Introduction and Presentation Setup

We're recording this so that we can post it on our YouTube channel. And at the same time, we're also live streaming it to Facebook. So it will be available on Facebook as well.

All right, I'm going to go ahead and close out myself. and I'll be here. Bye, Riley. And for those who don't know, that's Riley, who's our new patient coordinator.

So many of you Burning Mouth patients have spoken to her in the course of getting set up for your appointments. She's part of our really great team, just does a wonderful job.

Welcome, everybody. We've had a great response to this Burning presentation. And I've got some updates for you. It's not the same old talk, because I like to give you new information.

I have been learning. The more patients I see, the more I learn. the More I Have questions, The More a study and read articles. So I'm always in the process of evolving and putting things together for all of you with burning mouth syndrome.

We have a slideshow presentation. So I'm going to share my screen. I think weird is happening with my mouse. Let's see. Here we go. Good. I'm Dr. Susan Sklar. I started the Sklars Center for Restorative Medicine 14 years ago.

At that time, we called it the Sclar Center For Women's Wellness.. I had been a gynecologist for 25 years. My practice consisted entirely of women. So I called at the score center for women's wellness.

And then as women started becoming patients and learning what we do, they became interested in bringing their partners, spouses in, and we began to have more male patients.

And so I felt like I needed to change the name and I changed the names to the Sclar Center for Restorative Medicine and that's where it's been most of this last 14 years.

And just like it's mostly women who have burning mouth syndrome. It's true. But there are a few men as well. And the issues that come up for men are very similar, if not the same as for women.

We'll talk about some of them a bit later. My slide to advance. I think I did something wrong. So I'm going to screen share again. There we go. Hopefully it'll be smooth sailing from here, so sorry about the delays.

So new innovations, which I know is kind of redundant, but I thought innovations was too boring. And these are innovations and they are things that are new even from what I presented in July, this past July earlier this year.

I had one person send me this message by email after she received our mouth on fire ebook. And it made me really understand as well as my team understand what people are going through.

You know, I'm looking at your lab tests and I look at what you've written down. But there is the human story of the agony that people go through when you have this kind of problem that not only disrupts your life, but nobody just seems to know what to do about it.

And they may look like you're crazy. They don't see anything wrong. So this woman approved by using what she had written in her email and said I have indeed just managed to download your mouth on fire book.

I'm here crying because finally, finally someone understands the agony I've been going through for a year now

nonstop.

What Burning Mouth Syndrome Is

I see a glimmer of hope on the horizon. And there are some questions I wanna answer that we have received over the course of advertising the seminar and also that I know from reading online are big questions in people's minds.

So we will end up covering these questions, in the of the presentation tonight. Somebody asked me if burning mouth is associated with other types of pain like vulvodynia and skin pain.

And vulvidinia is another puzzling medical problem. I know because I was a gynecologist for 25 years and it's pain at the vaginal opening for which there seems to be no cause.

As you can imagine, it is a another huge disruptor of people's lives from their relationships, to simply sitting and doing something, being seated in a chair and other types of skin pain, burning pain on the back or the head or abdomen.

So we'll talk about that later. Another question is, is burning mouth an infection? And in some situations, in fact, it might be. And we will wanna talk about that a bit.

There are viral infections that seem to be connected to burning mouths and in a few cases, the sole cause of burning mouse. Is it contagious? People worry about understandably, am I gonna give this to somebody else?

I'm in horrible pain, this terrible thing that happened and I don't wanna pass it on to someone. I've gotten questions about breast cancer because those of you who have listened to my presentations before know that a lot of what we do for burning mouth has to do with hormones.

And since the bulk of people that have burning mouse syndrome are women, the issue of breast cancers arises and using hormones in somebody who has been a breast-cancer patient.

So we will address that as well. The question ultimately is, is burning-mouth syndrome dangerous? So we'll go over that later also. So this is the official definition of burning mouth syndrome from the American Academy of Oral Facial Pain.

It's a whole pain Academy, which is completely dedicated to head and face pain. it's say burning sensation in the oral mucosa, meaning the smooth pink shiny linings inside your mouth.

despite there being no clinical findings or abnormalities in laboratory testing, blood testing any other kind of testing or imaging. So this is a bit old because I will show you some of the things that we know now that do show up in testing.

They're mainly used in research settings, but they prove that really there is something going on. There is not, it's not a total mystery with no sign of anything different in the mouth of a burning mouth patient than a patient without it.

Some people have thought it was a delusional disorder and this literally was from a letter to the editor saying anxiety, depression, pain disorder, hypochondriasis, as well as delusion disorder should be considered for burning mouth syndrome.

So it's putting the lack of knowledge, the puzzlement and the frustration of the caregiver, of health caregiver right back on the patient. We can't figure it out, so you must be delusal.

And there is a lot in the literature, referring to this kind of attitude, less so in, the more recent papers and the last, I would say, four to five years, but previous to that a, lot of it's all in their heads.

And this also, this is from 2010. And I must say, I don't think much has changed. The International Journal of Oral Science had an article about burning mouth syndrome.

I lifted this quote from it and it said, most clinicians dread seeing the patient presenting with a primary complaint of burning pain. This is in the mouth.

In the same article, the patient with a complaint of a burning sensation of the oral mucosa presents one of most difficult challenges to the care professional.

And why? Nobody knows what to do about it. So we're gonna talk about what it is and who gets it and where that leads us in terms of solution. So this is called a syndrome.

In medical parlance, a Syndrome is the name you give something that is a accumulation of symptoms. You don't know what really the underlying physiologic processes that causes it.

So it's not termed a disease, you know, for heart attacks and strokes, right? It's called cardiovascular disease. We know the underlying process. You get plaque, it gets inflamed, ruptures, causes a blockage, tissue dies in the heart, and you have a heart attack.

And that's caused, called a DISEASE, because we know exactly what the process is. With burning mouth, nobody knows what a diseased process put together and called the syndrome because it's a combination of different symptoms that are put-together and given a name without a really good understanding of the underlying process.

And there are all of these terms for it, precisely because nobody can really, at this point, pinpoint a single disease. And who gets burning mouth? It's estimated that over a million people in America have burning mouse syndrome.

That's a lot of people. And there are lots of estimates of what percent of the population and it depends on what study you look at. Anywhere from 0.7% to 15% of a population, which I think 15%, is a high percentage.

We know that it increases with age. We know that it occurs more in women than men, and these ratios come from four different studies I looked at. Some have said it's a three to one ratio of women to men all the way up to 20 to 1. And I would certainly say from my experience, it is more like 10 to1.

Interesting, the studies of women who have had ovarian removal and have pain in the aftermath of that turns out to be a high number, anywhere from 18 to 80% of woman who before menopause have their ovaries removed.

The average age is age 60 for women. who have burning mouth syndrome and older for men. It's very rare to find in younger people, quite rare in under age 30 in women and underage 40 for man.

Who Gets Burning Mouth Syndrome

So the criteria for this syndrome is that you have some kind of pain in your mouth at least two hours a day and it's present for more than three months and there's no evident cause.

official from the International Headache Society, which is another one of these societies that studies head and neck pain. And the symptoms of burning mouth syndrome are many, and I know that many of you will be able to relate to what I've written here.

First of all, it's a feeling like your mouth has been scalded or burned. Well, we've all been through that, you know, drinking something way too hot and you get burning and it lasts after you've swallowed whatever it is and leaves your mouse feeling rough.

except that goes away. A daily deep burning sensation. It can be constant through the day or it may be less in the morning and increases the days goes on.

The intensity of the pain, looking at pain overall in medical world is considered moderate to severe. the intensity similar to a toothache, which is pretty bad pain.

And sometimes it improves with eating or drinking things. Sometimes eating makes it worse. sometimes, it interferes with sleep. Fortunately, a lot of the time it doesn't seem to in the patients that I've talked to.

And what else happens along with the burning pain? Anywhere from 46 to 67% of people have dryness in their mouth. It has been studied. actually doing salivary testing, what's called stimulated and unstimulated, seeing how much saliva you produce just at rest.

How much saliva you produced with a stimulus like smelling something pungent like vinegar. And it turns out that for many people, there's a feeling of dryness without actually a measurable decrease in saliva production.

There are taste alterations. Your mouth feels like it has a metallic taste all the time or it always feels salty or food doesn't taste right. Thick feeling saliva.

I've had a number of people tell me their saliva is foamy and thick and difficult to move around their mouths and manage. Sometimes people's mouths feel rough, even when objectively they know the surfaces are smooth.

