every 20 minutes you think about to keep on being all those inflammatory cells all over the body.

Very interesting. Dr. Hsu you've mentioned that the oral cavity is actually the beginning of the GI tract. Right? So so the leaky gut, the actually, it starts with the mouth and that's an interesting concept.

Now, you mentioned CRP earlier. Just for our listeners sake, that's a inflammatory markers. So you're saying that because there is leakage between or there there is a transfer of these inflammation in the mouth gets transfer into the system.

So so if you don't take care of your mouth, the inflammation of the mouth may go into becoming inflammation in the body. Is that, is that what you're saying? Yes.

Yes, absolutely. And then there are numerous evidence showing that proper oral hygiene maintenance daily can have a good preventative effects on the cardiovascular disease.

Today we even talk about potentially Alzheimer. Of course, we just mentioned about A1C. I think they're all in the same pot. I think, you know, there are so many factors.

I think I think that basically I think since we have the systems set up in this country wonderfully, everybody should should be utilized, their access to their dentists, you know, at least get their gowns checked and then including something very always ask the dentist, how is my periodontal pockets look like?

How much area of them my gums are bleeding. Those are the indication. In general, we don't want pockets more than five millimeter deep. And then in general, we don't want 30% and above of your your your gum area that's bleeding on touching on probing by the dentist.

So that's in general that's we consider that's a healthy status. Mm hmm. This is actually really interesting. So what we're seeing is that there is a convergence of health care providers, including the dentists participating in the whole body health.

Right. So. So now dentists not only are caring for people's mouth, but now there is a relationship to systemic health. And this is actually astounding.

Now, Dr. Hsu I always known you to be a pioneer. I have known you to be an innovator in your own space. But do your other dental colleagues are aware of this systemic oral relationship or this is something that people need to seek out a specific dentist for.

I think in general, I mean, all my dental colleagues are well aware of this general condition, but there are some breed of dentists like myself, probably like to spend a little bit more time in terms of patients general condition, including their mental condition, including, I think most important is their their diet condition, because I'm sort of myself an older generation.

I mean, when we were in Taiwan receiving the dental education, this very important part is about diet counseling, diet analysis. When I first came to this country, went to went back to school, updating my degree.

That was in the early, early 1990s. I think we have a full semester of the nutrition. But today I think they they decreased down to maybe just a few hours.

Diabetes, Periodontal Disease, and Dental Checkups

Unfortunately, that's about it. I think we're. Actually seeing that. We're actually seeing that in medical school as well. This is such a and this is this is a bad trend.

Yes. Yes. I think I think because we have so busy into those mechanics things, you know, we know we can do a lot with the disease population, but then we are treating the disease instead of treating for the health concern.

So is there a category of dentists? I mean, how do you how would you describe yourself as a, you know, the dentist at all, not only focusing on the mechanical sort of solutions, but also addressing the systemic health and nutrition aspect.

Is there a category of maybe there isn't. There isn't. But I hope there is something called integrative dentistry. But I already heard that coming up, just like the integrative medicine.

And actually we we should we know our own staff but will also should be more concerned and learn about other fields of the medical, you know, contributions.

And then so my main goal is to see my patient being healthy. I think that's the most fulfilling part of my career is not so much in there. How many holes can I drill?

Is this patient I was always my patient there. Let's watch this holes to see if we can maintain that. And then not getting bigger and not needing a root canal eventually.

So I think that's just my personal also is my calling as well. So yes, that's such a refreshing thought here. So let's come back to to kind of the relationship between diabetes and periodontal disease.

And you've mentioned earlier that it's it's truly a bi directional relationship. It's so people with diabetes have higher risk for developing periodontal disease and on the other hand, higher or more severe periodontal disease actually would elevate a patient's blood glucose.

Is that a fair statement? Yes. Can you maybe address that a little bit about why is this such a connection there? Why do people with diabetes have higher periodontal disease?

So basically, you you you have more inflammatory components in your system. And also, I you know, I have to including myself, are long term diabetic patients.

I know that sometimes our food choice you know not only effects are A-1 C or metabolic sin also effects our oral flora, which is the bacteria in the mouth.

And on top of that, if you have the initiation of the inflammation, the gums start to get swollen and then the pocket gets deeper and then you become more and they're all big bacteria in the mouth.

And we do think that that has something to do with the shifting of the whole microbiome in the digestive system. But I think the rest of we know about that.

So and then what we want to do in the mouth is, you know, I wish that we can take out a whole cardiovascular system and then do a cleaning, but one day we can do that, but at least we can clean our teeth.

Right? So chew and such. Yeah. And then maybe help our body a little bit. So and then I think the and also I think a lot of diabetic patient probably, you know frustrated with their their whole mental health as well sometimes they're just not eating correctly and then also the dry mouth and you know also dehydration dry mouth also facilitate the good gum inflammation as well, especially today.

