SoundBites Podcast Transcript
Episode: Better Hearing Month Top 10 FAQs

Dave Fabry: Welcome to Starkey Sound Bites. I'm your host, Dave Fabry, Starkey's chief innovation officer. Now, May is Better Hearing Month and in observance of this important month, we've decided to dedicate one episode of the podcast to answering the top 10 most frequently asked questions that we receive about hearing loss. I'm so happy to be joined by two of my Starkey colleagues today to help answer these FAQs. First, Starkey chief health officer Dr. Archelle Georgiou, is a medical doctor and Dr. Jamie Myers is a doctor of audiology. Archelle and Jamie, thank you for joining us today for this special issue, special version of the podcast. And I look forward to this discussion today on Starkey Sound Bites.

Dr. Archelle Ge...: Thanks Dave, for having us.

Dr. Jamie Myers: Happy to be here.

Dave Fabry: And Archelle for you it's a reprise of one of the earlier episodes and Jamie, welcome to the podcast. We look forward to more interactions in the future too. I'm excited to have this conversation with both of you and we're going to take turns answering these questions. And I'm going to take the moderator's prerogative and answer the first one, which is, **I think I might have hearing loss, what should I do? Or how do I start this process?** And I guess what I would say, and please both of you chime in, if you want to add anything to this. But for me, if you think you have hearing loss, you're not alone, first off. In the U.S., it's estimated by current figures from NIDCD, the National Institute on Deafness and Other Communication Disorders, that approximately 48 million people have some degree of measurable hearing loss, and world wide the World Health Organization estimates around 466 million people with hearing loss.

So certainly you're not alone if you're thinking that you're having some difficulty. It usually occurs when a family member or a colleague, or a friend, mentions it to an individual. And on average, it's about a 10-year journey from the time that a person first thinks that they have hearing loss until they get hearing aids for the very first time. So the thing I would do and would recommend if you think you have some difficulty hearing is get a test. And there are a wide range of ways that you can do this. First of all, seeing an audiologist or a hearing instrument specialist would be the best way to do this face to face in a clinical or a retail environment where they can calibrate and get a very accurate assessment of your hearing. If that's not possible or convenient, the other thing that COVID has taught us and delivered really are other means of screening your hearing.

You can go to starkey.com and do a hearing screening there. You can also purchase or download a number of apps, including the Starkey app that allows

you to, as well, screen your hearing on an Android or iPhone. And really I think doing that is the most important thing that you can do so you calibrate and see, do you have enough hearing loss that you should consider wearing hearing aids? And then the second step with that is to do something about it in the form of amplification. Anything to add from either you Jamie or Archelle?

Dr. Archelle Ge...: Well, the only thing that I would add to what you said Dave, is that you should do something. And Dave gave you so many different options and ways to explore whether or not you have hearing loss, do something. And the other thing, Dave, we talked about this on a previous podcast, is that I wouldn't ever think, well, it's not bad enough. Even a small amount of hearing loss is significant. Even if you can deal with it by turning the volume up, your brain is going to notice the difference. We'll talk a little bit about that later, but even a mild amount of hearing loss is something to think about addressing with hearing aids.

Dave Fabry: Yeah. And the journey, if you will, the hearing loss journey in many cases is interrupted over that 10 year period from the first observance of some difficulty or when a family member, or a friend talks about it to when you get it. And part of that journey in many cases is because when an individual even goes to their primary care physician and raises the concern, in many cases, people will say, ah, your hearing's normal for your age, or there isn't a need to rush into this. And yet, as we will discuss on some of the other questions, we're seeing increasing links between untreated hearing loss and other related health conditions.

And so maybe there is a benefit to having some sense of urgency to shorten that delay from the time of noticing that you have difficulty until action. And the final thing on that is that in many cases, the best litmus test is when you go to a crowded restaurant or you go to the proverbial cocktail party and note that you're having some difficulty in those environments. Because although the hearing test will help confirm where your sensitivity of your hearing is across all of the pitches of sound that are important for hearing, those real world environments are the ones where hearing loss sort of first crops up and hearing difficulty. Anything else Jamie, that you have to add to that?

Dr. Jamie Myers: No, you've covered it perfectly. I mean, the first step is a test and there's really no harm in it. So I think the sooner the better, and just go see a hearing care professional, or like you said, just to a simple online screening to see where you're at.

Dave Fabry: Yeah. And I sort of, my dream is to see that the Welcome to Medicare evaluation includes something beyond a pencil and paper screening or a questionnaire of hearing and really we are seeing raised awareness for the importance of hearing and balance conditions. And hopefully we're moving in that direction as we move toward the future.

