



INTERVIEW TRANSCRIPT

DISCUSSIONS WITH WORLD-LEADING EXPERTS

How Location & Lifestyle Influence Migraine Triggers

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Introduction (00:05): Many of us who live with migraine can name a dozen triggers, from stress and sleep loss to weather changes, certain foods, or even strong smells. But are all triggers created equal? And why do they differ so much from person to person? Joining us today is Dr. Tsubasa Takizawa, a neurologist and researcher from Keio University in Tokyo, who recently spoke at the International Headache Conference (IHC) on this very topic. His work explores migraine triggers and the biological pathways behind them, including the effects of tobacco and environmental factors. He'll help us understand what's universal, what's individual, and how to stay aware of triggers without letting them control our lives. Dr. Takizawa, welcome to the Migraine World Summit.

Dr. Takizawa (00:51): Thank you, Carl, for your kind introduction. Hi, everybody. My name is Dr. Tsubasa Takizawa from Keio University, Japan.

Carl Cincinnato (01:00): You and your team reviewed migraine triggers across Asia and grouped them into key categories. For those new to this, can you walk us through what those main trigger groups are, and what you hope to learn by comparing countries?

Dr. Takizawa (01:13): Thank you so much. This work is published in *Frontiers in Neurology*, and this work was done by my fabulous medical student, Ms. Chisato Iba — with a collaboration with headache specialists, not just in Japan, but from Taiwan and Korea — Dr. Kuan-Po Peng and Dr. Mi Ji Lee. We got advice from them as well.

Dr. Takizawa (01:36): So [this study is focused] on migraine triggers from Asian countries. We divided Asia into Eastern Asia, Southeastern Asia, South Asia, and Western Asia, and we compared what's the difference of the report. And for the triggers, we divided into several categories. Some of the categories are: stress, sleep, food, weather, visual, auditory, alcohol, etc. There were many more, but we knew that there were many studies focusing on stress and sleep in all parts of Asia. But at the same time, we found differences within Asia as well.

Carl Cincinnato (02:17): So you compared 42 studies, and you found that stress and sleep were the two most common triggers everywhere. Why do you think these are so universal, even across different cultures and environments?

Dr. Takizawa (02:31): Stress and sleep — it's very universal. And every human being gets exposed to these two very often — and it gets focused on — and I think it's a real trigger. It's also important when we focus on these two — it's important that stress itself can cause a trigger, but also relief from stress can also cause a trigger. And the same thing can be said with sleep. Lack of sleep can trigger migraine, and also oversleep can trigger migraine as well.

Carl Cincinnato (03:01): That's really interesting, actually, that too much of a good thing can be bad for you. And likewise, with improving from the stress side of things, improving stress or managing existing levels of stress can also be quite beneficial. In Eastern Asia, fatigue and weather were frequently coming up as common triggers. What local factors such as the climate or the lifestyle might explain that?

Dr. Takizawa (03:27): Thank you for another good question. As for fatigue, many East Asian people work hard, and maybe people might feel fatigue many times. And for the weather, I hear about this weather, especially about barometric pressure changes, almost all the time when I go into my headache clinic from the patients. Many patients complain about the weather. And in Japan, there are four seasons: spring, summer, fall, and winter.

Dr. Takizawa (03:58): And from early summer to fall, there are typhoons coming, and this can also — some patients complain that typhoons cause their headache as well. And it's not just the migraine or headache that patients in Japan complain of. When the typhoon or those low-barometric pressure



changes happen, some of the patients with rheumatoid arthritis, they complain of their pain getting worse.

Dr. Takizawa (04:24): I've asked about this weather to other colleagues in different parts of the world, and some of the colleagues said in their country, patients care about weather. Some of the colleagues said they don't talk about weather too much in their outpatients. So I think it's very different, not just in Asia, but also within the world.

Carl Cincinnato (04:44): In Western Asia, it was mentioned that fasting and changes in meal timing were strong triggers. How does fasting — like during Ramadan, for example — influence migraine? And do people adapt over time?

