

ROUGHLY EDITED COPY

HEARING LOSS ASSOCIATION OF AMERICA - ALBUQUERQUE CHAPTER
MEETING

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>> Good morning, can everybody hear me? Good morning. I want to make sure everybody can hear. I'm using a headset as a hand set so bear with me here. What we have available here for our meeting is a audio Loop, a hearing Loop. So if you have a Telecoil in your hearing aids, you can switch over to the Telecoil and you will have the privilege of listening through the Loop which is almost like somebody sitting on your shoulder and the speaker will sound like they are right next to your ear. If you do not have a Telecoil or a Loop, you may follow along on our CART screen. So CART stands for computer aided realtime transcription. CART is a lot easier to say. But Lenore here will be captioning everything that we say today. So if you have trouble understanding our speaker, you can sneak over and see what she says. That way you will have the opportunity to have full communication and we have -- we actually have four sign language interpreters today. We are in transition. They are students from the UNM. This is Kayla. This will be her last day here. And the other one who will not be coming back is Jessica, Jessica, would you stand up and say good-bye.

[applause]

And our two new students who will be with us in May and June and then return in September when we have our meeting in September will be Katy and Felicia. Felicia with an F.

[applause]

-- I have a good friend names Delicia. They will be our main interpreters starting next month. Kayla thank you for your year of service for giving us the opportunity with sign language interpreting. And good luck to you guys. You graduate.

>> Yes, I do.

>> Congratulations. Are you graduating also? Yeah! Jessica is graduating as well. Good luck to both of you.

We are going to have a couple of little announcements. One of the things I became aware of and some of you may be familiar with the audiologist Cathy Worth at Worth Hearing. She has sold the practice and now the Worth Hearing audiologist, head audiologist is somebody named Callie Beauchamp -- Callie Beauchamp. If anybody needs to know that information now you have heard it. I want to make sure that you are aware of the changes in the leading companies here in Albuquerque. The leading company in the City of Albuquerque is actually our speaker here. I would like to introduce our speaker to talk today about tinnitus. You will notice I pronounced it tinnitus. Many people pronounce it tinnitus and the reality is both pronunciations are in common use. So you will be going back and forth. Leah Fry will share with us the current state of the art in the world of diagnosing and treating tinnitus commonly described as ringing in the ears but can have other sounds as well. Leah is certified in Tinnitus Retraining Therapy and studied under Pawel Jastreboff. And he is the founder of this technique that has

more successes than most tinnitus treatments. She can share her insights and experiences and we will all learn to stand a great deal about the mystery of those sounds that we hear. So without any further adieu, I will put this microphone on Leah and let her get started. At the end of her program we will have a little update on where we are with our restaurant noise measuring project and so Jim Dillow, the one you met when you came in and got your name tag, will share that information about the apps that we can use on a SmartPhone to help rate restaurants based on noise. So I'm really interested in hearing his latest update. So with no further adieu, here we go.

[applause]

>> Good morning. Are you all awake? Is this too loud, comfortable? It's okay? Okay, I'll try not to breathe into it. I do have a bad habit of kind of pacing so if I get in front of the screen, just waive me back the other way.

As Mary said, I'm an audiologist. I work for Albuquerque hearing and balance. I got my undergrad at my graduate degree at the University of Utah. And I have a couple specialized interests that I kind of focus on in my career but one of them is tinnitus. I went and I got my training under Dr. Jastreboff in 2016, and he is out of Maryland. He is actually not an audiologist. He is an engineer, but he discovered that there are a lot of people suffering from tinnitus and decided to start doing some research on it to see what was available at the time and he has been doing this for probably about 30 or 40 years, but the great thing about his research is it's all based in research. He constantly is revamping his processes, making them better, getting new research. He primarily because he is not an audiologist he primarily deals with people that

have normal hearing and tinnitus. So there is kind of a whole gamut which we will get into.

So what we will cover today is kind of what is tinnitus? What falls in the category of tinnitus. Who has it? Who can get it? And how to diagnose and live with it or treat it.

So as Mary mentioned before, there are different ways to say it, tinnitis or tinnitus. Either one is okay. There isn't a wrong way. It's basically the sensation of hearing sound internally. There are a couple of different categories of tinnitus, but we don't necessarily need to delve deep into those. There are a few that are a little bit more concerning than others and we will talk briefly about those ones but we will focus more on what the majority of most people experience and that's just that internal processing noise that our brain creates. We will talk about why that is. But we have to remember that tinnitus itself is not a disease. Tinnitus is a symptom. I want you to keep that kind of in the back of your head today, okay?

Every individual is different when it comes to tinnitus. Everybody hears different things. I've heard choruses, chimes, all kinds of different descriptions so everybody's is different. So because of that, it's really hard audiologists in the past to really help people say, okay, this is the sound that you are hearing and this is how we are going to treat it because everybody is so different and I can't actually hear what you are hearing. What you describe as a buzz may be a roar to me. So it's very hard for me to specify what it is you are hearing. That being said, there are some sounds that are more specific to indicators of different things. So we do want to have a general idea of what it is that you are hearing.

