



Interview with Deborah Friedman, MD

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[00:00:21] *And some people have both. They have episodes with headache, and they have episodes without headache. Thank you so much for clarifying that. That's actually one of my pet peeves when people say ocular migraine, especially my colleagues who are eye doctors, whether they're ophthalmologists, optometrists, and they use that term.*

[00:00:38] *I tell them, "There's no such thing. Please don't use that term." The other term I oftentimes hear is optical migraine. It just irks me so much when people don't use the correct terminology. Call it aura, please.*

[00:00:50] **Rani Banik, MD:** Welcome back to the Eye Summit™ 2026, the world's premier online event where you can learn about your vision health, and your brain health, and raise your knowledge of how to protect your vision for life. Today, I am so pleased to welcome Dr. Deborah Friedman to the Eye Summit™. Dr. Friedman is a neurologist who specializes in headache medicine and neuro-ophthalmology, and she brings extraordinary clarity to conditions that often leave patients confused or worried.

[00:01:25] Dr. Friedman has spent her career helping people understand complex visual [00:01:30] symptoms related to migraine and disorders of intracranial pressure, including a condition known as idiopathic Intracranial Hypertension, or IIH for short. What makes Dr. Friedman's work so impactful is her ability to explain what's happening in the brain and the eyes in a way that is both reassuring and practical. Thank you so much for joining us on the Eye Summit™, Dr. Friedman. It's truly an honor to have you here.

[00:01:55] **Deborah Friedman, MD:** Thank you. It's my pleasure. And thank you for that kind introduction.

[00:01:59] **Rani Banik, MD:** Absolutely. And on a personal note, Dr. Friedman, I think we met well over 20 years ago when I had just gotten out of training and you were a well established neuro-ophthalmologist.

[00:02:10] Since then I've always looked up to you as my mentor, being a woman in neuro-ophthalmology, which wasn't so common back then. It's much more common now. So thank you for all of your role modeling and your impact on my career. I really appreciate it.

[00:02:23] **Deborah Friedman, MD:** Thank you.

[00:02:25] **Rani Banik, MD:** Today we're going to be talking about a couple of important topics that really are the intersection between our vision health, and our brain health.



[00:02:33] So the two topics we'll talk about are first migraine and some of the visual symptoms. And we'll talk a little bit about IHH as well. But let's begin with migraine.

[00:02:43] First of all, for our audience, what is migraine and how is it different than just a regular headache?

[00:02:51] **Deborah Friedman, MD:** Migraine is a lot worse than a regular headache. So migraine is really common. It affects overall almost [00:03:00] 20% of the population. About 18% of women, about 8-10% of men in 8-10% of children.

[00:03:07] And the diagnostic criteria for migraine were set up by the International Headache Society. Migraine is defined, first of all, it has to be recurring. So if you have aura, and we'll talk about aura, you have to have at least two episodes in your life to say, I have migraine.

[00:03:27] And if you don't have aura, then it's five attacks in your life. The attacks have to have one of the following four criteria. One sided doesn't have to be one-sided, but that's one of the criteria. Throbbing or pounding pain, moderate to severe in intensity, and worse with routine physical activity.

[00:03:49] And I think the last one is actually the most helpful. People with migraine don't want to go out and take a jog. They want to go lie down in a dark, quiet room.

[00:03:58] The next set of criteria are the associated symptoms. So you need one out of two: sensitivity to light and noise; or nausea and vomiting. And then of course we have to make sure that there's nothing else going on that would be causing these symptoms.

[00:04:15] **Rani Banik, MD:** Thank you for sharing that. It's really important first for people to understand that a migraine is not just your regular everyday headache, and it's not an eye condition.

[00:04:23] Even though a lot of people will come in with visual symptoms, some of which, you mentioned aura and light [00:04:30] sensitivity, these symptoms are not coming from the eyes, correct? They're coming from the brain and it's, quite scary when vision is affected in migraine.

[00:04:39] I would like to next just talk about some of the specific visual symptoms, and if you can explain, first of all, Dr. Friedman what is visual aura of migraine? What's going on?

[00:04:51] **Deborah Friedman, MD:** The visual aura of migraine, as you said, it comes from the brain. And it's thought to originate in the back part of the brain called the occipital lobe, which is where vision is processed. And there is a phenomena that happens that's called cortical spreading depolarization, where there is like a wave of nerves firing, followed by the stopping firing.