To their tongue, because of what's going on, things feel ruff. And then we know that anxiety, depression, and stress play a huge role. And anywhere from 30 to 60% of people with Burning Mouth Syndrome have depression.

Anxiety is 30-60%, depression 30%-50%. And psychosocial and stressed problems, 63%. Some studies have looked at whether these psychosocial issues are any different than other types of pain.

And most of the studies say that any type of chronic pain will give about this amount of statistics in anxiety and depression. I certainly feel like the stress issue with burning mouth in my observation has been a huge trigger.

many people start to have the problem after a very stressful event in life. Patients where we've gotten things diminished and they're feeling pretty good and it's now no longer a big part of their lives, it is a small part in their life, barely anything, go through a stressful time in the life and the pain flares again.

We deal with lots of patients with pain, we have autoimmune patients all over joint pain. many patients with chronic back pain and I don't see where stress triggers it to quite the degree that it does in burning mouth syndrome and i have some theoretical ideas about why but that we'll go over later.

And where is the location of the pain? It's often more than one site. Most of time, it's the front two thirds of tongue from the tip to two-thirds back.

It is a most common area. Also, the friend of hard palate, so like behind your front teeth in the back where the palate is hard. The inside lining of lower lip.

Really anywhere in the mouth, I've had also people tell me the burning goes up into their nose, into there eyes, down into they're lungs and on skin surfaces outside of the mouse and head completely.

The shoulders, the back, and the abdomen. And some of studies have shown that as many as 91% of people with burning mouth syndrome have pain other than in their oral cavity.

Some studies show that it takes seven years to get a diagnosis. This study from 2006 showed that takes a little over three years. People see many practitioners in the course of trying to figure it out.

This is a partial list of the practitioners people have told me about. It's in your mouth so you go to the dentist or the ear, nose and throat doctor.

That's logical. Some people get sent to a neurologist, to an allergy doctor, family practice, internal medicine,

alternative practitioners. And one of my patients actually got diagnosed very quickly by her primary care, her family practitioner.

He said, I have good news for you, and I know what's going on. I've got good and bad news. The good new is I knew it's Burning Mouth Syndrome, the bad new was I had no idea what to do to make it better.

And I went through looking at classifications. This is the medical profession trying to wrap their minds around how this happens and what the causes could be.

So sometimes classifications will help. And I don't wanna go through all of these in detail, but to show you the number of classification systems there are as evidence of the medical profession doesn't know what to do about it.

So this is one that is based on, does it happen every day and does get worse as the day goes on? Is it intermittent and where it's located? is it associated with mood problems and social isolation or not?

I don't think this is a particularly helpful classification or breakdown. This is the classification based on is it central in your brain that your nerves travel from your tongue to your Your brain registers it.

And so is something going on in your brain or is it only in tongue? And they did procedures where, you know how the dentist gives you anesthesia to block pain of a dental procedure?

They block the nerves going to the tongue and if the burning went away, they said it was located in the tone.

Symptoms and Common Misconceptions

If the burn didn't go away they say it must be the area of not functioning properly, of malfunction must in brain. I think there is some division between what's happening in the mouth and what can be helped with using local measures in mouth.

And yes, I thinks some is going on up in brain. This is another category that says it's a neuropathy, which we'll talk about what a neuropath is, but it is a malfunction of small nerves that carry pain sensation.

And that's their category one. Their second category was it's a trigeminal neuropathy and the trigerminal nerve is a big nerve that comes out here on the side of your face and have branches that go all over your phase.

And their third category is that it was central in the brain from decrease dopaminergic nerves. And I'm gonna mention this bit of detail because the issue of dopamine comes up again and again.

Dopamine is a brain chemical. It's what we call a neurotransmitter. it gets passed from one nerve to another to send signals. dopamine is our reward and initiative brainchemical.

It gets released when people have addictions. When you're addicted to your phone, why are you looking at your phones all the time? Why does that give you a thrill?

Because dopamine gets release when you get that text message. It get released if you have a substance addiction problem. And so we are looking for reward.

Dopamine is the avenue physiologically for reward. Dopamine is also an important neurotransmitter in dampening pain. So a number of things we're going to talk about later, whether it's medications or supplements, have to do with making more dopamine to dampen pain pathways.

And so this classification by this group in Finland has their third category as brain neuropathy, a malfunction of the nerves from decreased dopaminergic nerves dampening the pain.

And this is their estimation for what percentage of people with burning mouth syndrome have each of these

categories. There's another classification of primary and secondary.

So if there is a correctable cause, like it turns out you have a B12 deficiency and that gets corrected and your burning goes away, that's considered secondary, secondary to something else going on that can be fixed.

primary is when there doesn't seem to be any cause. You're not deficient in anything, you don't have diabetes. And I'm not sure that this is a valid classification because I am always looking for a cause and we found causes in enough of our patients to have a pretty good success rate of 75 or 80% of people getting significantly better.

And this is another one that I don't really like. Idiopathic, meaning there's no cause, or like the number one on the other one, primary. No cause found.

Psychogenic, which like I said, stress seems to play a big role in this syndrome, but it's not the only cause of it. And then they divide it into local, in the tongue, and systemic, means things going on in If you have diabetes and your blood sugars are off, that affects your whole body, your system, and it can also affect your tongue.

So I just wanted to go over that with you so that you can understand that the medical profession has been struggling to understand burning mouth syndrome.

How does it start? For some people, it's sudden. People remember the day their mouth felt weird. They were with their sister-in-law eating somewhere and things didn't feel right, or they remember that month that happened.

For other people it is slower and it might spread gradually, like some discomfort at the tip of the tongue, not so bad, but then it kind of progresses, involves more of a tongue.

The pain starts to get worse as the months roll on. And it's estimated that about half of patients have spontaneous onset, meaning they can't really relate it to anything.

And about a third of people relate to dental work, braces, having had an illness, a medication. So, and I think in many cases it is valid that there really is something that happened during that procedure, during the illness or with that medication, And the course of the disease.

So scientific studies show it goes on for a long time. There was one article that said they found 20% of patients had spontaneous partial recovery in six to seven years.

That's a longtime to be suffering with a painful condition. and recovery is signaled by intermittent rather than continuous symptoms. And that's certainly what we observe as we start treating people.

It doesn't boom, go away one day forever with our treatment, but people start to have less intense pain, more good days than bad days, and eventually mostly good day.

When it's a bad day, it is not as bad as it used to be. So that has been my experience, but I don't see it, or the people that come to me, it certainly didn't get better on its own.

And that's what I'm always trying to parse out, of course. I see people who have seen all the other doctors, gotten all of the medications that normally would be given for neuropathic pain and will go over them and haven't gotten better.

So I don't know if I'm seeing a skewed group, and there are a whole bunch of people who got prescribed something like gabapentin and got a lot better.

I actually talked to somebody like that. She got prescribe Lyrica. Her burning mouth really went way, way down. And then she got exposed to COVID. With that inflammation, it all came roaring back.

and so that was somebody I normally wouldn't have found out about if it hadn't been for COVID because Lyrica,

which is a commonly used medication for neuropathic pain, worked for her.

How do we make the diagnosis and why is it so difficult? First, what we call rule out, that's the medical term for going down a checklist to see, could it be any of these things?

Things that we know how to treat. Is there a white coating in the mouth? That can be a sign of yeast in mouth, what we call thrush. And sometimes tests are done, scrapings are taken to see if it's a yeast-in-the-mouth.

Candida, sometimes patients are given a mouth swish of something like nystatin, which is an antifungal, to I've had people who have gone through that.

It does not seem to make a difference in their pain, but this is one of the checkoffs on the checklist. Are there little blisters or sores? It can be from herpes, and herpies we know occurs around the mouth, or shingles.

And shingle is a viral infection that is reactivated chickenpox. So many of us have had chickenpox, unless you're younger and have the chicken pox vaccine.

But if you've had Chickenpox early in life, you have a chance of having shingles, which is a breakout of blisters along what's called a dermatome. And a dermatome is, your nerves innervate your skin.

The nerves coming out of your spinal cord will supply the nerve supply to say part of your face and so typically with shingles because the varicella or shingle virus lives in a nerve and when it gets reactivated it travels along that nerve to the skin that's innervated by that If it's the innervation of the skin around your eye, you'll get a breakout of shingles around you eye.

If its a nerve that goes to your mouth, You'll Get a Breakout in your Mouth.