So who can get tinnitus? Anyone, everyone. People with normal hearing can have tinnitus. People who have profound hearing loss, sometimes don't have tinnitus. My mom has worn hearing aids since she was 18 and doesn't have tinnitus. My husband had hearing loss in the last five or six years and he has tinnitus. Everybody is a little different. I have tinnitus after a really long day at work when I'm tired and it's quiet at my house and I go home and I have a little tinnitus in my ears as well. Tinnitus itself isn't necessarily something that is specific to sex, race, age, anything like that.

The centers for disease control estimates that 15% of the American public have tinnitus at some point in their life. That's 50 million people and that's just in America. That's a lot of people. Some of those people suffer from tinnitus very severely. They suffer from it and keeps them from sleeping, keeps them from concentrating. Keeps them from being able to function in daily life and listen well when they are in conversation so it can be a frustrating tiring thing. So it's definitely something to -- for us to start looking at as audiologists.

This is kind of what I touched on just at the beginning. There are a lot of different things that can cause tinnitus. And that's one of the reasons why -- and I will talk about it on the next slide it's important to get your health checked. There are a lot of different things. Hearing loss can be a cause. Ménière's Disease can be a cause. Any type of middle ear disorder. Issues with head and neck injuries. Then you have a whole range of gamut of medications, other illnesses, diabetes can sometimes cause that, age, smoking, those are kind of the those factors that can apply a little bit more because as we age we are more likely to have hearing loss so sometimes that can factor in. Diet and lifestyle are a big issue as well. So there is a

lot of different things that can cause tinnitus. And because of that, that's why it is really important to get your health looked at.

I'm going to really briefly talk about Ménière's Disease for just one second. Ménière's Disease is basically an overabundance of fluid in the inner ear. So our inner ear is filled with fluid. Ménière's Disease is when there is too much fluid. We don't know what causes this at this point. But we do know that it does cause very specific symptoms. One of those symptoms is kind of a roaring tinnitus typically. That's what most people describe it as, then vertigo episodes and hearing loss, fluctuating hearing loss. Typically with Ménière's, we see patients get a very extreme episode to begin with. So they typically have a very violent episode that lasts multiple days. And the dizziness and hearing loss are constant. And then it goes away. Most patients don't have that again for years. They don't experience it for a long time. But then they will have smaller episodes later in life. We don't have a ton of information again as to why our bodies do this, but we do know that the roaring tinnitus is pretty specific to Ménière's Disease. That doesn't mean, however, that if you have hearing loss you won't get roaring tinnitus. This is just a good example of how kind of convoluted tinnitus is. There are so many different things that can affect it and cause it that it really is hard to pull out that one thing.

So how is tinnitus diagnosed? First of all if you hear it, you just diagnosed yourself, okay? I can't say yes, there is a test where you can come into my office and I can look in your ear and say, oh, yup, you got tinnitus. Nothing I can physically see. It all happens in your heads your brain. But what that means is that you have to find somebody that is going to help you kind of hone in on potential causes. There is a lot of different underlying conditions

that can cause tinnitus. You want to always start with your primary care provider. Go over your list of medications. I think the number is very high. I want to say it's 80% of most medications actually list tinnitus as a side effect. Now whether that causes tinnitus or not is not necessarily a true factor. You know we all know that medications have -- might lose your hair, might get tired, might have to pee more. A lot of side effects that don't necessarily happen. Most medications have tinnitus as a side effect. Always start with your primary care. Look at what medications you are on. See if there is a possibility that you can maybe change brands or doses. And start there. We are going to come back to that in a little bit and re-address the medication issue, okay. From there you want to get your hearing tested. Come see an audiologist. We want to make sure that there isn't any hearing loss. If there is hearing loss, that's typically the first step in treating tinnitus. But if there isn't hearing loss, then we want to make sure nothing else is going on in your ears. After that, if everything is okay, we would probably refer you out for to see an ENT or otolaryngologist. Ear, nose and throat specialist. They will be able to check for other things that might possibly affect your hearing or your system.

So you had a hearing test. Now what? So if you have hearing loss, you want to treat that first and foremost. The one thing that we do know about tinnitus is if there is hearing loss, that is what the brain is picking up, lacking a signal. Not getting that full picture. Imagine looking at the world with just one eye. That's kind of what you are doing when you have hearing loss and we don't wear devices if you aren't wearing amplification your brain is not getting that full picture. So it's looking for something. Imagine a spotlight in the dark. It's searching for that sound. When it's creating its own sound because it's looking for something. So what we do know is that the part of the brain

that actually latches on to the tinnitus, once you are aware of it, is your autonomic system. That's your fight or flight response. The system that controls your heart rate, your breathing, your internal temperature, all of that. That's the part of your brain that responds to the tinnitus. We will touch on that again in a minute here as well. What if you don't have hearing loss, then what? A lot of patients actually have hearing loss in the very, very high frequencies. So on an audiogram and I'm not going to get into all of the details but most of you have seen an audiogram. We don't test passed about 8,000-hertz because there isn't a lot of speech sounds that go up that far. As far as we are concerned for hearing, it's okay if you have a hearing loss at 12,000-hertz because you are going to hear me say Ss if you can -- Ss if you can hear at 8,000-hertz. However, your brain hears that far up so your brain is still picking up sounds up there even though they are not speech sounds. So you might have normal hearing on an a audiogram but have a high frequency hearing loss. That's what we find with most of the patients that fall into the normal hearing category is they have a high frequency hearing loss.