[00:05:14] But this is like wave upon wave, and it starts in the back of the brain and it heads towards at least the middle of the brain. It commonly affects vision because it starts, starts in the occipital lobe.

[00:05:26] One of the more common manifestations of this of visual aura is people will often say, I see something funny going on off to the side of my vision. It's sparkling or shimmering and then it starts to bloom and expand. As it expands, there's this kind of zig-zaggy shimmering border. It could be in color, it can be black and silver, and many times within that border there's an area that people can't see through. So it's called a scintillating, which is the shimmering, scotoma, which means it's a [00:06:00] place you can't see.

[00:06:01] And this thing kind of moves over the visual field, and then eventually it gets out into the peripheral part of the vision, and it breaks up and it goes away. Usually lasts between about 10 and 20 minutes, but people can have the shimmering without the scotoma.

[00:06:15] And there are a lot of other manifestations that people get. Some people will see sparkles or they'll see dots or black spots in their vision. Some people will notice that their vision is totally distorted. It's described like seeing the heat waves rising up off the pavement, trying to look through them.

[00:06:34] Other people will have what we call Alice in Wonderland Syndrome. Things look too big, they look too small, they look too close, they look too far away.

[00:06:43] And the scariest ones are when people lose their vision. It's interesting because the criteria say that all of the aura symptoms come on gradually, but these two don't.

[00:06:53] One is people lose half their vision, so they're looking straight ahead of the world and all of a sudden, half the world is gone. Sometimes people can completely lose their vision. Both eyes blind, that starts suddenly. And at other times people can develop like tunnel vision and the peripheral world starts closing in gradually, and sometimes it completely goes away. And as you can imagine, this is very scary and depending on the situation can be also very dangerous. And that generally will get people's attention and bring them to seek medical care.

[00:07:28] The other things that can [00:07:30] happen in migraine aura, it can sometimes cause double vision.

[00:07:33] And it very rarely causes the whole world to flip upside down, which is actually not in the visual cortex; it's in the brainstem. But stroke can also do that. So whenever that happens, we always worry that maybe we should be looking harder to see if the person has had a stroke.

[00:07:50] There are a couple things that happen in migraine that are not coming from the brain, but they affect vision. And the most common one is blurred vision. Things look out of focus, and that doesn't come from the brain. It comes from the eyes. It's probably



because as part of migraine, the part of the brain that's affected called the autonomic nervous system controls tear production.

[00:08:14] If the person is not tearing enough and the eyes get dry, then that can cause them to have blurred vision. Some people will also get double vision just out of one eye during migraine.

[00:08:27] Then there's this very rare kind of migraine that's called retinal migraine which just has symptoms that come from one eye. In retinal migraine, things can either be what we call positive, which means seeing things that are not there, like flashing lights, zigzag lines, spots in your vision; or negative, which means something that's supposed to be there isn't there, so losing your vision. Episodes of transient vision loss can occur with retinal migraine, probably more commonly than episodes of positive [00:09:00] visual things in your vision. For retinal migraine, we also worry about problems with the blood supply to the optic nerve. And so often people will be evaluated for that as well.

[00:09:10] **Rani Banik, MD:** Thank you for that wonderful summary. It's so complex what's going on in the brain, all these different pathways that can potentially cause these visual symptoms.

[00:09:20] I'll never forget the first time I had my first visual aura and first migraine. I was a second year med student studying for exams, and I was cooped up in the science library and all of a sudden I started to see these zigzags and I thought I was having a stroke. And even being, in medical school, I had learned what migraine was, I'd learned about scintillating scotoma. I didn't know that's what I was experiencing. I didn't know what I should do, so I just went home. I went to sleep hoping that it would go away.

[00:09:46] When do people need to seek care when they have any of these symptoms? Are there specific red flags that happen whereby people should really get to either an eye doctor right away or maybe even get to the emergency room right away?

[00:09:59] **Deborah Friedman, MD:** I would say if you're having transient visual loss. Then you should see somebody right away, at least the first time around, and make sure that there's nothing else going on that would be causing a problem with blood flow either to the eye or to the back of the brain, depending if it's one eye or both eyes.

[00:10:14] Another one would be if you have aura symptoms that last more than about an hour. And can they? Yes. Do they frequently last more than an hour? No.