Diagnosis and Rule-Out Conditions

It's very painful. And some people may have what's called post herpetic neuralgia, which is after herpes, after it is all gone, and you still have the pain.

I think that happens to some after shingle. Are there white patches in the mouth? There's something called lichen planus that is an autoimmune disorder that can cause either white patches or little kind of squarish pinkish purple raised areas.

And that's, something that should be diagnosed by, you know, an oral professional who can take a biopsy. Are there sores in the mouth? there can be wheat or gluten intolerance that can cause mouth sores and they can become very painful.

And we see a lot of patients with burning mouth syndrome who have their mouth is burning all the time, but when they get a sore, things really flare. So we're always looking to try to figure out what is causing those soreness and keep them subsided so that people don't get flares.

And I mentioned saliva flow. Certain dentists and specialists do have instrumentation to diagnose if there really is low salivary flow, low production of saliva goes along with some of the autoimmune disorders like Sjogren's syndrome, where it's not that your mouth feels dry.

In fact, your is dry due to lack of saliva production. And along Sjoegren is often dry eyes. That's one of, for me, a distinguishing feature. If somebody feels like their mouth is dry, ask them about dry eyes, because it may lead us down a pathway to evaluating for Sjogren's, which is an autoimmune disorder and can be diagnosed somewhat with blood tests.

Is there a local cause in the mouth, like a dental prosthesis that's not fitting right or rough? Is their hypersensitivity to materials used in your dental work and is there biting cheeks or clenching, which I really think is not a cause, I

think it's a result.

And we see people with temporomandibular joint pain from, and fatigue of their entire face and facial muscles because of always being aware of they're tongue, moving their tongue moving, their face, trying to let their time rest.

So there's lot of activity that goes on in the muscles around the head and the face. Looking into, like I said, allergies to food, food flavorings or mercury.

And we always ask people about dental amalgams. I can't say that I've found, you know, a for sure connection, but there are some articles in the literature about mercury from dental, amygams possibly, and burning mouth.

Mentioned gluten sensitivity and celiac, which can cause mouth sores and possibly other mouth problems. A lot of times people with burning mouth have been told that they have reflux, intestinal gastroesophageal reflox as a cause of their burning.

And I think it causes some burning particularly, or can in the back of the throat, the mouth, what we call the pharynx behind the tongue and behind your soft palate.

And we have people getting treated with antacids, courses of ant acids, because one of the doctors can't figure it out and figures it. Well, we know how to treat reflux.

So let's treat that. And it, for the most part, generally, the people I see, it hasn't helped. There's something called geographic tongue. And I showed a little boy with geographic tone because I couldn't find a really good picture of an adult with Geographic tongue, but this child has the loss of some of the papillae, which are the little wavy kind of protrusions on the surface of our tongue that helps us with taste.

When we lose those little protusions, we can end up with like a bare pink area like this. Child has, and it can be painful. it's called geographic tongue, trigeminal neuralgia.

So that nerve that comes out and supplies the nerve sensation to the face and the head can cause terrible pain actually. It's somewhat different kind of pain than burning mouth syndrome.

Its more of an acute jab, very intense, intermittently, but it is something you want to roll out along with another Neuralgia called glossopharyngeal neuralgia, which, like I said, the pharynx is in the back of the throat, and this would be the tongue back, usually consisting of very sharp jabbing, intermittent pain.

And the other thing that certainly can cause a lot of face and jaw pain, not necessarily burning tongue, but you want to rule it out as Temporomandibular Joint Disorder or TMJ.

You want to rule out systemic causes. So that means things going on in the rest of your body that are affecting your tongue. There are a number of nutritional deficiencies that have been associated with burning mouth syndrome.

And I see that replacing these deficancies improves the situation. B vitamins, vitamin B12, folate, Zinc, which we've been very aware of zinc since the pandemic started, because it's one of the ways to boost our immune system.

And virtually everybody I see has a low zinc level. So if you're not under care at the Sklar Center, ask your doctor about doing a zinc-level. Your zinc should be at 100. The range is much different than that for the lab.

At the bar range of something like 60 to 130. But really, if your at 60, you are low. You want your zinc at a 100, iron deficiency can affect how nerves function.

I mentioned Sjogren's syndrome already, so I won't belabor that. Diabetes can certainly cause neuropathy, and mainly we see diabetics with foot and leg neuropsathy where they have tingling, burning, numbness, not being able to really feel where their feet are on the ground, but it can also affect the tongue.

So we really look at blood sugar levels. There are certain blood pressure medications that have been associated with burning mouth syndrome, most commonly the ACE inhibitors.

Those are the acetylcholinesterase inhibitor or ACE inhibitors, and they end up with PRIL at the end of their names. That's how you can have an idea if if that's one of the ones you're on, lysinopril and captopryl.

And then there are the ARBs or angiotensin receptor blockers like losartan and eprosartans. So things that end in sartin are angiotensins receptor-blockers.

If you are on something that ends in P-R-I-L or is a sarten, you will want to talk to your doctor about whether this could be contributing to you burning mouth.

And then hypothyroidism. And we'll talk about that a little bit later. There seems to be a much greater amount of low thyroid function in people with burning mouth syndrome.

My reading has led me to understand why and what happens to some of our nerves that address supporting cells, white blood cells and other cells that support healthy function of nerves.

And then of course, we always need to evaluate these psychosocial contributors. Not saying that it's caused by this, but it seems to be worsened by it, particularly stress.

And like I mentioned earlier, more than 50% of burning mouth patients have depression and anxiety compared to age match controls who are not having pain.

But that's similar to other pain syndromes according to the literature. Then I just want to go over a few of the misconceptions. Hopefully, none of you have encountered this, but I encountered it in the literature and it made me want scream, quite frankly.

There's a lot that says people are worried about cancer and that's why they're magnifying this pain in their minds. that it's a somatization disorder, meaning if you're sad, if your grief stricken and you can't deal with your feelings, you converted into a physical symptom that's easier for you to wrap your mind around.

I totally disagree with that view of it. And this was the craziest thing I found in the literature. even their commonly overlooked gestures and habits like watching a particular television soap opera may be involved in their disease process.

And this article called it television moans as a cause of burning mouth syndrome. So hopefully that's all in the past literature and not a current point of view.

I think the main thing, and we are going to be having a course for patients, which I'll tell you more about at the end, that will expand on the things we're talking about tonight.

And after I finish the course for patients, I'm going to develop a course or practitioners. This is really aimed at practitioners because you know it's not all in your head, but practitioners don't always know that.

We need to learn that just because we can't see anything doesn't mean it has to be in our head. And there are studies, and like I said, these are cities that are usually done in research settings.

So I don't have access to this kind of evaluation, but looking at pain receptors and nerve growth factors, they were different on the tongues of burning mouth patients than people who did not have burning mouths.

When they do specialized stains on a tongue biopsy from somebody with burning mouse, there is nerve degeneration. And you would think fewer nerves would mean less pain, but that's not how it works.

So there's nerve degeneration with the release of substances that are pain producing. You can't see it on a regular

biopsy that you send to your hospital lab.

This is special research staining. MRI of the brain shows changes in certain nerves in thebrain. And the saliva composition is different in burning mouth patients than in people who don't have this problem.

And like I said, lower density of nerve fibers, there's the nerve degeneration, not as many nerve fibres. There's something called quantitative sensory test, which is a test of your ability to feel.

And it's done either with vibration or temperature, like putting something hot on your tongue or vibrating something. And there are altered sensory thresholds in 90% of burning mouth patients.

That means something's going on with sensation. And I mentioned small fiber neuropathy that was in one of the classifications. There are small-fiber neurophathic changes when they've done biopsies and staying for it.

And that leads to symptoms of burning, stinging. We see it in diabetes and we see with Sjogren's syndrome. They're a small fibroneuropathy. There's also large fiber neuropathy, which gives somewhat different symptoms, more of numbness, extreme sensitivity to touch, and also tingling and burning.

So different kinds of nerve fibers are affected that are seen scientifically when the proper stains research settings are done. And I mentioned dopamine before.

Nerve, Dopamine, and Pain Mechanisms

Here's dopamine again. Dopamine in the brains of people with burning mouth is lower than in controls. dopamine lessens pain. If you don't have as much dopamine, you have more pain Parkinson's is another disorder of low dopamine.

And the brain scans in people, with Burning Mouth Syndrome are very similar to what things look like in Parkinson. Low dopamine And low dopamine can cause depression and anxiety.

So it's not just that you're feeling bad about it. You have chemical changes in your brain that are making you depressed and anxious. And there are things that can be addressed.