So getting a clean bill of health, this comes back around to that. What I was saying earlier. We want to make sure there isn't any other causes. If we know you have hearing loss and everything else is clear, you know, you had an MRI, there isn't any kind of tumors or anything going on that's growing in the brain or in the ears. Your medications are good. You had a clean bill of health check. Everything looks great. Then we know okay, hearing is the issue. We just focus on that. If there are other things going on then we need to focus on those things first, depending on the health concern.

I just said that, I jumped ahead as Mary said earlier. I talk too fast. So basically what you want to do is get

that clean bill of health and address the hearing. The reason why we want to address the hearing first and foremost and it's not uncommon that we see a lot of patients that say, you know, I may struggle a little bit with my hearing, there are sometimes I feel I don't hear quite as well but the tinnitus is driving me crazy. I want that to go away. I don't care about the hearing. That's not uncommon that's the issue. But the problem is or the -- not problem, the hurdle, if you will, is because of the part of your brain is that autonomic part of your brain that responds to the tinnitus and it doesn't just stop the minute we put hearing aids on. The minute we give the brain the full signal it doesn't go, oh, the tinnitus is off. Because right now your brain has put that in a part of your brain that is that responsible for that fight or flight response, remember? So any time you are stressed or tired or a little spread thin or frustrated or angry or anything other than happy and perfectly calm, your brain says, oop, turn it up. Turn it up. Because at this point it's not only that it's just responding to the lack of signal. It's also responding to your state of being. So if you are very, very tired, your tinnitus will be worst even if you are hearing with your hearing aids. That's why some people have it come and go. Some people notice it more in times of stress. And if you have let's say a loved one in the hospital and are sleeping at the hospital and not sleeping well and worried about them, your tinnitus might kick up and be very loud and that's why. Even if you are wearing your hearing aids. So treating the hearing loss is the first and most important thing when it comes to tinnitus. For those people who have normal hearing, how do we treat that hearing loss? Well, the good news is that with TRT we can treat both.

So let's talk a little bit about treatment options. TRT is the one that we mostly use at Albuquerque hearing and balance, but there are a lot of other options out there.

When I went to my Tinnitus Retraining Therapy certification course, he actually has -- and I have been trying to figure out who published it because I didn't write it down, he has a text book that's about that thick of all of the tinnitus treatments that are in the world. And we are talking everything from ear drops over the counter vitamins to really extreme surgeries. I mean, severing your auditory nerve, those types of things. So it's definitely something that is an issue. It's something that people suffer from and it's something that for years and years and years we just said, just deal with it. Just ignore it don't worry about it. But we are seeing now that this is really affecting people's lives and it's affecting how they function and how they can work and integrate into their daily lives. And we are also seeing with how noisy our world is getting that younger and younger people are having more hearing loss than we have seen in years past. So we are seeing more and more people that have tinnitus because of it. So it's definitely something that needs to be addressed.

Looking at a cure, because of the fact that there are so many different things that can cause tinnitus, there isn't one pill, right? Do you take one pill for everything that's affecting you? No. You have to take one for your this, and one for your that. Your vitamin B for your sunshine. You have to take different things to address different issues. Realistically if you've got Sally has tinnitus because she has hearing loss, and Bob has tinnitus because he has got diabetes and he is eating way too much salt, if they both take the same over the counter pill, will it affect them both? No, it's not. So there is a lot of different things to take too consideration when you are looking at treatments for tinnitus.

So what's a good treatment and what's not a good treatment? First of all if anything says that it is a cure,

walk away. There is no cure for tinnitus. If you take nothing home today from this talk, there is no cure. Because of how our brains function, anyone can get tinnitus. You can put somebody that's never had tinnitus in a very quiet booth and leave them in a sound booth for ten minutes and their ears will start to ring. That's the way our brains work. Anybody that says I can cure it. It will go away. It will never come back. It's not true. The second thing to keep in mind is you want to look at stuff that's founded in research. Again, I have had patients that come in and say I was taking these over the counter drops and they worked for six months and now the tinnitus is back. We will talk about why that happens. But because of that, there are a lot of different things. I've seen cactus bark. I've seen cranberry root pills. I've seen over the counter drops that really don't have anything in them. The biggest one that was on the market for quite a long time and I think is still is the lipo-flavenoids and those for a long time we did think those helped. Once they started to do the research on it they were seeing that those weren't producing long-term results. They are very short term. Again we will talk about why that is. Basically you want to look for something that's based in research. You want to see what's behind it. Where it came from. How long it's been around. And you want to find something that talks as far as a treatment. Helping you learn to live with it.