But Archelle you raised this issue of, some of the issues about hearing and comorbidities. But hearing loss doesn't hurt, it's not accompanied by, in many cases, any visible sense of a disability. But to the end of what we already started to discuss, **why should I proceed with treating it if I have a hearing loss?**

Dr. Archelle Ge...: Well, Dave, you've been in this industry a lot longer than me, and I've learned a lot from you. And one thing that you've shared that resonated is that Helen Keller said that vision loss separates us from things and hearing loss separates us from people. And connecting with people is part of being human and it keeps us healthy. So not connecting with people because of hearing loss means that you are at risk for social isolation and depression. That can turn into loneliness and loneliness has been scientifically linked to premature death. And the reason, it's actually been compared to the risk of smoking a half a pack of cigarettes per day. So that is a really important reason why you should address hearing loss even though it's not painful.

But for those who are thinking, no, I'm fine. I'm not lonely. I'm not depressed. There really is an important additional non painful reason to address your hearing loss. And that's because hearing loss increases the risk of dementia, even mild hearing loss doubles your risk of dementia, moderate hearing loss triples it, severe hearing loss makes it times five. So, no, hearing loss doesn't hurt in the early stages, but the dementia that can follow can certainly hurt you and especially the people that love you. So again, like Jamie said, there's no harm in getting it addressed early.

Dave Fabry: Yeah. And the harm, the Hearing Loss Association of America has for years made the comment that your hearing loss is more conspicuous than your hearing aids. Unfortunately, even though, and perhaps if we have time, we'll talk a little bit about over the counter hearing aids. And the fact that they're becoming a reality in the US that really addresses accessibility and affordability of hearing aids. But we know that even in those countries where there is a social benefit that includes provision of hearing aids at no additional cost, less than half of people in those countries choose to proceed. And so that stigma remains even among people in my generation, Baby Boomers, but I think we are seeing, and Jamie, perhaps you'd wish to comment on this, because I know you've worked clinically as well. I think among my generation, the Baby Boomers born between 1946 and 1964, that we're less stigmatized by hearing loss and even the use of hearing aids than our parents were, but we do have higher expectations for what hearing aids can do.

Dr. Jamie Myers: Yeah, absolutely. We're certainly seeing the age creep down of first hearing aid adoption. And with that comes usually technology lovers, usually the people that aren't afraid of it and even I'm hoping that these OTC hearing aids and more of these hearables on the market will make it more not as stigmatized to have something in your ear all the time. And so hopefully we can kind of combine our worlds and reduce that stigma. But certainly, I mean, I think it's the

technology — and the technology in Starkey hearing aids is a great example of it — trying to make the hearing aid more than just a hearing aid. And I think hopefully that will help in the long run with de-stigmatization.

Dave Fabry: Well, and staying on that topic to move into question three, if you do proceed with a decision to get a hearing test and you know that it doesn't hurt, but as Archelle said so well, proceeding without delay, if you have a hearing loss and hearing difficulties. **How do I know what type of hearing aid is the best one for me?**

Dr. Jamie Myers: Yeah. That's an excellent question. And I mean, there are many different models or styles to choose from, and it's a loaded question because from my audiologist mind, I go through so many things when thinking about what style is right for a patient. So it's not as easy as just a, oh, one size fit's all, click 'add to cart.' Yeah. That'll work for me. Certainly there are some models that work for most, but when you're looking at a style, you have to think about, what is your ear like? What is your ear anatomy? Do you have a tiny ear? Is it tipsy and turny, and curvy? And nobody knows, because you've never been able to look inside of your ear, as well as your hearing loss. I mean, that's the first step in getting the hearing test. What is your hearing loss? And it's not even the severe hearing losses we worry about.

I think as an audiologist, we see the most people that still have some normal residual hearing, usually in their low frequencies, and they have a sloping loss where they've lost high frequency hearing loss, which ties back to misunderstanding, not hearing well in background noise, all of those first symptoms of hearing loss. And that hearing loss is particularly difficult, because we don't want to plug your ear up. If you try to put a custom hearing aid in that ear, sometimes it's difficult. Sometimes you feel like you have your fingers in your ear, everything can sound a little more muffled, especially your own voice. So your hearing loss, we have to take into consideration. And then now the perk of having so much more connectivity with hearing aids is that we have to discuss, what is your technological savviness? Do you like Bluetooth?

Do you like connecting it to your phone? Do you like using apps? Do you still work? Do you use your cell phone? Do you use a landline? Do you use a walkie talkie? Do you use a radio? What do we need you to use your ears for? And so all of those things in combination with your hearing care professional and your relationship with them, they're really the steward of this journey that can guide you through all of those questions and then say, okay, based on what we know now, you have either this one option or you can choose from these three.