We have on top of that, a lot of upper airway restriction because of the environmental allergy. So those all contribute to dry mouth. Dry mouth also facilitate the gingival inflammation.

So you become a malicious cycle and then or much. So yeah. We have to break it. Yeah. Yeah. For sure. So, so let's get down to the basics. Okay. He is among our listeners.

There are many people who live with type two diabetes. How often should they see their dentist? By the way, there are servings in the U. S. that says people actually see their dentist more often than they see their doctor.

So so inside you've become kind of the primary care health care provider. Yes, for many people. So how often should they go and what do they do when they go see you?

So so in general, I mean, most of the people that have dental benefits or insurance benefits have said, well, you call the insurance company recommend every six months.

But actually that's not evidence based. So we don't know for sure. Very interestingly, that we that a quote defined study probably in the early 2000, they found out that the agency nine and ten patients for decades and then the endocrinologist has done everything, including their medicine.

And so whatsoever they they couldn't lower it. If they suffer if they suffer from gum problems, simply just go through a deep scaling cycle, what we call phase one periodontal therapy.

They can drop their agency by 1%. And that in fact lasts about three months. So which and all that study pointed to the frequency should be three months for the high risk patients, specially the periodontal in the diabetic patient.

They should have that unless they are so well maintained. As I said, do your bleeding areas last and 30%, their dental pockets are less than four millimeter.

Then those people we consider are just as healthy as general public. They should go every six months. That's fine. So are there any insurance that covers more than twice a dental clean?

Any insurance will cover three times. And I think that coming out of consumer, I would highly recommend, you know, the consumer need to ask for it. And then but in general if these are the patients I hate to use the word qualified because insurance should not dictate what are you know what I meant the medical behavior.

But if we think that a patient is on the high risk, for example, they are periodontitis patients, usually insurance will cover every three month. So after each area go by, like if you did deep scaling and then they will cover every three months and which is evidence based.

Now you is a term do you scaling is so scary what does that involve? So basically what happened is you think about that if we just clean your teeth, everybody had that experience.

Sometimes you may be a little sensitive, but usually those areas you have some gum recession. And then so what I'm talking about, if you're masham and the puck is more than for actually hygiene is has heart tank going deeper than four without hurting you.

That's why we want to actually put a little bit local anesthesia and usually we do a, you know, have two mouth at a time and then so so that's why we give the term deep scaling.

I totally agree we should change that verbiage because it sounds not very welcoming. And then in the dental term,

we call that phase one therapy periodontal.

Nutrition, Fasting Mimicking Diet, and Prevention

So basically, I think every the general public, they should always ask their dentist, how is my pocket today, how I see my bleeding condition. And I usually we would tell a patient and not a thing about their tie control how well they brush their teeth.

And then my personally I, I really go through what they eat because sugar probably is one of the the thing that so basically what you can do or hygiene you can do the fluoride treatment but most effective way of preventing dental caries especially is actually sugar restriction.

So that today if you tell the patient don't take candy is so old. So I think that's what I'm so in love with this FMD and this fasting, mimicking die concept.

And I think those are very, very good treatment not only for the general health and that that's actually the most effective way to reduce dental caries.

So you're telling you're talking about a sort of an innovative nutritional approach and you mentioned the fasting mimicking diet. Maybe we go there for a few minutes.

Tell us a little bit about what is fasting, mimicking diet. It seems like a little bit of a contradictory array of fasting, and then there is a die in there.

Right? So basically what happened is this let's just talk about sugar and calories. I think we are more effect. I mean, what damaging is not how much sugar you take at a time is how frequently you do.

So that's. Interesting. Interesting concept. Yes, of course, if you take too much sugar, we talk about simple sugar that definitely bad for you metabolism loading of the system.

But it just give you an example I think I to 1940 47 to be exact. The diet constantly is a very important intricate part of the dental education. Something happens in 1945, the great discovery of fluoride.

I think it's like discovery of the insulin in terms of a century. They changed the behavior of the dentists. No longer. We are telling the patient not to take candies, would you say do fluoride?

So I think fluoride at best reduce dental carries about 50%, but sugar restriction can be as effective to 80 to 90% of a carries a reduction. And so so FMD, it's very hard to tell a patient not to have candy almost like, you know, patient won't take that.

Oh, that's an old, old record. I heard that before. I think you look at today's diet, I think the most convincing to me is FMD, because FMD doesn't have any sugar in it.

And it also give your body a chance to really loosen up the inflammation. I think I think that for because of restriction and selection of the food doing that, that time of a fasting week, you actually improve your gum health, although that's anecdotally the people, when people are doing that kind of thing, they actually take care of their general health and including oral health as well.

Yeah, it's very interesting because intermittent fasting right now it's all the rage, right? There's been a huge popular popularity. It's estimated that more than 10% of of Americans is in some sort of fasting, Right.

This this fasting mimicking diet. And so it's quite a fascinating innovation, essentially in nutrition, precision nutrition that gives you the benefits of a five day fast.