So these are just some of the treatments that I have talked about. Some of the ones that you probably have not heard about are something called neuromonics. That's one that sometimes patients will come in and ask about. This device actually founded in a very similar concept to what the Tinnitus Retraining Therapy does. It's basically the concept of training your brain not to hear that sound. The problem with neuromonics the devices are very expensive to purchase. The function, the way you actually have to use this product

is very dedicated. You have to listen to four music tracks for four hours a day and you can't be doing anything else. You can't be driving or reading or walking on the elliptical. You have to just sit and listen to music and it's classical. Not everybody likes classical. But the concept behind it is there is a sound embedded in it and you listen to that sound for six months with the music and then after six months you remove that sound. And then the theory is good in that it trains your brain not to hear it. We will talk about why. Basically not my fave. Cognitive behavioral therapy is another one that you may not have heard about. This stems more in a psychological branch of health care. And the nice thing about Tinnitus Retraining Therapy is it's very, very similar to cognitive behavioral therapy. Cognitive behavioral therapy is basically they use it for a lot of patients who have like amputees where they have a lot of phantom limb pain and those types of things. It's training your brain. That's all these treatments are is training your brain. We are all trained and we don't realize how trained we are.

So let's talk -- let's dive into TRT. So TRT started as this Dr. Jastreboff seeing that he was seeing a lot of people that were complaining of the sound so he started doing some research and started looking into it. And again he only deals with patients that have normal hearing, that do not have hearing loss because he is not an audiologist. He cannot prescribe hearing devices. And originally when he first started doing his research he had a very similar concept of, okay, I want you to listen to this specific sound, white noise for this specific amount of time and we will go from there. That worked for some people and he was getting good research and he was doing okay with it. He realized after awhile, okay, this isn't long-term enough. It's not lasting as long as I want it to. Why? What's going on? He completely changed his approach. He has patients

listening to whatever gives them pleasure. Whatever music is calming to you. Whatever sound is calming to you. Because in reality what we want to do is we want to create that release of positive endorphins in the brain. We want the brain to be in a happy place because what's in a happy place it doesn't have that fight or flight response kicking on and sending out the tinnitus signal to a point where it's at a cognitive level. So basically what that means is, again, when you are stressed your brain makes you aware of the sound. When you are not stressed you don't hear it as much. So he said I'm going to do this with whatever music you want to listen to. Whatever you want to hear that's nice and calming. And he got much better results. Much long-term results that lasted longer. So we are going to talk about -- I said I would circle back around to the whole -- it worked for six months and then it stopped. So the reason for that, you guys ever heard of something called the placebo effect? Yeah, our brains are so trainable and if we are convinced that something is going to help us, it does. We have seen that in study after study after study. So the same thing works with cures for tinnitus. If you go -- if you have a friend that says, I swear by this. This worked for me and the best thing out there. Go try it. Run to the store and you try it and like, oh, maybe that did help. Okay. And then you take it for six months and then after about six months oh, it's back. I'm noticing it again because your brain has figured out that it's not really doing anything. Nothing has changed. And so it comes back. So that's one of the reasons why there is also a lot of treatments out there the placebo effect is very big with tinnitus. I totally lost my train of thought there.

So basically the other nice thing about Tinnitus Retraining Therapy is that we don't necessarily need to know the cause. We don't need to know exactly what's going on. We want to know what's going on just to make sure that

everything is okay medically, but we don't have to know because no matter what the cause is, we are still going to train your brain the same way. So it's nice in that sense because we don't need a very specific treatment plan based on cause. Everybody gets the same treatment plan as long as they have a clean bill of health because we are health care providers but everybody gets approached in the same way. And basically what Tinnitus Retraining Therapy is for is to train your brain to break that cycle. Tinnitus becomes a feedback loop in your brain and your brains says you need to hear it, you need to hear it. So we want to break that cycle and that's what Tinnitus Retraining Therapy does. It trains you not to hear that cycle. You feed into it.

That's almost pretty much what I have. Basically everybody can live with tinnitus. We just want to get it to a point where it's calmed down enough that it's not affecting daily life. It's not preventing you from sleeping and keeping you from being able to interact in conversations during the day. Always seek out information from your audiologist or your ENT. Ask questions and get information and remember to go into it with an educated approach. Don't just take somebody's word that this is the perfect drop that will fix all of the problems because typically those aren't founded in research. Remember that there is no cure for tinnitus. There is only habituation, training your brain not to hear it. And if you do have hearing loss that is the first step to treating it. So those are the big take homes from today. I think I covered all my extra stuff. I added some slides.

Any questions on anything?

>> I've heard tinnitus maskers which are kind of like a hearing aid. I don't really understand what they do. Can you explain what that is?