Dave Fabry: Excellent. And when I was working and I still work with patients now, but we would talk about the size, like you said, the performance as well and then cost. And I think the great thing is, is that we are seeing channels that allow really price points that can fit most people's budget. As you mentioned from being

down to devices that fit almost invisibly in the ear canal that still enable a connection directly to a smartphone, Android or iPhone, all the way up to the most powerful ones that may fit behind the ear or the receiver in the canal devices.

And then really looking at the lifestyle beyond the audiogram, as you said, I think is so important to considering what the best solution will be. And that's why we at Starkey still believe that even with some of these new channels that may allow direct-to-consumer, that everything you articulated is often best handled and the best results achieved when the patient and the professional engage in the diagnosis and then the discussion over all of these different factors that will help them come up with the solution of the best size, the best performance and the best cost of device for them.

Dr. Jamie Myers: Absolutely.

Dave Fabry: And then the last thing I would say is, we have two ears, we have two eyes, two ears. And when people are looking at a hearing aid, they should be looking at two hearing aids. And I think if you're looking at, if price is a sensitive factor, I would say, and I'd look to see whether you agree that getting two devices is critical in terms of the best outcomes. Would you agree Jamie?

Dr. Jamie Myers: Oh, absolutely. And I mean, studies have shown it. I mean, if you aid one ear and leave the other unaided, we can actually see your word discrimination or your word understanding, decrease in that unaided ear. And that really goes back to what Archelle was saying, all of this leads back to your brain. I mean, all of it is being processed up there. So really two is better than one when you do have hearing loss in both ears.

Dave Fabry: Excellent. Well, Archelle, let's come back to you for **question four** now. And that one is, **why should I see a hearing care professional over just visiting my primary care physician?**

Dr. Archelle Ge...: Well, I was trained as a primary care physician. I'm an internist and there're also family practitioners, there are some other doctors that work as primary care physicians. So I feel like I have license to say the following. What I'd say is that primary care physicians are generalists. They know a little bit about a lot of things. So for example, Dave, if you sprained your ankle, which is a very complicated joint, if you went to your PCP, they don't have the equipment or the expertise to tell you whether it's a sprain or a fracture. And they shouldn't guess because that can be a dangerous, poor outcome for your ankle. They know even less about hearing. So if you have any complaints about your hearing, they might be able to sort of do some direct observation of the ear. They can diagnose an ear infection.

They can certainly do that. But to actually test your hearing, they don't have the equipment or the expertise to do that. So I want to make it really clear that a good doctor isn't one that, a good primary care physician is not one that is able to do that or tries to go beyond what they've been taught to do. A good doctor, a good PCP, is one who asks you whether you have any difficulty hearing. And if you just say yes, then having them refer you to a hearing instrument specialist or an audiologist is the best thing that they can do for you. Because anything else that they attempt to do is outside of the scope of their training, it may not be outside the scope of their licensure, that's unfortunate, but it is outside the scope of their training.

Dave Fabry: Yeah, I think that's a great point. Is that in working with my primary care physician, I know that she will take care of my primary needs, as you say, but then if I need a referral to a specialist that is really the action, the next action that will be required. They are often, primary care physicians in the US still are the primary gatekeeper on the hearing journey where a patient will, because of that trust that they have with their primary care physician, they'll begin to ask the question there.

Dr. Archelle Ge...: Absolutely. It's hard being a PCP. Every single patient that comes through your door is going to have a slightly different set of symptoms and the human body is really complex. So a good PCP knows what they know and they know what they don't know, and they quickly refer to get the person the best care that they can.

Dave Fabry: Well, Jamie, going back to the hearing aids at this point again, I mean, some people will say that, well, **aren't all hearing aids the same?** You talk already about a couple kind of issues in diving into the technology a little bit, but maybe you could go a little bit more. **Isn't it the case that just all hearing aids do is just smake things a little louder?** Like if I have a relative who has a hearing loss, if I just shout at them a little bit, won't that just really eliminate the need for a hearing aid anyway?

Dr. Jamie Myers: Oh, yeah. I wish, wouldn't life be so much easier and you alluded to it-

Dave Fabry: We'd be shouting to each other all the time.

Dr. Jamie Myers: Yeah, that's true. Our voices might be strained. You alluded to it earlier with the different technology tiers we have within each of our models. And that is really to help usually budget and also lifestyle. So beyond the style, the model, that we have to make the decision on, then we start asking you more of those lifestyle questions and listening needs. And those are real audiology terms for, what do you do every day? And what's important to you? Again, do you still work? Do you like going to restaurants or are you in more quiet settings? Do you like to spend time at home watching TV, talking to your grandchildren? And helping you prioritize again, your listening needs, will help us narrow down which

technology you need. So we have the more basic hearing aids that help you mostly in quiet.