I wanna go a little bit now into what chronic pain is versus acute pain so that understand because certainly burning mouth is a chronic condition. So when we have acute pain, we get a really bad ankle twist.

It's so painful, We can't stand on it. That's a safety feature of our bodies. Don't Stand on It. it needs to heal. Things have been torn. You need to rest it, and so that pain tells us what to do.

Immobilize it don't, stand On it and wait till it heals. Burning mouth is a chronic pain. And a neuropathy, the definition of a neuropathy is the disease or disorder of nerves, something's wrong with the nerves and typically causes numbness, weakness or pain In chronic, pain, there is no relationship between the amount of damage to tissue and the Like if you have a little twist on your ankle and you don't really see anything but just kind of hurts, you're gonna stay off it for a couple of hours and that's gonna get better.

If you a major twist and break some blood vessels, it gets all bruised, turns purple, gets swollen, there's more damage, its gonna hurt more. With chronic pain there can be a small amount of damage that leads to really big pain.

And not only is it more intense pain that doesn't really relate to the severity of the damage, it's usually felt over a larger area than where the original injury happened.

And eventually, even if the originally injury heals, and we see this with certain chronic pain conditions that come following an injury, it takes on a life of its own.

So even after the injury heals, the ankle heals. The leg is still painful. And the other thing to remember, and this has to do with dopamine, is pain's a two-way street.

Pain sensation goes from, say, you're feeling it in your tongue. It goes up to your brain. Then there's pain inhibition that travels to another part of your mind and eventually down your spinal cord back out to you tongue, a lot of that pain inhibition or calming is mediated by dopamine.

Other things that we see in terms of pain being a combination of helpful and not helpful things is there are inflammatory factors that will increase pain.

Histamine is one of them and we're going to talk about histamine later. histamines is a pain producing chemical. Lots of us are familiar with histamin because we have environmental allergies.

There's pollen, there's dander from pets. We get a histamine release, it makes our nose run, It makes her eyes get itchy and water. It may cause us hives.

And that's histamines release in response to a trigger. Histamine also can cause pain and stress can caused histamin release. The other inflammatory factor is something called calcitonin gene-related peptide.

And this peptides is significant because it's, we think, one of the triggers of migraine headaches. So some of newer medications are aimed at interfering with this pain-producing peptid.

There are inflammatory factors and pain producing chemicals that get released. There are also healing factors, things that decrease pain. BDNF, brain derived neurotrophic factor, is a healing substance for brain.

The innate repair receptor. is a repair receptor that gets produced when we do something that relieves pain with some of our peptides. And dopamine comes up again.

Like I said, there are various ways to get dopamine into your system, medications, and also supplements to raise dopamine so that it is the healing and dampening factor on your pain.

I want to talk about the role of the vagus nerve because I think this has a significant impact on burning mouth syndrome. So there is a very large nerve.

It's the 10th cranial nerve, it's called the vagus nerve and vagis in Latin means wandering. This nerve is called The Wanderer. it starts in the brain, It goes all the way down through the neck and chest cavity. It partly innervates the heart and then goes on down to your digestive system.

It's part of what's called the parasympathetic nervous system. The sympathetic nervous is the part your nervous that's the fight or flight. So you get scared, everything gets activated.

Your heart rate goes up, your blood pressure goes. When you really scared your intestine shuts down and it's our signal to get out of danger. Our body does everything it needs to do to out danger The opposing system to that is the parasympathetic nervous system, our rest and digest.

So it's our digestion working, not shut down, it is our heart rate slowing down. It's are breathing slowing and when we activate the vagus nerve, its very calming, pain relieving, anxiety reducing, and inflammation reducing, which are all things that are very important in burning mouth syndrome.

And the vagus nerve doesn't exactly innervate the entire tongue, but it is involved in a lot of nerves around the mouth and head. So it supplies sensation to your ears, the back of your throat, and the base of Some people theorize that stretch, and it also goes, like I had mentioned, it goes down through your neck.

There are some chiropractors who feel that stretching on the vagus nerve because of neck injuries or osteoarthritis or some problem in the bones of the neck may be some of cause of burning mouth syndrome.

And we're gonna talk a little bit more later about some mechanical causes of nerves being stretched or caught. There's definitely a hormone influence.

It's the only pain syndrome I know where 90% of the people with it are perimenopausal and menopause of women. And when I started getting involved with burning mouth syndrome, it was probably 13 or 14 years ago when i started the Sklar Center for restorative medicine and changed the name.

and had a patient who had lot of menopausal symptoms, perimenopause symptoms. She was tired and her libido was low and your mood wasn't so good and you know, her estrogen and progesterone testosterone levels were all really low.

And so we put her on a hormone restoration program and she said, my energy is better and my muscle definition's better. Am I burning mouth is not nearly as bad.

What is that? I treated women for 25 years as a gynecologist. People weren't talking to me about their mouths, I can tell you that. And nobody mentioned burning in their mouth.

So when she told me that, It registered kind of in the back of my head. Didn't think much about it. And then somebody read my website. It was my very first website, it was like some one page my son set up for me.

Somebody read it and said, I have burning mouth syndrome. What do you know about? And so I thought, well, we better learn something about what hormones have to do with this.

So I spent hours, hours and hours days researching in the scientific literature about what hormones would have to do with nerve function. And it has a lot.

And some of you know that I, at one point, was a specialist in reversing and working with cognitive decline patients. We still do some that work, but it's not the main part of our work.

But everything I learned about hormones and nerves applied to cognition, because your brain is full of nerves. If your cognition is not good, there are nerves that aren't working right, partly because of hormone decline.

So the protective hormones that we have, that women have before menopause, a lot get lost during menoppause. Some of them get loss through the aging process for both men and women, testosterone, DHEA and pregnenolone.

Once women become menapausal, we completely lose our estrogen and progesterone, thyroid function tends to go down, down down through life. Melatonin levels go down.

And we'll talk a little bit about oxytocin later in terms of treatment. So there seems to be a lot of protection from hormones that get lost when women get into menopause.

We see it not only with burning mouth syndrome, we see with some of the inflammatory disorders and autoimmune disorders. That loss of estrogen being very anti-inflammatory along with progesterone and some these other hormones.

One thing that doesn't go down is cortisol. And cortisol is our stress hormone. So that fight or flight reaction I told you about, the first thing happens is your body releases a lot of cortisol and we were meant to have a big but brief reaction to danger.

So if you thought an animal was gonna eat you, you better get out of there. And so cortisol got released, it released sugar to feed our muscles and our brains so that our muscle would be able to have the energy to let us run or climb.

That our brain could work well to figure out how to get outta danger, but it was meant to be quick and then end.

And then the parasympathetic nervous system comes in and slows down your heart rate, it slows your blood pressure, gets your GI track going again.

In modern life, We live under chronic stress and your, our bodies, you know, like our society has evolved since the caveman. Our physiology has not evolved, since The Caveman and so when you're sitting in traffic aggravated, when have fear because of the pandemic, When there's a stressful situation with your family, your body thinks that you are about to get eaten by a predator.

And it produces cortisol and cortisol is not good for nerves. I can tell you it's not good for your brain. It shrinks brain tissue and so it is damaging nerves and plays into any kind of nerve situation going on where nerves are degenerating.

Hormones, Stress, and Vagus Nerve Factors

The other thing that happens with cortisol is cortisol DHEA and pregnenolone, especially pregnanolones, is a precursor to cortisol. So there's a pathway where things get made.

It starts with, it's called the steroid synthesis pathway. You'll learn a little medical school stuff. Cholesterol converts into pregenanulone. The next step is it makes progesterone or DHA, this other hormone.

And if it doesn't do that, because you're under a lot of stress, pregnenolone just goes straight and converts to cortisol, so that you have enough cortisol because your body has that as its highest priority.

It thinks you are in terrible danger. As a result, your DHEA and pregnenolones levels go down because pregenenone is being diverted to make cortisol and DHEA is been divert to cortisol.

These two steroid hormones, DHA and pregnenolone, which I put in our BMS advanced support supplement because it's hormones that you can actually get as a supplement, doesn't need a doctor's prescription, end up being extremely important for nerve pain.