>> Yes. So tinnitus masking is actually very wrongly named. Because what do you do when you mask something, you cover it up. When you mask your face, you can't see your face. So if you cover up the tinnitus, what happens when you turn the cover off? Still there. Waiting for you. So masking in and of itself is not something you want to do. If you are using a sound to help treat the tinnitus and it covers the sound, it's too loud. That being said, you can use sound to help marry the signal. I have a chart that I usually draw for people but I will try to explain it to you. Let's say I put you in the booth and I say I want you to tell me how loud your tinnitus is and you rate that it's this loud. And in a normal daily environment maybe the background noise level is around here but when you get into those quiet situations the noise level in your life is down here. It's very quiet. The goal of a masker is to bring up that noise level, the noise floor so that your brain perceives the signal of the tinnitus being smaller. The tinnitus signal never changes. It's still the same level of loudness. But because there is something else going on in the background it marries to that significant threshold and your brain says, oh, that's -- signal and your brain says that's just a background noise and I don't need to hear it. How many of you notice your furnace turning on or your fridge dropping ice? Probably do if you pay attention. But do you notice it every single time? Because your brain is used to it. It knows what that noise is. Now if a chicken starts clucking in your house in the middle of the night, you are going to go -- oh, what is that? Something is happening. That he was not a normal noise I hear in my house. Your brain filters out sounds faster than you are even aware of them. Most of them -- I'm going to age myself here are in a Rolodex that your brain -- Rolodex, I know that's the furnace and that's the fridge and I know that's whatever. I don't need to bring it to a conscious level. That's where we want the tinnitus. We want to train

your brain to filter it out. So the maskers marry that sound so your brain perceives the signal as smaller and so it can tune out as a background -- tune it out as a background noise.

Any other questions?

>> Will they cut the auditory nerve -- when they cut the auditory nerve, what happened?

>> I heard of a couple of different stories. I've heard some that got rid of the tinnitus and I've heard some that made it worse. So I think that is very extreme and very unnecessary. So that is not something I would recommend. I haven't seen that happen in any research or anybody that I have seen in a long time. That's more of an older approach to tinnitus. But people get desperate. Tinnitus can get bad enough that people consider very drastic measures and that was one of them. I think that it's becoming a more well treated and something that we are considering more of a health concern is a big step forward. And so because of that, we are seeing more of this Tinnitus Retraining Therapy and seeing more of a therapeutic approach which is much more helpful I think long term. It gives you the tools to deal with it even if it does die down over the years but it comes back. We will have periods of acute stress in our life where things get really, really bad. Having the tools to be able to go back and say what do I need to do to calm this down? What do I need to do to relax and get myself back to that place where I don't hear it as much? That's going to help you much, much longer than taking a pill every day for the rest of your life or cutting your auditory nerve.

Any other questions?

>> Any promising research going on?

>> Is there any promising research going on to try to actually find a cure some day, some time?

>> Yeah, I mean, there is definitely -- I wouldn't say tinnitus is something on the forefront of what they are concerned about as far as audiologists go. Most health care professionals don't know what to do with tinnitus at all and they send people with tinnitus to us. There is research. But again the biggest issue is there are so many different factors that can affect it that it's hard to find a cure. We do know with most of the situations that we run into that training the brain is the best outcome that we've seen with all of them. It's the longest lasting and it's the most sustainable. And right now it's kind of one of those things that there is a lot we don't know about our brain. Some people can't have this seam of their sock underneath their foot. Drives them crazy. Their sock slides down under the foot during the day and I have to get my foot off and fix it. Some peep don't care. Why -- people don't care. Why is that it has to do with how the brains are wired. A lot of that behavioral research and things that go into that psychology side are looking into that as well because we do see a lot of results with the cognitive behavioral therapy approach as well. And there are people -- I had a patient she -- her tinnitus was so bad she was getting -- she was starting to have a physical reaction on her skin. She was having reactions to chemicals that she used her whole life like her laundry detergent and lotions. She was breaking out in hives. Her whole body, her system was revolting saying, no, this is not right. It was basically just because she was spread really, really thin. Her husband was in the hospital and she wasn't sleeping and a lot of things that were factoring into that. We are finding that this brain health thing which I'm sure you all heard about if you talked to your audiologist, this brain health that goes along with

hearing as well is affecting us in a lot more ways than we realize outside of that. So the research into the brain is pretty deep.

>> What experience do you have with tinnitus and Cochlear implants?

>> So I have not directly worked with a patient yet that has a Cochlear implant personally. I have Dr. Jastreboff has a couple of audiologists that have that we discussed some issues with. But it's the same thing. If you have hearing loss even with a Cochlear implant, a lot of it depends on when you got your Cochlear implant first of all. Is there -- the base of language. If you have Cochlear implant you aren't aware of -- did you have language to start or have you been deaf since birth? Hard-of-hearing or deaf basically. So if you are deaf since birth, then you have no concept of sound. Most patients that are deaf since birth that get Cochlear implant that I've talked with I haven't actually met one that has tinnitus that bothers them but that's just me. But I do know that I worked with a couple of audiologists that have and they found good success with this because it's just training your brain. You can train your brain to do anything. How many of you live with someone and when they make a certain face or a noise you know you left dishes in the sink or you know you left the toilet seat up. Or you know you didn't put the toilet paper roll on right. Because they made a sound. They didn't say anything verbally but we are all trained and we are all trained. My dog scratches at the door and I know he needs to go to the bathroom. He doesn't tell me but I'm trained to listen for that sound at my house because that's what he does. So we are all very trained creatures. We train our brains to understand information the way it's processed and the way it's brought in to us through our world and through our surroundings and that's something that we can all change. It just takes time.

>> I actually have something --

>> Is there any use for any convulsants -- convulsants for treating tinnitus?