And then as you go up, they help you more in background noise, essentially to super simplify it. And then we have nice little charts and graphs that'll help you make this decision, but they certainly do get more complicated in how we process the sound. So if we just make everything louder, you really wouldn't like that. Really when we start to lose that high frequency hearing, we start to lose those consonants, which in the English language is what we need to understand each other. So I always use the analogy of Charlie Brown's teacher talking, wah wah woh wah wah wah woh, is what you can start to hear when you lose that high frequency hearing loss, and hearing aids can bring back those consonants.

But with that comes a lot of really annoying sounds, the clicking of pens, the swishing of paper, your feet on the carpet, even your hair brushing back, all of those make sounds. And perhaps you've lost the ability to hear those really soft sounds throughout the years and years that you've had untreated hearing loss. And so hearing aids have gotten really smart over the years to really be able to pick up on those speech sounds while also not making those really annoying soft sounds just as loud. So it's actually very complex and the research that's been done, especially in the last decade, has just been incredible to really make them less of that overall amplification device and really more precise with what we amplify.

Dave Fabry: Excellent. Well, and to expand on that, maybe for both of you, as we approach the two minute warning of the first half of our program today, I'll put in a shameless plug for Starkey technology and talk about the fact that we have been on a journey to really redefine and reinvent the hearing aid from a single-purpose device into a multipurpose, multifunction one that can help really address not only hearing, which as you've said really is the job one, of any hearing aid for quiet and noisy, a benefit in quiet and noisy and challenging listening environments. But also talk briefly, either one of you, about the way that we're incorporating embedded sensors in our technology and why that's important to hearing aid users.

Dr. Archelle Ge...: Well, Dave, I'll take that and Jamie chime in afterwards, of course. But we talked earlier about the fact that hearing loss is associated with depression, social isolation, loneliness, and of course dementia. But wait, there's more, there are more health conditions that are associated with hearing loss. And one of them is that people with hearing loss have three times the risk of falls, they have twice the risk of getting injured doing everyday things that you love. So this isn't just your grandmother or your grandfather falling. This is people with hearing loss that are 50, 55 years old, older, little younger, little older, might be playing golf or riding a bike, they have an increased risk of falling. A few possible reasons for that. One is that with hearing loss, you do become more socially isolated. So you

have less activity, therefore you have less muscle strength. Therefore, you have some frailty.

It could also have to do with the inner ear, the vestibular system, because our ears make us aware of our environment and keep us balanced. Number of different factors that put people with hearing loss at risk for falling. And so for all of those reasons, we have made our hearing aids much more sophisticated by putting sensors in them. And then applying artificial intelligence so that our hearing aids not only give you this great Starkey sound, but they also monitor your activity levels, the number of steps you take, whether you're running or walking or sitting and giving you feedback about that.

Because, it's really important to encourage yourself to remember to stay active. Along with that our hearing aids and the sensors and the AI that go along with that also have fall detection feature, because we're all at risk for falling regardless of our age. And the more you get beyond the age of 65, the higher risk you are. So recognizing that we've made it even more multipurpose than just a hearing aid by offering a fall detection feature so that if you are wearing your hearing aids, you fall, it triggers an alert to a loved one that you have preloaded into your contact so that they can get notified that you might need help. So that was a long way of answering your question Dave about-

Dave Fabry: No, I'm glad you did. And I would just point to one other element too that relates into that health and wellness piece. That with the physical activity and cardiovascular health, and then as you already discussed, the cognitive health, the nutrient of getting speech to the brain, the other area in the virtual assistance is medication adherence. And particularly in the aging population, we know that adherence to chronic medication protocols is about 50% in many individuals. And so we can have a reminder that can actually be set on a daily basis throughout the day, if you're taking multiple medications, that will give you an audible alert to say, take your medications at a designated time. And that's been something that's been really well received by many of our patients and providers alike because it just helps give you that additional edge to stay on top of your medication protocol or not be late for your meetings.

Dr. Archelle Ge...: Well, across the general population, Dave, you're absolutely right that adherence to medication for the entire country, hearing loss, no hearing loss is really just at 50%. And the whole medical industry doesn't know how to crack that nut. But I'll say that people with hearing loss have even lower adherence and as a result also have a higher risk of being readmitted to the hospital because they didn't hear. It's not that they just don't want to take their medication, they couldn't hear their practitioner when they advise them on the frequency of taking their medication, et cetera. So people with hearing loss really benefit from those reminders and the assistant because they're at risk for so many reasons, and it begins to mitigate a little bit of that risk.

Dave Fabry: Thank you. Jamie, anything to add to that before we reach halftime?