And there are people who feel that burning mouth syndrome is part of a nerve entrapment. And I mentioned that before with the stretch on the vagus nerve, there is a craniosacral osteopath manipulator who got in touch with me, who has seen a lot of burning-mouth patients and feels that there nerve entrappings that contribute to the pain of Burning Mouth Syndrome.

and what causes nerve entrapment, head injuries where nerves get damaged and inflamed, facial trauma, cosmetic surgery, a whiplash injury, infections around your sinuses and in your throat, surgery with intubation where they put a tube down your mouth into your throw, your neck is super extended, dental work, Anesthesia, dental anesthesia and even headaches and migraines can end up with predisposing to nerves being inflamed and getting trapped.

And some of the common places where nerves can get entrapped. are these foramina or foramen, and you can even feel them. If you feel your brow, there is a little divot.

Mine is right here. And there's a nerve that comes out there and feeds your forehead. There's another one here, you could feel it on your cheek where nerves exit your skull and come out onto your skin.

and there another is one down here It's possible that nerves feeding your tongue, your face, the inside of your mouth can become swollen and trapped in these areas and the osteopathic manipulator through manually pulling things moving things.

can sometimes free up these nerves. And so it may be that part of burning mouth is an accumulation of injuries that may part why it occurs later on in life.

Later in your life, you've had your car accidents, your dental work, or surgeries. For me, it ends up as this perfect storm with something causing a nerve problem, whether it's entrapment or something we don't even know yet.

hormone decline and stress all seem to come together. What can we do about it? There are the common medical treatments. I'm going to go through them. Like I said, most of the people that come to see me have tried them and either they haven't worked or there have been such severe side effects, they can't tolerate being on them, So there's a class of anti-depressants, amitriptyline and nortriptaline are in this class antidepressants.

They are known to cause dry mouths. So if you're already feeling like your mouth is dry, the dry mouth caused by these sometimes is a completely impeding factor in continuing to use them.

Gabapentin blocks some of the excitatory nerve chemicals. It's used a lot and studies don't show that it's particularly effective. I wouldn't say don't try it, but honestly, like I said, I don' know if there's people that come to see me that already have tried all of this or the studies that say it's really not effective when they go to look at it.

It may be somewhat more effective, when you use it with alpha lipoic acid, which is a supplement that's an antioxidant anti-inflammatory has been known to be helpful for diabetic neuropathy and sometimes maybe or may not help burning mouth syndrome.

A lot of times people are put on Prozac or one of what we call the serotonin SSRI, selective serotonin reuptake inhibitors, a lot because people who are depressed because they're in pain.

Sometimes people treated with an antidepressant for that reason. Also, sometimes people were treated for pain with a SSR and it blocks the uptake of seratonin and gives you effectively more in your nerves.

it's questionable whether that provides any improvement. BIMPAT is a newer class of Medications, it stops nerve firing, but has a lot of side effects.

And trazodone is another very old-fashioned antidepressant. Some people use it for sleep. It's actually somewhat effective for asleep in low doses. In high doses, its used as an antidespressants and has not been found to be any better than placebo, meaning giving somebody a sugar pill.

for burning mouse syndrome. So most of the studies that are review studies looking at lots and lots of different studies, I did looked at one that had reviewed 152 papers and really said that these medications don't work well and cause a lot of side effects.

If some of you are on them and they're working, more power to you. I'm happy to hear that, but in general, probably not so effective. And then there's clonazepam, which is in the benzodiazepine family of sedatives and calming medications.

This, for a couple of different reasons because of the neurotransmitters it affects, may be more effective than most things. The problem with being on a benzodiazepine is they tend to be quite addictive so that you may need higher and higher amounts.

They also sometimes have side effects. So your pain may be diminished, but if you're too groggy and sedated to do anything you want to, do it's not a very good trade off.

One of the ways that Clonazepam is used, and it has been shown to be fairly effective, 40% of patients got some relief, was letting it melt on your tongue and moving it around the tablet to the different painful areas in your mouth for three minutes and then spitting out and getting rid of their residual.

And what that does is you don't swallow it, so you get as much of a sedative effect. You don' swallow so don get much the addiction potential. And some people seem to have it help with both pain, altered taste, and dry mouth.

And I'm trying to figure out, you know, are they people with a local problem in their tongue as opposed to in the brain? Like, who does this work for?

The other problem with it is it's fairly temporary relief. So you need to use it multiple times a day and usually it used

three times the day. Then there are treatments with specialists.

So cognitive behavioral therapy, which I really encourage people to do, and I'm going to tell you about an app that works really well. You can do it with a therapist.

There are studies doing group therapy. there are our studies with individual therapy and cognitive. Behavioral therapy is reframing the pain. and putting it in different words and trying to remove it from the catastrophic feeling that seems to go along with it for a lot of people.

And it actually cognitive behavioral therapy is effective. So there are definitely things that go on with your physiology and your body chemicals if you can not be so scared and feeling like this is going to go on forever and be terrible forever.

Just reframing that has been very helpful. There's also low-level laser therapy that's done in some dental offices. They release serotonin and endorphins.

Endorphin are our body's own natural pain relieving chemicals, and seratonin is like the happy brain chemical. reduces depression, makes us feel better.

The low-level light therapy improves oxygen supply, reduces inflammatory chemicals, and had significant benefit. Again, there are some studies that show it works and other studies don't show effectiveness.

What about things you can do for yourself? So I put a big emphasis on that in this talk for those of you who are not under treatment with us where, you know, we know you're on a path toward things getting better.

So topical mouth moisturizers, xyla melts are things you kind of hold in your cheek and helps provide moisture. And lots of people use biotin just to get some moisture in their mouths.

You want to check things for parabens. Parabens are not good for your body. They are chemicals that are toxic to our bodies. For dry mouth, so the salivary glands change as we age.

and they produce less coenzyme Q10, which is needed for energy production all over our body, our salivary glands included. And with that reduction in CoQ10 there may in fact be less saliva production.

So I've had some patients do well with this liquid form of Coq10 used in their mouths as a mouth swish where they hold it in your mouth for 30 seconds to a minute and then swallow it.

It's good to swallow CoQ10, you need Coq10 for the rest of your body too, that wouldn't spit it out. So that's something to try for dry mouth. Topical capsaicin, so capsation is what makes hot sauce hot, it's what make Tabasco sauce, hot.

And capssation actually lowers histamine, which we talked about, is a pain producing inflammatory chemical. And it lowers something called substance P, which is a pain producing chemical that activates mass cells and the mass.

Cells are our white blood cells that produce histamine. So you're hearing these things repeatedly histamines dopamine. So basically you can use dilute hot sauce, swish it in your mouth, hold it and spit it out.

And you may end up depleting some of these pain producing chemicals in you mouth. A couple of the studies, there was a range anywhere from 20 to 78% of people improved after a year.

It can be quite painful when you use it, And about a third of people were not able to tolerate it because it made their stomachs burn. So it's something that can give temporary relief and for some people may give longer term relief.

There's a doctor named Dr. Afrin who has a series in our medical literature on patients with burning mouse syndrome that he has treated as mast cell activation disorder.

And the mast cells are these cells that produce histamine. In the picture here is a mast-cell. This mast is what we call degranulating. Little granules inside the cell contain histamines and other inflammatory chemicals.

When a mass cell gets activated, It kind of spews out all of these little granules of pain-producing, allergy-producing, irritant chemicals. And Dr. Afrin used antihistamines, histamine blockers, to treat his series of patients.

He had success with a small series with five people and I think he had another series. So it's something that we always want to consider. as a possible cause of your burning mouth.

Treatment Options and Self-Care Strategies

And if you're somebody, I would say I'd be more likely to think of it as the possibility if there's somebody who already has allergy problems because it means your mast cells like asthma, environmental allergies, your mass cells are already in a state of overactivity.

and over-the-counter antihistamines. Pepsid is an H2 blocker and Claritin is in H1 or histamine one block or they block different histamins. And some people have gotten some relief using these antichistamine and they have in Dr.

Afran's study and we've had a few patients where it helped things somewhat. Alpha lipoic acid has been around for a long time as far as treatment for burning mouth syndrome.

There was a group in Italy that studied it very widely and had great success in the studies they published, and then nobody could repeat their success.

So we don't know what to do when that happens in the medical literature. And so people are divided on it. If anything, good for your body. Like I said, it's an antioxidant, an anti-inflammatory.

It's not damaging. So it is certainly worth a try to see if that will help with your burning mouth. I've seen it help a few people. You can increase your own dopamine.

I don't necessarily recommend doing it totally on your without guidance, because some people will feel somewhat hyper or anxious with some of these dopamine increasing products.

But these are supplements that can convert to dopamine, tyrosine and phenylalanine. Our bodies use vitamin B6 and convert those things into dopamine and there is a medicinal plant called mucuna that by itself can increase dopamine.