[00:10:27] So prolonged aura [00:10:30] symptoms always raise concern that, maybe there's something wrong. But in general if the aura follows a repeating pattern, and if it's like what you experienced that is very typical for migraine aura, there's nothing else that really causes zigzag lines in your vision. If it's typical for migraine aura, then usually there's no need to go to the emergency room.

[00:10:53] **Rani Banik, MD:** I know a lot of people do seek out an eye doctor and what I always do myself in my practice and also tell our residents, who are training is at least do a visual field, do a dilated exam, make sure there's nothing else going on. And if it's all



normal, then reassure the patient that this is your first migraine with visual aura. Keep track of it, try to identify triggers, but if anything on those tests is abnormal, then further testing may be necessary. That's how I approach it. Do you have a similar approach, Dr. Friedman?

[00:11:23] **Deborah Friedman, MD:** Yes I do approach it very similarly, and you would expect the eye exam to be normal or to not show anything new anyway, because the symptoms are not coming from the eye, they're coming from the brain. That thought is more scary, I think, to a lot of people than it's coming from your eye. I do the same thing that you do and I explain, why it's happening in the brain and that it's part of migraine. Most people who get aura get a headache afterwards. So that's pretty easy to make the diagnosis when that happens.

[00:11:53] But migraine is more than a headache and some people don't get head pain at all after having aura. They [00:12:00] just have aura. And this leads to an erroneous diagnosis of "ocular migraine." Many people come in and see me. They say, I have ocular migraine. There's no such diagnosis as ocular migraine. It's migraine or without a headache. And in most cases it's not coming from the eyes, which is what ocular means. So if, if that happens to you, don't panic. It can still be migraine and it probably is migraine. You just didn't get the headache afterwards.

[00:12:28] And some people have both. They have episodes with headache, and they have episodes without headache.

[00:12:34] **Rani Banik, MD:** Thank you so much for clarifying that. It's actually one of my pet peeves when people say ocular migraine, especially my colleagues who are eye doctors, whether they're ophthalmologists, optometrists, and they use that term. I tell them, there's no such thing, please don't use that term.

[00:12:48] The other term I oftentimes hear is "optical migraine." It just irks me so much when people don't use the correct terminology. Call it aura please and as patients, please just know the difference. Retinal migraine is a thing, but ocular migraine is not. We need to be more careful with our terminology and descriptions.

[00:13:06] Dr. Friedman, in your experience when patients do have this visual aura of migraine, either with or without headache, what are the most common triggers that people should be looking out for that they can try to identify and then avoid, so they don't have future episodes?

[00:13:23] **Deborah Friedman, MD:** Most people probably don't have triggers for aura. There are triggers that many people will [00:13:30] identify for having migraine in general, including the headaches. And some of them are pretty legitimate and others are not as well established.

[00:13:39] The ones that we hear the most commonly for migraine triggers probably number one around the world is heat. Being exposed into a hot environment can trigger a migraine. Stress, either being under stress, or more commonly after the stress is over after taking that final exam that you were studying for when you got your migraine, after giving the big speech in public. A lot of people will get a let down migraine.



[00:14:06] For the same reason some people will get migraine on the weekends. When they're supposed to be relaxed or on the first day of vacation, and again, when all the stress has gone away, the planning's over.

[00:14:16] Alcohol is also a common trigger. People blame red wine, but white wine can do it too. Any alcohol can trigger migraine. Everybody's different.

[00:14:26] Changes in sleep schedule, for example going on vacation, but going halfway around the world on vacation because of the time change that can trigger migraine.

[00:14:35] But even simple things like not getting enough sleep, sleeping too much, like sleeping in on the weekend, can cause migraine as well.

[00:14:44] Now there are a lot of food triggers that people. Say, trigger their migraine. And some of them may be real and some of them may be what we call prodrome. At least 30% of people, some say up upwards of 70% of people with migraine [00:15:00] experience, what we call prodrome or promonitory symptoms. They know that a migraine is coming because all of a sudden the lights are too bright or the noises are too loud. Or they start yawning uncontrollably or get a mood change for better or for worse, or unexplained fatigue or irritability, increased thirst, increased urination, and food cravings.

[00:15:29] If people are going to crave food, they're probably not going to crave broccoli, right? They're going to crave good stuff. They're going to crave chocolate, they're going to crave salty food. And so they'll eat the chocolate because that's part of their prodrome. Or they'll eat the chips because that's part of their prodrome. And then a few hours later they get a migraine and they say it must have been the chocolate. It must have been the chips. Probably wasn't. It was part of their migraine.