Dr. Jamie Myers: Yeah. I mean, the reminders is one of my favorite features and I even had a hearing care professional tell me they set reminders for their patients to come in for their cleaning appointments, to clean their hearing aids themselves. And per your medical reminders, the transcribe function on the app to be able to type out what somebody is saying. I always think of doctor's appointments because my mom will accompany my grandma's and she's there taking notes. But if you don't have that person or if you don't take the notes, or if you can't fully understand them, this transcription component writes out what anyone says and then you can save it to your phone, email, et cetera. So just one more fun feature.

Dave Fabry: Yeah. So I think, as I like to say, to make a long story long, question number five really points out that all hearing aids are not created equal and there are a huge, there's a huge range of choices available that begin with that fundamental focus on better hearing, followed by these opportunities to link to overall health and wellness, and even go a little into the future with those virtual assistance.

And let's transition quickly into **question number six.** And this we'll come back to Archelle on the issue of, **does hearing loss really affect my overall health?** We've kind of touched on this a little bit already, but do you want to elaborate on anything additional in this question beyond what we've already addressed?

Dr. Archelle Ge...: I just can't emphasize enough, Dave, that hearing is part of your overall health. So yes, we covered the specifics, but I'm going to repeat them because I think people don't know [crosstalk].

Dave Fabry: It's so important. Yeah.

Dr. Archelle Ge...: Social isolation, loneliness, depression, falls, injuries, dementia and cognitive impairment. And there's more, and the most important thing is that, that hearing is related to all of these other medical conditions. And I think that if more people were aware of that, rather than just thinking that their decreased hearing is causing a little bit of a communication problem that they can solve by turning the volume up, I think that more people would care and less people would delay in addressing their hearing loss. So thank you for letting me say all those things three times in one podcast. But the more, the better, because I believe that educating people on the health-related effects of hearing loss is going to be the key strategy in getting people to overcome the hump, overcome the stigma of feeling like hearing loss makes them feel old. That hearing loss and therefore getting hearing aids makes them feel old.

Dave Fabry: And I would just, [crosstalk]. Oh, go ahead, Jamie. Sorry.

Dr. Jamie Myers: Well, I was going to say to build on that, the recent Lancet Commission study on dementia, it really showed that treating your hearing loss is the number one modifiable risk factor in mid age, which I believe was 40 to 64 is what they defined as mid age. And that is the number one modifiable risk factor for preventing dementia. Number one, I mean that, I just wish it was on every billboard. It's such a seemingly simple treatment for us to prevent such a disease that can cause so many more problems for yourself, for your family.

Dr. Archelle Ge...: And our own federal government earlier this year issued in their annual report, that is a regulatory requirement to issue a report on the prevention and treatment of Alzheimer's and various dementias. They added a new section, a whole new section that's never been in that report before about making hearing aids more accessible because they are a modifiable risk factor for dementia. So our own federal government is supporting that as well.

Dave Fabry: Well, and I've always said that if you want to get a baby boomer's attention, talk to them about cognitive decline. And we've likely gone to school more than our parents did, and we want to preserve as much of that kidney function as possible. I'm pointing to my brain or what's left of my brain, and we want to keep it as sharp as we can throughout every sector and segment of our life. But then I would also say Archelle, the other two areas, I have both cardiologists and orthopods on speed dial. And cardiology, in an answer to the question of why would we want a hearing aid that can monitor physical activity, like your steps or your exercise throughout the day. And I think I'm not overstating what cardiologists have told me in the aging population that the ear is one of the best overall barometers of cardiovascular health, even in a population or a person that didn't have difficulties with hearing younger in life, because of the comorbidity between hearing loss and high blood pressure, at risk of stroke, diabetes, a host of other general and specific cardiovascular conditions.

And then the other thing that you mentioned is already the risk of falls. But in general, in the aging population, just that reminder or that monitoring of getting up and moving around for a few minutes, every hour is good for musculoskeletal strength as we look at aging too. So I think that physical activity piece also goes hand in hand with the cognitive social engagement score that we report in our hearing aids to ensure that people are staying more physically active to prevent some of those, well, to address some of those cardiovascular conditions, as well as the musculoskeletal strength of keeping moving every day.

Dr. Archelle Ge...: And wait, there's more, so to just add two more things to the list. People with hearing loss also have a higher risk of high blood pressure. And we know that activity, being physically active is one of the important parts of the treatment plan for anybody that has high blood pressure. So the ear is a vascular organ, so it feels the effects of high blood pressure. And also people with hearing loss have a higher risk of developing diabetes as well. And so exercise is also important for the management of diabetes, because we have to maintain our

weight, et cetera. So, so, so, many links between hearing and overall health and so many important reasons why the activity monitoring is a key feature.