One of our patients told me about this device that an associate of hers developed called chemo mouthpiece and it was developed to help people having systemic chemotherapy keep their mouths chilled so the blood vessels would stay constricted while they were getting chemotherapy and have less of the chemotherapeutic agent affect their mouth and cause the inflammation that people on chemotherapy get because of chemo therapeutic agents.

And this can be helpful to people with burning mouths. I mean, people tell me they put ice in their mouths, they drink cold drinks. This is a device that kind of fits into your mouth, the roof and your gums and provides a very cold surface.

It's temporary relief, but if you're in a flare and need something to help, this is the possibility. Some people tell me their tongues feel so raw that even touching the roof of their mouth makes things more painful.

And some patients are using tongue guards, which are just smooth pieces of silicone that can rest at the top of your mouth and provide a smooth surface for your tongue to rest on.

One of our patients told me about this TMJ healing plan. Like I said, when you have pain in your mouth, you are a lot trying to move your tongue, adjust things, readjust things.

Your jaw joints, the temporal mandibular joints can get very tight and uncomfortable and add to your pain. And so this book has facial relaxation exercises.

to help remove some of the tension and clenching, which makes things somewhat worse or can. This is the app, Curable. And it is like a cognitive behavioral therapy app that you can do yourself that very reasonably priced for just a few dollars a month, helping you reframe your pain and the effect on your life.

You can find it at curablehealth.com. It is based on modern research. Modern research shows that we have what's called neuroplasticity. That means our nerves can change.

We can learn new things, even if we're old. If we had a nerve pathway that's a well-worn pathway, we can do things to have our body not keep taking that well worn pain pathway.

And something like curable is part of it. And so this is what they talk about. It says it incorporates modern research and mind-body medicine techniques, which is using the principle that we have neuroplasticity.

Our brains can be molded no matter how old we are. To overcome fear of your pain, learn how to retrain your body's pain response, tackle your unique pain stressors, and break the pain cycle.

And we engage in everyday life's everyday activities. So it is a combination of journaling meditating. Cognitive reframing things and I really recommend it.

We've had patients have good luck with it and then what about cutting edge and new things so. We are unique at our center in using hormones. I wouldn't call it cutting edge anymore.

We've been doing it for 14 years, but it's cutting the edge for burning mouth in the regular, the rest of the medical world. There have been, and trust me, I have researched the literature from the last 30 years from 1980s on.

There are maybe four or five articles about hormones and burning mouth, in spite of the fact that 90% of people who have this problem are perimenopausal and menopauseal women.

I've seen people write review articles that just say, yeah, hormones don't seem to work. Well, each of the articles I looked at showed that it worked.

This was an article all the way from 1989 that said, not only did people have less depression and more ability to cope when they were on estrogen and progesterone, two-thirds of them experienced a decrease in their mouth pain.

Then there was this study from See, did I skip one? No, maybe I didn't. So there was a study from Europe that looked at something that we don't have in the United States.

It's called tibolone, and it has estrogen and progestin and testosterone effects all in a single pill. And tibilone helped to decrease burning mouth syndrome.

Even though it was not a bioidentical hormone, it acted like a hormone. So I know hormones have been written off for burning mouth in the medical literature, but that's not what's happening at the Sklar Center, because we've seen it work pretty well.

Estrogen is made in a number of places in our ovaries. It's made it in brain, in nerves, and somewhat in adrenal glands. And estrogen has a lot of protection and regenerative capacity for nerves.

We see that with burning mouths and we see it with cognition problems. And it comes pain pathways, especially in the head and face and coms cortisol release, which is really important and also relieve stress so we think that the loss of estrogen with menopause is one of the reasons why, you know, in the years before I got into Burning Mouth, just talking to menopausal women about what's happening in their lives at the time they go through a

menoppause transition, feeling like they couldn't handle the stress and multitask and all the things that they did previously.

And it turns out that's due to loss of estrogen, which helps you with your stress response. And I want to address the question of breast cancer because I've heard this from a number of people and somebody in relation to this talk asked about it.

Can people have had breastcancer use estrogen? So for me, it depends on how long ago you had your breast. Cancer has been more than five years. Have you have no evidence of recurrence and If that's true with the agreement of your oncologist and enlightened oncologists understand that for many women, estrogen is a safe option even after breast cancer.

If they okay the use of it, I will use it. But the other thing to understand is we use a whole variety of other hormones. And so our treatment plan doesn't rest solely on estrogen.

We use progesterone, testosterone, DHEA, and pregnenolone. Again, run those by the oncologists. Most enlightened oncologists understand how important testosterone is for women, for energy, brain function, libido, and so they for the most part will approve the use.

So there are workarounds and ways to address breast cancer in people who have burning mouth where we want to use estrogen. Digesterone is another incredibly pain relieving calming.

In anti-aging medicine, we call it nature's Valium because it's the brain calming and it actually attaches to the same receptors as Valum and Clonazepam and all the benzodiazepams do.

It increases our endorphins, which are our own natural opioids that our bodies make. And it can help men as well as women. It breaks anxiety, so it works in a number of ways.

And then DHEA and Pregnano, which I mentioned is in our BMS Advanced Support Supplement, has incredible protection, anti-inflammatory, and pain relieving capacities.

Vitamin D is really important. We've had a couple of patients recently with incredibly low vitamin D levels who increased their vitamin B supplements before we started them on anything else and already their pain got better.

So low Vitamin B levels are really, I think a risk factor for a lot of things going wrong, but it seems to, and some people really affect nerve function and their burning mouth.

And I told you I was gonna talk to you about thyroid and burning mouth. And, I know this talk's gone on for a long time. I'm trying to tell you everything I knew about burning mouths.

So I understand if some of you need to leave, but we will be sending information out for those of who might need leave. There was a study done with thyroid and burning mouth syndrome, and they had a group of 123 women with burning mouse syndrome and 123 woman who didn't have it, who were about the same age, what we call age match controls.

The people with Burning Mouth, 58 were hypothyroid, meaning low thyroid, And the people without Burning mouth, only 13 were. So there seemed to be some association the higher amount of low functioning thyroid.

And when they treated with thyroid, 64% of them had their symptoms resolve. Some of this has to do with the effect of thyroid on supporting cells for our nerves, the microglia that are cells that support our nerve function and can be inflammatory or anti-inflammatory, and thyroid helps them be anti inflammatory.

And melatonin is well known in neuropathic pain needs to be used at pretty high doses up to 10 milligrams. So you want to work up slowly so that you don't end up really sedated the following day.

Citosan is something else that has brought people relief, although sometimes it's temporary, but at least it is our birth and nursing hormone that gets released when we go into labor and when were nursing babies.

And it stimulates, again, our natural pain killing opioid chemicals. stimulates the release of those and calms the fear center in the brain. So it's called the cuddle hormone and we use it for people with social anxiety.

We use that for sometimes for People who are really stressed. And low dose naltrexone is something that works on central pain syndromes and again is anti inflammatory and helps us release our own natural endorphins or opioids.

Now, Trexone in high doses is used as an opioid blocker to prevent opioid overdoses, but when it's used in low doses, it has exactly the opposite effect.

It helps our body release own, natural pain relievers. and new on the horizon. We've been working a lot with peptides this last year and a half, and we're learning more and more about the effect of peptide on nerves.

My initial foray with the peptid I thought would work the best did not help the first two people we tried it on, but I still feel like there is potential for other peptids or perhaps trying it with other patients.

Aeropriparizol is a antipsychotic medication that releases, that works on dopamine. And people can have side effects when they take it by mouth, but I did have a patient tell me about a suspension that was made with it that she switched in her mouth and it has fewer side-effects when it's used that way.

So this is another dopamine releaser, just use locally in your mouth. We've been starting to try this a lot, transcutaneous vagal nerve stimulation. So I told you about the vagus nerve and how important it is on calming your body, relieving pain and relieing anxiety.

And the reason it works is I tell you the Vegas nerve goes from your brain all the way down and it has ramifications out on your face and tongue. It has.

Ramifications to the left ear. And so we put an electrode on the left ear and another electrode, on left shoulder and send an electrical current, very low intensity using this mechanical, this electrical rather device that activates the vagus nerve.

Meditation does the same thing. A lot of people have trouble meditating. So we're starting to use this quite a bit. It helps the digestive tract. And like I said, it helps anxiety.

pain relief. What about acupuncture? There are case reports of lots of things with burning mouth, like a single case where things get better. There was a study on 30 patients that was in Italy, I believe.