>> I have heard of that and it does -- it depends what's causing it. So if you are having issues with something neurological, I have heard that does work for patients. But if there isn't anything neurological going on, it would have kind of a null effect. I haven't seen a lot of research on that, though.

>> Because anti-convulsants have -- anti-convulsant have pain syndromes and it seems to me that some of tinnitus may simply be auditory neuritis.

>> Yeah, yeah, if there is auditory neuritis there is typically hearing loss. So if you got damage to that nerve, then you are going to have some sort of hearing loss even if it's in the high frequencies. So typically we just say, let's give the brain the full signal and let's get amplification on you, and then we will treat the tinnitus through habituation.

>> Once you start getting tinnitus, is it supposed to be usually constant or can it come and go? I noticed mine which started a year or so ago sometimes it will go days with nothing happening. Then it will come back for a day or so.

>> Yeah, yeah. So tinnitus is very variable. It also depends on kind of your brain how tired you are, what's going on in your daily life, how stressed you are. So for me for example I get tinnitus when I'm really tired. Like when I worked a long day and I have 27 things on my plate and I go home and my house is very quiet and my ears ring. Then it

goes away the next day. My husband's is more constant. He has hearing loss. So everybody is a little bit different. There isn't really a right or wrong, but it's not uncommon that people go through periods where it's constant and periods where it comes and goes. There is an old wife's tale that says it used to be that the -- wife's tale that it's the sound of the hair cells dieing in your ears. That's not true, but the concept of it getting worst is definitely something to pay attention to. If it -- if it's constant and goes back to being intermittent that's fine. If it goes constant and it's staying constant, you definitely want to go and get your hearing checked again and re-evaluate and make sure nothing is getting worse. May just mean that your hearing has gotten worse and we need to adjust your hearing devices. But typically for the most part those changes are normal.

>> I've been to the doctor -- I did fine through his means that I have a hole in the bone, the left ear, and I hear my heart beat all the time so at least I know I'm alive, but it is distracting. And I don't know about the right ear. They couldn't explain anything there. Ya'll got anywhere to go? The doctor I found no longer does the surgeries maybe it wasn't that efficient.

>> So there is something called pulsatile tinnitus. When I was in college if patients came in with that pulsatile tinnitus it's like we need to get them in to see the ENT right now. That's calmed down a little bit. It's not as dire, but that's exactly what you are describing. So you got a physical issue that's causing you to be able to hear your heartbeat is what's happening. A lot of those issues with pulsatile tinnitus is left flow related. Has to do with some way you are hearing your heartbeat. Those also can work with habituation. The biggest issue with those is it's more training your brain to try to ignore it versus training your

brain not to hear it. Just because it is an actual noise that you are hearing. Your brain isn't creating that noise. Exactly. So if you don't hear it, we have a problem. Those types of tinnitus can still be trained to ignore. If it's something that's really bothersome to you, look into Tinnitus Retraining Therapy or even cognitive behavioral therapy. Like I said, they do a lot of this type of therapy with patients that have amputations and have that phantom limb pain because how do you massage an arm that's not there? That's pretty heavy stuff. This is the exact same approach. Habituation can be used -- is everybody familiar with the term habituation? I don't think I gave a definition on that habituation just basically means that you are training yourself to get used to something. Training yourself to either ignore or be comfortable with or get used to something. You can habituate to anything. It just takes time. And that's also if I can kind of back up a little bit, and that's one of the biggest issues with tinnitus treatments and cures is that patients kind of expect that immediate result. With tinnitus retraining, any type of brain training, it takes months, months. Most patients don't start to feel results until six months to a year. So it takes time and patience and dedication to really committing to that life and to that process and to that pattern. It's not instant. So I would say look into it and do some research on-line. And if you can't find someone to do the surgery to help fix it, you might find a good either psychologist or -- we can come in and have a conversation about TRT and see if that might help for you.

>> I would actually like to ask you two questions if I may. -- actually I have a third -- no, no. Two. You mentioned habituation and mentioned TRT. I was wondering, why you didn't mention meditation, meditation will cause one to calm down, less stress. My second question is, I know basically it's environmentally cause. Is there any research

about any genetic cause to this where it's passed down from generation to generation? Thank you.

>> Yeah, so touching on the medication, obviously -- the meditation. There are some patients that I worked with that we worked with a psychiatrist as well and a lot of times we do start out with something like a valium or something like that that will help with that anxiety in helping to relax. A lot of times when you have a level of tinnitus there is a certain level of anxiety and stress that comes along with that. You are really not feeling well. You are very frustrated and so anxiety is a big part of that. And so long term, obviously I don't want somebody to take a valium for the rest of their life. A lot of those supplements that help with that are addictive. So the goal is to potentially get you in a place where you can do that yourself and so that's we focus more on the habituation because again you get that long-term effect and it gives you the tools to use if you do have those moments of stressful situation. You know sometimes we need a little help at the beginning. It's not uncommon that we do sometimes resort to medication. I've worked with a psychiatrist in the past and psychologists in the past and I haven't found one that specializes in Albuquerque CBT. And then your second question about the genetic factor, genetics play a huge part in our hearing as a general rule. I was lucky enough the college that I went to we had a contract with a minors hospital. So I saw generations of families that all worked in the mines, grandfather, father and son. And some of those guys came in and had their hearing completely wiped out and some of them came in and had been doing the same job and for same amount of time and had a little bit of high frequency loss. So our ears are affected by our genetics like everything else. Some people inherent bad teeth and some inherent weak ears. You don't inherit the hearing loss -- inherit the hearing loss unless there is a genetic defect or something like that