Dave Fabry: Thank you. I think we've emphasized that, hearing is a connection to overall health and wellbeing. So Jamie, the next one is for you. You mentioned that in addition to that wah wah woh wah wah, Charlie Brown voice, that sometimes **people who are trying and wearing, and experiencing hearing aids for the first time, report that they sound a little strange, a little different, a little unnatural. Can you talk a little bit about that?**

Dr. Jamie Myers: Yeah, absolutely. And you alluded to it, I think first in the podcast, most people wait about 10 years, five to seven being on the low end. And during that time, your brain is not used to hearing sounds, certainly some speech sounds, but again, like I said, those environmental sounds that don't necessarily jump out to you that you're missing them, like your blinker even on your car. And so I always use the analogy of, let's say you're in a room for five to seven years and we start slowly turning down the lights. And by the end of those years, maybe the room's dark, maybe it's still a little dim. What if somebody just walks in that room and just flips on the light? You're probably not going to like that very much. You're probably going to go, oh, whoa. That's way too much. It's way too bright.

It's very similar with hearing loss and treating your hearing loss. We can't just come in, put the hearing aids on you, turn them on to prescription and say, sound good. Okay. See you, never see you again. We very much have to ease you into it, ease your brain into it. And you have to work to identify those sounds that you've been missing again. So oftentimes people might realize that their car actually needs maintenance because they haven't been hearing this whirring and clicking from their engine or perhaps their refrigerator. Those are the more funny stories, but we certainly have to start you below prescription first to help acclimate your brain. And we even tell you, listen to an audio book, go out and talk to your friends and family. Really, like you said, what did you say?

The nutrient of the words to the brain. I like that because you really need to reacclimate to all of these things that you've been missing and feed your brain again. And I would always tell my patients, "I'm going to fit you a little below your prescription this first week, maybe the first two weeks. When you come back, I want you to tell me you're not hearing as well as you did when you first got your hearing aids, because that means you've acclimated and we can start to turn you up again." So certainly don't have the preconceived notion that it is just a, like my glasses, I put them on. I'm good to go. Always has been. However, your hearing loss is a little more complex with its connection to your brain. So we certainly need to give it a little more time.

Dave Fabry: That's great. And I think as well, sometimes people also report that when they're first fitted with hearing aids that, my own voice sounds funny. And it

does take a while for people to adapt to that. Can you talk a little bit Jamie about how the technology has really improved the sound of a person's voice, their own voice when they're talking for the first time in recent years?

Dr. Jamie Myers: Yeah, absolutely. I mean our goal, I think with any new hearing aid is to have it sound more natural and have it sound more clear, as well as the processing speed always gets faster. So some of it is kind of the delay in what you're hearing. There's just this millisecond delay, but our brains are quick, they can catch it. And so you start to hear that delay, but rest assured within days of wearing them full time, that's another thing I will say. Wearing your hearing aids eight to 10, to 12, to 14 hours a day is what you have to do. I don't want to give away industry secrets, but we can tell how long you wear your hearing aids. So don't try to trick your audiologist, your hearing instrument specialist, you need to be wearing them, especially when you first get them to get used to your own voice, as well as these other sounds. Did you have something else you wanted to add about that Dave?

Dave Fabry: So we've seen again the technology, but what I'm hearing you say with this answer is, for the hearing aid user, when they're first starting out with amplification, be patient with yourself. If it sounds completely natural, it's probably not doing enough to give you that benefit. But to use that dimer, and I really like your analogy of a dimmer switch that we're slowly bringing up as you get used to hearing some more of those sounds, but to give yourself the grace and the patience to acclimate to that, because it will take time to get there.

Dr. Jamie Myers: Mm-hmm (affirmative), 100%.

Dave Fabry: Great. Archelle, your last question is as follows. **I think my loved one has hearing loss. How can I help them? And how do I even approach the subject with them?**

Dr. Archelle Ge...: Well, I've faced this as a daughter to my mom who has severe hearing loss. I would say that this is tricky and it's tricky because you want the person you love to feel loved and not judged. So I would plan out the communication over a few conversations. And I would start by having a general conversation about something new that you learned about hearing. So if you're listening to this podcast, you have probably learned something about the health effects and the relationship between hearing and overall health. I won't repeat them for the fourth time, but you hopefully learned something new and you could just start a conversation about something interesting you learned about hearing, you didn't know it before. And then in a future conversation, a few days or maybe a week later, then let them know that you care about your own hearing because of what you've learned.

And then I would say, walk the talk. So you should care about your own hearing. So go to starkey.com and do your own online hearing test and share the results

with your loved one who you think may have an issue. Share them, don't be embarrassed to share them, whatever they are, be transparent about it. And then offer to see if maybe they'd like to do the same test on starkey.com so that they can get that objective information about their hearing. In my experience, when someone feels love not judged and when you give them objective evidence, then they're much more apt to at least start seriously thinking about taking the next step. So that's how I would approach it.