And they had improvement after three weeks of regular acupuncture treatments from a pain level of eight out of 10 to two out 10 and they showed improved blood flow in imaging on the tongue, the blood vessels of the However, the practitioner that did the acupuncture was specifically trained and expert in acupunture for dental disorders.

Some of the other studies did not show that kind of benefit, so I think it really depends on the skill of that acu puncturist. Chiropractic treatment has helped some of these nerve entrapment and vagal nerve stretching problems.

And like I said, craniosacral and osteopathic manipulation to help release some these nerves that are trapped may be an avenue for some people that aren't responding to hormones and some other treatments that we use.

Then the latest thing that I've been exposed to, and there is really not anything in the literature about using it for burning mouth syndrome, but one of our local really expert practitioners in nerve hydro dissection told me he had treated about 20 patients and they'd gotten relief.

is to actually insert a needle close to a nerve that is trapped and swollen and inject what's basically a sugar

solution, very safe, just to provide a buffer and release the nerve from its connection and entrapment in the nervous sheath.

So this is the next thing that we will be trying for people where we've tried all of the other things. I told you I was gonna tell you about our course.

It's coming soon and we're open for pre-registration. So it's called Hope for Burning Mouth, a course for finding relief. And you can be part of an online program to help you understand and find solutions for burning mouth syndrome.

I'm gonna close with leaving you with our text. For information, phone number if you text us at this number, provide us with your name, number and email.

Number one, we can send you a copy of the slideshow. If you're not on our email list already, if we write list we'll put you on the list. And if would like a BMS coaching session, you can note that in your text.

When you send us a text, we will send you a response back that will have links to pre-register for the course. And if you haven't gotten our e-book yet, it will a link to get our E-Book.

So with that, I'm going to close. Gosh, know I've gone on for a long time. I am going stop screen sharing. Oh, didn't mean to do that. Good. All right.

And. So I'm willing to take some questions that people would like to put questions in the chat, or if you are tired and just want to go home, that's fine.

You can always let us know later if you have questions and things that we haven't addressed. No, it just occurs to me there were a couple of things I said I was going to do at the beginning and failed to.

One is, is it contagious? If you have herpes on your mouth and that is contributing to your burning mouth. Yes, herpies is very contagious skin to skin.

So you do not want to kiss somebody else while you Have an outbreak. And the other question of A couple other questions in the beginning.

Hormone Therapy, Thyroid, and Newer Approaches

Let me see if I've Is it dangerous? So the question of is it danger is, it's not life threatening, but it certainly life impacting for sure. And it is not dangerous like cancer might spread and eventually end somebody's life.

But it certainly makes people get socially isolated, very depressed, sometimes lose weight, become nutritionally depleted and weak. So it is a very significant condition in my mind.

And let's see, we have one question in the chat. What about our Advanced Support Pack? Yes, so we sell Burning Mouth Advanced support as a three pack and I do that intentionally because it takes about three months to see if you're going to get it.

It doesn't necessarily take three month, but you need to give it three. Months to. See if it's going. To benefit your Burning mouth and it also is available on our website and if he would like to contact us either through the text request.

Or, and let me put that back up for you, or by calling our office. Put the text request number up again. I'm sorry, I took it away. There it is. And I'll screen share again, I'll keep this up for the duration.

And if you text us, we can give you information about getting BMS advanced support. It's not as successful as when somebody is getting treated at our center.

I would say probably 25% to 30% of people that use it do get some significant relief. We've had some people be on it for years. That brings me to another thought.

I have not found a cure for burning mouth syndrome. I found that if you stop treatment, pain comes back. So this is a management of a neuropathy by decreasing inflammation, enhancing the nourishment of the nerves and reducing stress and putting your body in the healthiest position possible to fight this kind of issue.

Let's see. And then we have another question. Let me just get this one. I'd like to know if BMS can be a physical manifestation of an overactive nervous system and my thoughts on the mind-body connection.

Certainly, anxiety and stress, like I said, play a role. The mind body connection is huge for any pain condition, certainly for burning mouth. And let's see a 31 year old male so you're out of the norm, I must say, by virtue of your age and being male it's been going on for a year and a half and you are using the BMS advanced support and are there any particular minerals or vitamins that have made flares worse?

I can't think of any vitamins or minerals that make it worse. I certainly see foods that do, citrus foods, spicy foods. Sometimes alcohol and coffee. If your burning mouth seems to be getting worse on BMS, advanced support, I have not heard that it makes it worst.

Number one, anything is possible because we're all individuals. I don't know if it would be getting worse on its own anyway. I can't really answer that question knowledgeably, I do not know of any vitamins or minerals.

Silent reflux. Reflucs. A lot of people who've been diagnosed with reflux have gotten treated for the reflox, which may help the reflex symptoms, but does not seem to help their burning mouth symptoms.

And I have one patient right now, we've tried a lot of things on, and I'm going to try treating her for silent reflux. Her symptoms were not typical of the usual burning mouth syndrome.

And, I told her that when we started treating, hers is more of a numbness and swallowing difficulty, which is not typically for what I've seen. We've try a few different things and the latest thing is we're trying treatment for a silent reflex and we just started it.

I don't have an answer for you. Let's see, are enlarged papilla common with this problem? Well, burning mouth is called a syndrome for which no cause is seen.

So if papillas are large, you would want to try to figure out why those papillas on your tongue are in large because that's not typical. It sounds like there may be an irritant or something else going on that is not a typical burning-mouth where you look and you don't see anything wrong with the papilae.

Let's see, you have a 10 unit. I'm not the biggest expert on this and you could, well, what you wanna do is get an ear clip to put on your left ear. It's gotta be your last ear and a pad on the shoulder.

Some people I think have used pads on that ear, but the clip works better. Let's see, I heard somebody use BMS Advanced Support for four months and had more pain at that time and…

had hot flashes. And then, let's, see the note got cut off. Yeah, so I would say probably your pain was on its way to getting worse. You know, if it was part of the Bms Advanced support, you know I…

I'm concerned to say the least. I not sure why BMS advanced support would cause more pain because those steroid hormones usually calm things down. And hot flashes also, which usually is from low estrogen.

So I don't have a good answer for you on that, quite honestly. Herpes simplex one, right. We use high dose antivirals. Valcyclovir actually in pretty high doses like a thousand milligrams two to three times a day to really suppress the virus for quite an extended period of time like three to six months.

There is a doctor in Colorado who studies viruses and she's a neurologist who specializes in viruses. And she has cases of people who had herpes simplex as well as varicella, which is shingles that she treated successfully with valcyglovir.

Has the AIP autoimmune diet been helpful? I actually haven't. It might be helpful. A lot of the people I see are so limited in what they can eat that mainly all that they eat are kind of refined carbs and things, which can make things worse.

And we are looking at wheat and gluten sensitivity because you certainly would not want to eat if that's contributing to the problem. A lot of people can't eat salads, fresh vegetables, all those things that are on the AIP autoimmune protocol diet, which is tons and tons of vegetables.

And so we have recommended reducing inflammatory foods like sugar and the white flour products, but a lot until people's pain gets somewhat reduced, people are limited in taking on very specific diets.

Let's see, what about hot flashes? Well, hotflashes are usually a sign of low estrogen. And we see that, and it's actually a kind of inflammation in your brain in the temperature regulating center.

So with the loss of estrogen, that center becomes inflamed and produces hot flash. Let's see what types of hormones. We recommend bioidentical hormones, so bio identical estrogen and progesterone.

And I'm not familiar with the bijuva, but I'll look it up. Oh, it's an estradiol-progesteron combo. I haven't heard of that one. Yeah, that sounds good.

You take Baidu, but it doesn't help. So you may need other things besides that, like testosterone, thyroid, DHEA, and pregmenolone, melatonin, vitamin D.

Somebody had depression and anxiety years prior to BMS and treated with some of the medications for years. How do I deal with BMS? What comes first, the depression, anxiety, or the Bms?

You know, I think it goes both ways. Certainly people in your situation where you had depression and anxiety for a long time prior to burning mouth, and then people who become depressed and anxious because of the pain and because their situation with burning mouths.

And both need to be addressed. We address it in a variety of ways. Certainly, medications do help some people with depression and anxiety. We have a lot of non-medication approaches we use at the Sklar Center.

A lot very calming supplements. L-theanine is one of our favorite calming supplement for anxiety, it's not sedating and it is not addicting. progesterone, very brain calming, good for burning mouth, Good for anxiety.