So you're actually not fasting, you're fast, you're getting the benefits of fasting while probably getting some

nutrients. This whole area of fasting, I think it there's actually a studied Dr.

Hsu that I know of that is looking at the fasting mimicking diets effect on periodontal disease that that's actually being carried out at the moment. So so now it looks like the field of dentistry and medicine is coming all, you know, even more closer together because the mouth is part of the body.

In fact, I think our society and or our medical discipline kind of split the tube. And in fact, there should be I mean, there is definitely a connection in the end.

And so so let's summarize a little bit about about our discussion so far that there is a bi directional relationship between periodontal disease and Type 2 diabetes, people with Type 2 diabetes have higher rates of periodontal disease and people with periodontal disease happen to have to have to have a higher A1 seal blood sugar.

So this relationship must be broken. And and I say, Dr. Hsu you mention that thing that dentists more often for surveillance, for dental cleaning, if necessary, deep cleaning or deep scaling, as you call it, that would be would be important.

So I'd like to finish off by really focusing on the nutrition back to this very important thing. Nutrition has the benefit of improving metabolic health, but also improving periodontal disease.

But dentists are busy, right? How do you impart that education in your practice, especially on nutrition or fasting and etc.? When do you have the time to talk to patients about it in oral practice?

Usually I have a lot of reference on my bookshelf, so that's a first introduction of my practice. And second, I really just like yourself. Every time I went to see you, we came up with an action plan and I am sure that most of dentists give a patient action plan too.

But in my action plan is also includes about nutrition because as you know, as much as you probably know more than I do, you know, a lot of people has, you know, taking SSRI, taking all kinds of medications and a lot of times they just need to reset their nutrition.

They may be helping their sleep, helping their general health. And then especially, I think I learned from you last time in your summit, you said that average the insulin resistance problem is longer than 15 years before your metabolism starts to show symptoms.

I think the dentist can play a big role on that when we see a lot of uncontrolled gingival inflammation that you couldn't explain. Maybe we have to think about that.

Is there some components of the insulin resistance in it that contribute? I think it's all about prevention and and then so that's just I think that's what I think, yeah, that's important.

Dr. Hsu, our listeners who who is living with diabetes, what advice would you give him or her when the when our listener goes to, to, to the dentist, What should the listener do?

Why should, why should the listener ask? Yes, definitely. They want to ask how much inflammation I have in the mouth. All right. As I said, two very simple thing we call the bleeding.

I'm probing, which you shouldn't be bloody. You know, you wash your hands, session with me, bloody wash. We do a dental cleaning. Cleaning That shouldn't be bloody as well.

How much is that. That you need to ask the dentist or hygienist. Second, we should ask again. You want to ask the charting of the periodontal pockets.

Most of the I think should be 100% of dentist should provide that information. Look at your pockets. You can look at those red numbers. Those red numbers, you should see more than four, which is millimeters.

And then you should ask and then so what can you do about that?

Practical Advice and Closing Remarks

And then if if people have those too, you want to see if you can qualify for four times or three times and you're cleaning, start with two would suggest that tradition, insurance coverage and I think that's the basic thing that we should do.

And then if your dentist happened to be into the nutrition, which I know plenty of them did, they like to talk about that because it's in our blood. You know, we need to talk about nutrition.

We just don't know what to do with it. And I think today we have the technology like the FMD, like this summit's about I think I think that's a tool that we should use.

And then in my practice and then the moment that I talk about autophagy, to talk about renewal, because gum is a part of the skin, you know, it's a good foot in.

I'm pretty sure it's going to go for the gums and that's a good point. And then maybe people don't see their gardens. You said that as part of the skin.

They want to look younger, outside and younger inside as well. So I think many of our behavior was interested doing the same thing. Or that interesting concept. Yeah.

Every dentist who tried to do it and do it was the whole office staff. That's what we are doing. So they see. The staff are losing weight, they're looking better.

You know, everybody say, What's the secret? And there you go. That's amazing. Dr. Hsu what what inspirational this discussion that we've had and so helpful as well.

Very practical. Right. So our listeners, if when you go to see your dentist, if you if you haven't made sure you go and as these critical questions Dr. Hsu if if our listeners want to look up your information and look up your type of practice that you have and by the way, where are you anyways?

At currently my practicing downtime Boston looking at the Boston Commons and then my office is Suffolk Dental Group, which is their location in Suffolk County.

So we do have a suffolkdental.com as a website or people can contact me with my email, which is my name. yinhsudmd@gmail.com and then you probably can.

We are adopting a new system on the website that I can't have a direct conversation with my People while you make yourselves so, so accessible. Thank you Dr. Hsu you are one of a kind.

So our listeners, thank you. This will conclude our today's episode Reversing Your Type 2 Diabetes Summit. 2.0. Thank you. Thank you. Happy fasting.