that's actually been physically caused. That's another element. But as far as just hearing itself goes -- you can inherit weak ears which will make you more inclined to have tinnitus but some people cope with it a lot better. I had moms and daughters and family members that have come in that have a very similar hearing loss, their whole family has hearing loss but one really struggles with tinnitus and the other doesn't. It's about our coping mechanisms, too.

>> So you treat tinnitus, do you do the TRT?

>> I do.

>> And if so is it covered by insurance.

>> I do the TRT. And I got certified in TRT before -- and Dr. Jastreboff is actually retiring. So that certification will no longer be offered in the world. -- I will answer your insurance company and I want to note on something. One of the things that he told us when I was at my training was -- when I was in college, TRT had a really bad reputation. It doesn't work. It's not good. But the reason for that is there is a lot of people that say they do TRT that are not certified. They gone on-line and they read a course and go, I can do that. I can offer that. It has a bad reputation in the community. Not as much now as it used to. It's coming back around. When I was in college, TRT is not good. So do -- if you do look into getting TRT, make sure that you are with somebody that is certified in it and not just saying they do it. No, insurance does not cover it at this point. So typically most clinics that do offer it, it's an out of pocket expense. It's usually a couple hundred dollars and different clinics approach it differently as to if you come back for follow-up appointments or not. My approach, I want you to ignore it. I don't want you to think about it so we usually do one appointment, it's two hours. We charge 275

for that appointment and you come in when you need me. I don't call you and check up. I check on your hearing, there is a hearing loss, but the whole point of tinnitus is to start to ignore it. If I call you and say how, your tinnitus today? What does that help anybody? And that's one of the big things with diet. A lot of times for the longest time doctors would say, go home and reduce your salt intake and reduce your caffeine and see if that helps so you go home and you don't drink your coffee and don't eat your salt for two weeks and sitting there going, nope, still there -- wait. Yup, still there. That doesn't help anybody. That's not helping you at all. The whole point of this is to train your brain to the had a hear it. If you are constantly checking in, it's not going to help you. So that's my approach. I have been very successful with it. I had a lot of patients that are very successful with it. But because of that, it does make it a little more harder for me to check in with you so that's why I have to rely on you to let me know what's going on.

>> Kind of was my question was how long does this tin -- how long is this tinnitus training therapy take? It sounds like it's a one visit and you send them home with the tools to learn how to deal with it and then you are out of the picture unless they want you, is that the way of summarizing it?

>> I definitely wouldn't say I'm out of the picture. If nothing else I want to see you once a year to check your hearing. Even if you have normal hearing, I want to track that. We still care about other aspects. Sometimes patients that have tinnitus issues have balance issues or dizziness issues. Those two. So there are other ways I check in without checking in. But yeah, for the most part it's that one appointment and I work with -- I have a workbook that I created and we go over all of the different things that you need to kind of pay attention to and change in your life and

then if you are having issues you call me and you come in. That same lady I was talking about that was having the skin reaction, she did really, really well. She did come in to see me about a year and a half after our initial appointment and she said it's back. I'm really struggling again. I said, okay, let's sit down and let's talk about this. What's been going on and she said well my daughter is in the hospital now. Oh, well, okay. Are you sleeping? No. Are you -- you know are you relaxing during the day? No. We had to kind of revisit her tool kit and say let's look at this again and let's revisit and let's go back over these things and kind of refresh your memory. And then she was okay.

Any other questions?

>> Believing me I talk loud enough. The one thing that we have a tendency to walk away from is the fact that the majority of us are older. We are very stagnant. If you walk, hey, you got your body knows what it has to do to keep upright. And that's the best -- excuse me, I'm hearing myself. Okay? You tend to rely on other people doing things for you. As far as working on your brain, the best thing that you can do is walk. Because if you don't walk and you don't keep yourself upright and concentrate on what you are doing, that's what you are listening to. You are listening to that sound.

>> That's a great thing.

>> And that's the thing that I realize we are all about the same age, okay? I'm 81. Coming up on 82. I walk a minimum of five miles a day and as much as 10 when I'm really pumped up and then you can come home and you take a shower and you get a book and you get your mind concentrating on something. And believe me, I have had -- I have been that way for 55 years now. Long before I got the implant. The implant

really hasn't changed my life any other than what it does do is it magnifies the sound. I'm more aware of it now. Yeah, I can take it off and it really goes down. Believe me. And you kind of feel like you are walking. And you -- you can train your brain that way. I noticed that there are quite a few other gentlemen that are like me. Just need a hearing aid on one side and you have to have an implant on the other side. And that really affects your balance. The only way we can really cheaply work on the brain is to walk.