[00:15:55] The other things to be aware of are weather changes. Often those will cause migraine people around the world say that changes in the barometric pressure can trigger their migraines.

[00:16:07] And then migraine is also often attributed to neck pain because the neck is tied into that whole system in the brain that controls pain and migraine often starts with neck pain. So if they don't go to the eye doctor first, if the pain's in the back, they'll go to the orthopedist or their general doctor first because they're having [00:16:30] neck pain. But that in fact is part of the prodrome, it's part of migraine.

[00:16:35] **Rani Banik, MD:** Fascinating. And all this is coming from the brain, correct?

[00:16:38] **Deborah Friedman, MD:** Some comes from the brain and some comes from the peripheral nerves. Like the neck pain comes from the periphery. The blurred vision comes from the periphery. But it's all part of the nervous system.

[00:16:49] **Rani Banik, MD:** It's so complex. Migraine has so many different components to it, so many different layers. I wish I had another hour to pick your brain, Dr. Friedman, but I know we're almost out of time.



[00:16:58] I did want to ask you very briefly, this other condition, idiopathic intracranial hypertension, that can also have headaches. And I know that there's also this overlap between the headaches of IIH and the headaches of migraine. What are some key features you use to try to distinguish between the two?

[00:17:17] **Deborah Friedman, MD:** With either condition, it's a package deal. So when people come into the office, they don't just say, I have a headache, and then you're supposed to make a diagnosis, right?

[00:17:27] So we ask about the all the features of the headache, and we also ask about other symptoms. With IIH, which is a condition where the spinal fluid pressure in the brain is too high, people often get other symptoms beside the headache.

[00:17:44] So they may have blurred vision. They may notice that they have a problems with their peripheral vision. They may have times when their vision just goes out on them for a few seconds. They may have a whooshing sound in their ear. And usually this [00:18:00] affects young women of childbearing age who often are overweight or who have recently gained weight, or sometimes we find another reason for it, like a medication or a problem with the veins in the brain.

[00:18:13] So I look for those other symptoms as well. And as far as the headache, there's really not a lot that distinguishes it other than maybe aura. IIH- the headache doesn't give you aura, but it can cause headaches that sound just like migraine. And we did a large treatment trial a decade ago looking at IIH and the treatment of IIH and we asked people very detailed questions about their headaches, and it turns out that more than half of them, their headaches met the criteria for the diagnosis of migraine without aura.

[00:18:47] So they can be on one side, they could be on both sides. They could be in the front, in the back, in the eyes. There's really nothing specific about the headache of IIH it's more the company it keeps than anything else.

[00:19:00] **Rani Banik, MD:** You said that so eloquently and in my experience oftentimes my, IIH patients will have migraine as part of their history. We just have to ask. They may not necessarily say that out front, but we have to ask, "What types of headaches did you have before, maybe five, 10 years ago, before any of the recent symptoms started? And oftentimes it is migraine, they meet that criteria.

[00:19:21] Dr. Friedman, this was so insightful. Your words of wisdom about migraine. I really hope that our audience is taking this to [00:19:30] heart, understanding the symptoms, and if you are having symptoms, please seek out care with a headache specialist, or a neuro-ophthalmologist like you and I.

[00:19:39] Dr. Friedman, if anyone wanted to reach out to you to learn more about you, perhaps even become a patient, please tell us a little bit more about how they could connect with you.



[00:19:48] **Deborah Friedman, MD:** I have a private practice in Dallas, Texas. It's called the Yellow Rose, like the yellow rose of Texas -headache and neuro-ophthalmology. Probably the best way to find me is on my website, which is www.neuroeyes.com.

[00:20:06] **Rani Banik, MD:** Wonderful. And we will be sharing those links right below the interview. So if any of you are in the Dallas area or you're planning to travel there, perhaps make an appointment to see Dr. Friedman. She is absolutely wonderful.

[00:20:18] We appreciate you so much Dr. Friedman, for taking time out of your busy schedule to spend time with us on the Eye Summit™. We really enjoyed talking to you, so thank you.

[00:20:26] **Deborah Friedman, MD:** Thank you. This is my pleasure and this is a really great venue.

[00:20:30] **Rani Banik, MD:** Thank you and thank you all for tuning into this episode. Stay tuned for our next interview on the Eye Summit™. See you soon!