Estrogen is good, for depression, estrogen helps to support the serotonin, which is the brain chemical that makes us feel good. And we think when it's depleted may play a role in depression.

So I think for different people, it is different. For some the burning, mouth comes first and for other people their anxiety and depression precedes it.

Yes, a question about clonopin melting in your mouth without swallowing. Yeah, you might've come in late. We went over that being a probably a pretty effective thing to do for a number of people.

And it keeps you from having some of the side effects of sedation because you're not fully swALLOWing it. You're spitting out the residual and it probably reduces addiction as an issue because your not swAllowing it I don't know if the AIP protocol diet's been affected.

That's another question about that. Magnesium supplements cause bad flares. You know, magnesium tends to be a very brain calming and nerve calming mineral.

So I have not seen that, honestly. And magnesium is one of the things that we like to use for anxiety because, again, it's not sedating, not addicting, helps anxiety, and helps sleep.

It's a typical for sugar to be a trigger. I think any of anti-inflammatory foods can be trigger for further inflammation. Could nerve entrapment be caused by wearing braces?

Definitely. And we had one patient who had Invisalign and her burning mouth started with that. So I think anything that happens in your mouth, face or head has potential for causing nerve and trapment.

And so somebody noticed BMS after a car accident two years ago. And again, they're probably or may be at a nerve entrapment as a result of that car and you're hitting your head on the left side of the car window.

So the kind of person you want to see for that would be a craniosacral professional or osteopath. And there are doctors of osteopathy here in the United States that go through a four-year medical school, just like I did.

But in addition, they learn craniosacral manipulations that could possibly help in releasing a nerve. Let's see. Somebody said, I do believe my hormones have been affected.

What hormones or products would you recommend for men in early 30s? the DHEA and pregnenolone. And I usually have people get their levels checked to know where we're starting and whether they're low.

Somebody in their early 30s, a male at early thirties should not have low testosterone, but it's possible, you know, depending on the stress in your life and your nutritional state.

And do you have enough zinc in body? And you eat a lot of refined carbs and that will, that can end up depleting your testosterone. So I would get evaluated for testosterone DHEA, pregnenolone levels.

and the BMS advanced support possibly might help. Let's see, the burning I feel is tongue, throat, and moves to my lips and nasal facial folds. At the end of the night, I want to rip off my face and take off makeup.

Do you think makeup or chemicals can be a contributor? I have not encountered that, so I don't have an answer for you. Certainly, we absorb toxins. Anything we put on our skin, We absorb.

If it's something toxic, you can absorb it and not see any evidence on your skin. So whatever you're using may not be an obvious irritant to your skincare, but I do not know if there is something that is getting absorbed.

that is causing you to have so much discomfort at the end of the night.

Audience Q&A and Closing Remarks

And I don't know if it's also the natural course that a lot of people have where their burning mouth is better in the morning and it gets worse and worse as the day goes on until it is really the worst at night I would say try not wearing your makeup or trying to find a makeup that's very non-toxic.

And magic mouthwash. Oh, thank you for mentioning that. Yes, I'll put magic-mouthwash in my talk next time. And let's see, somebody with depression and anxiety before BMS and wonder if the medications you were giving actually caused burning mouth.

There are some studies that talk about how the SSRIs could be a trigger for burning mouth, not so much the benzodiazepines that I've seen. Let's see, somebody had trigeminal neuralgia in 2007 and 2009, took a homeopathic and it worked on her stress and went away, that's great.

And then you got BMS last year in May and wondered if the trigerminal neuralgia could flaring up again. It's certainly, it's very sometimes hard to distinguish between those two things.

So you would want to get both evaluation for the trigeminal neuralgia as well as for your burning mouth. It is all in the same area. The nerves, the trigemina nerve, you know, has branches all over your face and mouth, Let's see, 64-year-old man with burning mouth for about four years, seeing a specialist, University of Pennsylvania, told you to try lipoic acid.

You've been on it about two months and got BMS advanced support three weeks ago, also on 600 milligrams of alpha liproic from superior labs. And taking your Bms treatment, pain seems to have been cut in half.

That's great. Do you suggest anything else? Yes. So addressing some of the other things I had in this talk, like the dopamine supplements, the curable app.

possibly getting evaluated for your testosterone levels, adding melatonin in, getting your vitamin D level checked and seeing if that's low. So those are some things that sounds like you've made some good progress.

I'm so happy to hear that, but you can augment it with some of these other things. Can propranolol, which is another blood pressure medicine cause BMS?

Possibly. It's not the top of the list like the lysine aprils and losartans. Let's see, balancing, restoring with hormones, are there risks of using this also with adding DHEA and pregnenolone?

I'm 55 in perimenopause, also having prolonged periods and had some tests and seen the gynecologist one time, I asked about BMS, not very familiar. And some doctors don't recommend hormones.

So as far as I am concerned, a big proponent of hormones I think they do a lot of good for a lotta people. So that not only does DHEA and pregnenolone help the pain of burning mouth, DHA is a wonderful energy and vitality hormone.

Pregnenalone helps your memory. Estrogen helps you serotonin in your mood. So we see people who some of it's because their pain's getting relieved, but also some because the hormones are helping their sleep, helping, their energy, I am a big proponent of hormones.

A lot of doctors aren't. It's because of the Women's Health Initiative, which is now 19 years old. I don't know if you've ever heard this statistic, but it's estimated that medical advancements take about 17 to 20 years from the time of discovery until it reaches the general medical community.

So the women's health initiative that said hormones cause breast cancer, which was done with a synthetic progesterone called provera which really should be off the market, but I think probably for financial reasons the FDA is not taking it off So that study came out in 2002, and lots of doctors have not changed their attitude toward hormones since that came in out 2002. And all of the new information we have about hormones hasn't gotten to them yet.

So, that's why some doctors don't recommend hormones. Let's see, we have 28 new messages. You know what I'm going to do? I am going probably take another five minutes for messages, you've all been so patient and engaged, and then I will copy the messages out of the chat and we will send some answers in the follow-up email that we send you.

Treating bad lip pain. Would apply, the same things would apply. Some people feel it in their lips, other people on their tongue. Would being under high stress cause high estrogen?

57, had your estrogen check, thinking it might be low and it was high. Not that I know of. I'm not sure what would be causing your high estrogens. a certain toothpaste and mouthwash.

So the bioteen company has a toothpaste Fifty-eight-year-old female had a C5 replacement that's the cervical, I guess, disk in your neck in 213. Twenty-seventeen diagnosed with chronic fatigue syndrome and in November 2019, notice for signs of burning mouth syndrome.

Have I treated many patients with spinal injuries or have had spinal surgery and suffering from BMS? I actually have not, but I think that seeing a craniosacral or osteopathic person to evaluate the nerves around your neck and see if there is some release that can be done might be helpful.

The other thing is chronic fatigue syndrome. also can be caused by a number of things or number factors and hormones can one of them. And I think that even some people who have nerve entrapment benefit and have reduction in pain with hormones because of the anti-inflammatory action of hormones.

So it's something that would still be an avenue for you. Do I use hormones for someone in their 70s? Well, there are a lot of doctors who say it shouldn't be used after age 60 or 65. I honestly feel like depending on your health, if you're generally in good health I used hormones if there is a compelling reason to use them like burning mouth syndrome.

The dosage of DHEA, you know, it really depends on what your actual DHEA level is. I tried to pick an average dose of DHA to put in our BMS advanced support, which is 25 milligrams.

Do I recommend hormones for a female in her 80s? The same thing applies. If there is a compelling reason, unless you have some serious medical problems, There are very few reasons why I wouldn't try hormones for pain relief, because if something is impacting your life, like burning mouth, and you are willing to take what is very minimal risk, I would.

And I think that we got to all the questions. Let me just see somebody had their hand up before somebody named Tom. I don't know if you got the question or not.

Anyhow, I'm going to end here and Just want to thank you all for your patience. I'm sorry it went on for so long. But like I said, I wanted to tell you everything I knew right now at this point in time.

And we will have updates as they come up. Like I've said the Burning Mouth course will get updated periodically as we find new things that work for people.

A lot of patients give me wonderful information that I like to share with the rest of you. So part of that, tied in with that course will be a community to share.

So I want to wish everybody good night. And I wanna thank Riley, our new patient coordinator. Thank you so much Riley for being on the call and being so patient.

It went on for a long time. Oh, thank you. You're welcome. We'll see everybody at the course, I hope. Good night! Thanks everyone.