>> Well, I think that's a very good point you make. A lot of times patients will say during the day when I'm busy I don't notice it. So it's exactly what he is talking about. If your brain is busy, you don't notice it quite as much. A lot of times patients will say it's in the evening when I'm trying to go to sleep or in the morning when it's very quiet that I notice it. So that's part of when I talked about that in reaching your sound environment or focusing on something else, are all methods to train your brain not to pay attention. That's a good point.

Anything else? I think Mary is creeping up on us.
Thank you so much for letting me talk today.

[applause]

I have some handout and my card is up here and there are some brochures and pens so come and help yourself to some not really goody, goodies.

>> You can't get away without a thank you note. But thank you note is also USB card with our label on it. So now you can remember us every time you use that flash drive.

>> Perfect. Thank you very much. Thank you. Thank you all.

>> Thank you, Leah!

>> Don't leave, we have another discussion coming up so hang in there for an update on our restaurant noise issue. I'm just getting the computer set up.

>> If I could just have your attention for a couple of minutes. I will make this short. Some of you may recall if you have been associated with the Hearing Loss Association for awhile the board talked about providing information about noisy restaurants, identifying restaurants where you can go to be able to talk to one another. And for a long time nothing happened. This year we were fortunate. We got a new board member by the name of Peter Johnson and he looked into what could be done. The board really realized that there is no way a small group of us could go out and do a survey of restaurants in Albuquerque. What he discovered is a couple of applications for SmartPhones that are fairly new that basically allow you to go out and measure the environment. This provides data then that can be used to also use that same app to find noise levels for locations just like with yelp, you can find ratings for the quality of the food and the service. And so what we have done is if you go to the website, HLAA ABQ, this is the home page and scroll down and this is today's meeting and the newsletter, we also on that -- website have a lot of information and one of them is some information about these two apps. SoundPrint and iHearu. SoundPrint is a very easy use app to use. Unfortunately it only works on an iPhone. IHearu is a little bit more challenging to use, but it works on an Android and an iPhone. So you can use both. And so in order to try to help if you are willing to support this and to help out -- if I can find -- we have put together -- oops. I'm used to a Mac -- there.

>> That's a touch screen.

>> And there. If for both of these apps, we have put together illustrated instructions that if you go to those you use step by step how to use the app. And basically each of these apps allow you to go to restaurant very quickly record the sound levels and it gets submitted to a database and that database is also used to give you a list of restaurants in the area and the list actually uses the database so it has all of the restaurants in the world and see what the measured noise levels are for those restaurants. And so what I'm encouraging you to do is if you are comfortable using apps on a SmartPhone is that you and your friends go to restaurant, take a measurement and these are new apps and when you go to the database you will see that a lot of restaurants aren't even characterized and it's not going to happen until people like you care, actually do some of the measurements. We realize there are some of you that are not going to do this with a SmartPhone or you don't have a SmartPhone and so one of the next steps in the process is we are going to develop a way of collecting the data from you using the good ol' fashioned form process where you go to a restaurant and you fill out a form and you get it back to Hearing Loss Association and we will put it together. And then eventual goal or -- we are so far ahead. We have this surveys will look like this. And the eventual goal then is to take data from sources like the paper forms that you submit, these -- the data from the SmartPhone apps which you can access just by going to the app. And putting something together that sort of is a useful piece of information for our members and anyone that gets our newsletter so that is in the newsletter or sent out on e-mails to help you choose venues where you can go and you can have a conversation with the other people at the table. So that's what we are about. We are making a little progress and if you have questions check with me after we are done here. But the thing that really helps is for if

you are comfortable using an iPhone, take the data, submit it, it's easy. And you are helping out a lot of people when you do this. And including people that aren't participating in the Hearing Loss Association. Okay? And I will turn it back to Mary.

>> Thank you, Jim.

[applause]

>> We've been trying to figure out the best way to get this effort off the ground and I want to thank Betty Jean for helping us -- prodding us to make sure that we go forward. And after the meeting today, Jim and I and Bettie Jean will get together to talk about the logistics it is that we are trying to get done. If there is anybody else that has a burning desire to work on this restaurant noise issue feel free to join us. Jim and I are tall and Betty is short but she has on a purple sweater. Betty you can raise your hand here. Thank you, very much. And with that, I want to make sure that you know about our meeting next month. We are going to be learning about vestibular rehabilitation. I'm giving you time. It's a long time. Vestibular rehabilitation is the technical term for someone who works with balance issues. And another speaker who we've already learned about is actually is Leah's husband and his name is Dr. Morgan Fry and he works -- he is a doctor in physical therapy who specializes in balance issues. So he will be talking to us about treating balance issues and all of the different causes and resources that you -- that are available. I'm really excited to have that to offer. He is a specialist in that field and he just got home from a big convention in Atlanta so he said he was really excited to learn the latest in what's going on in his field. So in May our meeting will be back to the third Saturday so that it

will be May 18th. So thank you for all coming today. And we really are excited that we had this opportunity to talk about tinnitus today. And say good-bye one last time to Kayla and to Jessica. Thank you very much. See you next month.

[applause]