Dave Fabry: That's great.

Dr. Archelle Ge...: And for my mom it worked

Dave Fabry: Excellent. Yes. I know, that's she's a successful hearing aid user.

Dr. Archelle Ge...: Yes.

Dave Fabry: Excellent. Anything else to offer on that Jamie? Or shall we go to your last question?

Dr. Jamie Myers: I can take my last question.

Dave Fabry: All right. So first of all, tinnitus or tinnitus?

Dr. Jamie Myers: Oh, tinnitus.

Dave Fabry: Okay. All right. Me too. So tinnitus for those who are uninitiated to the term is ringing in the ears. And many people, actually more people suffer from ringing, occasional ringing, at least in their ears than they do from hearing loss. But **how do hearing aids come into play with this for someone who may have ringing in their ears, than only minimal loss or hearing loss in combination with that ear ringing? What can be done?**

Dr. Jamie Myers: Yeah. The good news is hearing aids is the best treatment for tinnitus that's known. There's no cure for tinnitus, which is something that should be put in bold. Anything that says it can cure it is likely a snake oil, so be cautious there. But to go back to, what is tinnitus and how does it come about? It's largely due to damage to your hearing mechanism. And tinnitus is often a symptom of hearing loss. So 90% of people that have tinnitus have hearing loss. That's not true, the other way around, not everyone that has hearing loss has tinnitus, but people that have tinnitus often have hearing loss. So the first step, when you start to hear a continuous or a mostly continuous ringing, hissing, buzzing, it can be really anything that's not in the environment that you're hearing all the time, is get your hearing tested.

And then from there, the treatment process can be varied. So 60% of professionals said that when their patient had a hearing loss and they just wore

hearing aids, their tinnitus, they experienced relief. One in five experienced major relief just from wearing a hearing aid. So that alone is what I've experienced in clinic as well. I mean, if I were to just, I would say 75% of my patients, they say, "Oh wait, I'm not hearing my ringing anymore." And it's a little varied on the cause of that. Part of it is, again, those soft sounds that we just reintroduced back to you. Your brain is on high alert going, ooh, what's that? Ooh, what's that? And it's not paying attention to your ringing anymore. So that's part of the treatment. However, if you don't see relief from just wearing the hearing aids, there is something that we call sound therapy that is built into every Starkey hearing aid. And most modern hearing aids on the market now, there's some kind of sound therapy or you can get it through many noise generation apps.

So just playing a very low level constant sound, and it can be anything that's soothing to you. It can be white noise, brown noise, ocean waves, wind chimes, whatever you prefer. And really just that same principle of distracting your brain from not paying attention to the tinnitus, but really paying attention to that other sound. People see relief, sometimes minutes, sometimes hours, sometimes days from their tinnitus just from using that hours on end, days on end.

So again, there's no cure. However, we do also know that there are stressors to your tinnitus. So oftentimes people first experience tinnitus after a stressful event in their life or a stressful time in their life. And then we know from there, once you have tinnitus, it can certainly ramp up when you are more stressed, when you're drinking more coffee or alcohol, or smoking more, or angry, or anything like that that really ramps up your system can make your tinnitus seem louder. But again, the good news is, hearing aids alone oftentimes are the relief. And if not hearing aids, hearing aids in conjunction with that sound therapy is an excellent treatment option.

Dave Fabry: Yeah. And I think you said it so well. I mean, tinnitus is one of those conditions that range from a mild inconvenience that is only noticed in quiet rooms, or if they go into a sound booth and they hear it, up to people can be in full blown despair with tinnitus and almost incapacitated. Those are very rare, but it can occur. And as you said, there are treatments in the form of amplification. There are other treatments, none that is a proven cure on everyone. But in rare occasions, particularly if the tinnitus is getting rapidly worse, or is in only one ear and not the other, there can be underlying health conditions that could require treatment.

And so if you have tinnitus in one ear or something that has just gotten progressively worse, very rapidly, see your physician, maybe start with your primary care physician, ear, nose, and throat specialists, audiologists as well, that can work to diagnose and treat, and determine if it is something that does require additional investigation to rule out any underlying health condition. But

for the vast majority of people for whom tinnitus is a mild inconvenience, hearing aids alone, or using some of the sound therapy programs embedded in a hearing aid can ameliorate that problem related to the ringing in their ears on an occasional basis.

Dr. Jamie Myers: Yeah. And that's a great point, bringing up the people that are very severely bothered by it. I mean, hearing aids alone, that's great, but there's also cognitive behavioral therapy that has been shown to reduce your emotional response to that. So that is certainly another great call out to say, if hearing aids don't work for you, because again, I said 60% and then one in five. So there's going to be a chunk that they may not be the best treatment for you. Cognitive behavioral therapy is another great route to explore.

Dave Fabry: That's a great point. And we've all been under increased stress over the last few years I think, pointing back to some of the loneliness and some of the isolation during the COVID-19 era. So some people may have only recently begun to experience this stress contributing to tinnitus. So then the last question, I think we've really addressed this throughout the last 45 minutes or so. And that is, **how hearing aids have gotten better over the year.** When I think of summarizing it from my perspective, and then I'd go to each of you to maybe add additional commentary. But I think the way I've seen hearing aids improve is really becoming more and more effortless in terms of the user interface. That is, once the hearing loss has been measured and been programmed by the professional to compensate for the hearing loss, that in many cases now hearing aids automatically adapt as I go from quiet to noisy listening environments, even music and other specialty things that I don't have to make a lot of adjustment.

The automatic nature, using artificial intelligence and advanced signal processing, enables me to go throughout my day without having to intervene a lot. But we do also in some technologies have the capability of me engaging additionally with a user evoked scan of an acoustic environment to optimize further if I want to. But for most people, what they really want is effortless hearing, to just put them in and go about their day.

Then I would also say effortless connection, given that, as you mentioned Jamie, now hearing aids connect to smartphone, iPhones, and Android phones, so that I can stream phone calls to both ears, which makes a huge difference. Stream any audio coming from my smartphone. My wife now thinks I have a sense of direction since I started wearing hearing aids, but secretly I'm just streaming the map directions, the audio directions in my ear when I'm driving or we're driving somewhere.

And I listen to podcasts and music as I'm working out with them. And that connection to the technology is a great one. Also, enabling me to be connected to the professional if I can't, or don't want to always go in for face to face visits. I can do some of those follow up visits for adjustment or counseling with my

professional using telehealth. And then the last plug is for an application that we have that enables with permission, family members, or colleagues, or even professional caregivers, to monitor my progress in terms of physical activity, wearing my devices, even social engagement through the use of a companion app.

So whether it's connecting to technology, to the professional, to family, that effortless connection, I think is another area I've seen improvements. And then you hit on it so well Jamie, the effortless selection of the most appropriate technology from the smallest to the largest, most powerful devices, with the different price points, with the Android or iPhone, that are very, a broad array of them are compatible with these devices. And then even using specialized accessories like remote microphones, TV streamers. And really all of that is best handled to make this an effortless experience between our technology fitted with the hands of the professional to optimize or exceed outcomes for the patient. That's all I have to say about that. Any other comment?

Dr. Jamie Myers: I'll add one more thing. And you guys might be surprised, when you first started saying the, how has this changed? I've been around hearing aids for 10 years now, this will be my 10th year. So I hope I look young. I may look young or sound young, but I've seen them for a bit now, now that I think about it. Rechargeability, it's something that we really take for granted with our smartphones, with really any electronic we have now, we expect it to be rechargeable and the same is true with hearing aids. And Dave, you might know the number more off the top of your head, how many hearing aids, the percentage, it's surely the majority now. The-

Dave Fabry: It's two thirds are rechargeable. Yeah.

Dr. Jamie Myers: Yeah. The direct devices, the behind the ear, and then Starkey had the first custom in-the-ear rechargable hearing aid, which is really exciting. So I just think rechargeability is another one.

Dave Fabry: That's a great call out. Archelle, any other final words from you on that?

Dr. Archelle Ge...: That was a really beautiful summary that you gave. So I'm not going to add to that. I'll just say that what I see is that Starkey and our hearing aids, and our devices are recognizing that hearing is personal. So just like so much of healthcare is personal, we want our treatment plans to be tailored to us. And what our hearing aids are doing is it's tailoring the sound to us because hearing is so very personal and it is really cool to see how our technology can do that.

Dave Fabry: The best thing for me about my job is that I still get to see patients as well as have a hand in helping develop the new technology. It's amazing to sit across from a person that is experiencing the technology and the benefits that come with it and that's what I like best. So I would encourage listeners who are

considering getting an assessment of their hearing and proceeding on this hearing journey to try amplification. Don't delay, just do it.

And Dr. Archelle Georgiou and Dr. Jamie Myers, it's been an absolute pleasure to speak with you here today on Starkey Sound Bites.

Dr. Archelle Ge...: Thanks Dave.

Dr. Jamie Myers: Thanks for having me.

Dave Fabry: Well, and to our listeners, thank you for listening to this episode of Starkey Sound Bites. If you enjoyed this conversation, please rate and review us on your preferred podcast platform. You can also follow this podcast or subscribe to be sure that you don't miss a single episode and we'll see, and hear you next time.