Dr. Takizawa (04:58): I think there are several ways that fasting can cause migraine attacks. Obviously, dehydration can cause headache. Also, there might be some kind of stress due to the — sometimes I've heard from a colleague from Muslim countries that it's not just the fasting of the Ramadan that can cause headache, probably. And also, there are papers that are showing that on the first part of the Ramadan, they get headache, but they get used to it afterwards. So I think the change in their eating habits might also cause the headache or migraine.

Carl Cincinnato (05:38): What does it suggest about migraine when we've got this sort of adaptation that can occur after repeated exposure to the same trigger? So in this instance, fasting?

Dr. Takizawa (05:50): For migraine patients, if they get used to it, it's less likely for them to have a trigger. Getting used to the environment or situation is sometimes important. Sometimes you have to cope with the triggers. There are triggers that you cannot avoid. For some, I think it's important to cope with triggers and live together with them.

Carl Cincinnato (06:16): Yeah, I think that's something that I'd like to come back to in a moment about whether you just avoid all your triggers or whether there are some triggers that can be managed or not. But before we go there, I want to talk about alcohol. Alcohol was reported far less than in Western populations. Why do you think that is?

Dr. Takizawa (06:36): The amount of alcohol we drink is different within the countries. Some Western countries drink more. I've heard that Muslim people do not drink. So I think it depends. And if they do not get exposed to that kind of triggers, it doesn't get focused [on] too much.

Carl Cincinnato (06:59): Do you think there's also biological differences that may be playing a role for those that do drink alcohol in the East?

Dr. Takizawa (07:06): I don't have a perfect answer for that. But some people — they get drunk even with a small amount of alcohol. So likewise, I think it makes sense that for some patients, a little alcohol can induce migraine. For some patients, they need a lot of alcohol to get migraine. So it's different. But at the same time, I ask my patients, you know that even with alcohol, some people say red wine causes migraine a lot. It's not just the red wine. It's all kinds of alcohol, including some of the domestic [Japanese] ones — such as sake and shochu, which are made from nuts, grapes, rice, etc. So it's not just the red wine, I think, in my opinion.

Carl Cincinnato (07:55): Yeah, yeah. I mean, there are so many factors that go into alcohol that seem to play a role. And it may not be the alcohol itself. It could be some of the added ingredients, or it could be the sleep deprivation. Because alcohol reduces the quality of your sleep, and we just learned that sleep was one of those universal triggers that affects everyone.

Carl Cincinnato (08:15): So we may not get an attack straightaway when we drink the alcohol, but we find the next day or the day after, after one or two nights of disrupted sleep, that the migraine attack



comes from — and then do we make the connection to trace it back to the alcohol? You mentioned before about some triggers you can manage, some triggers you can avoid. That's something that we're told quite often as a community of people living with migraine: “Just avoid your triggers.” But we know that that can now lead to additional stress or even overvigilance of our triggers. How can someone stay aware of their triggers, but without letting that awareness control their life?

Dr. Takizawa (08:54): Some patients, I think they get obsessed with the triggers. And maybe some triggers might not cause headache all the time, but they get afraid — anticipatory anxiety some patients get. And for those kinds of patients, sometimes it's not proven. So more important study, like propagation study or studies using animals, to confirm whether it's a trigger or not is also important. It depends on what kind of patient characteristics they are. Sometimes it's important to avoid. Some patients, it's important to cope. And some patients, when they're very obsessed with migraine triggers, we have to ask them whether it really is a trigger or not.

Carl Cincinnato (09:41): Yeah, I mean, I've certainly in the past been obsessed. I would definitely fall into that bucket. And I think it's because migraine trains you to be obsessed because you get these attacks — you don't know where they come from. And so you start trying to rationalize why you got it in the first place. Was it the lack of sleep or was it some food I ate today or yesterday? Was it stress, like how stressed am I? And you become vigilant. And then with increased migraine attacks and increased habits of vigilance, you become overvigilant or hypervigilant. And that becomes kind of — in some situations — self-perpetuating.

Carl Cincinnato (10:20): You feel like you're experiencing a prodrome. Maybe it was just a flash of light if you have migraine with aura, and then you think you're having a migraine attack, and then you're stressed about a migraine attack, and then it leads to a migraine attack. As opposed to maybe it was just an innocent reflection from a car driving past on the street, so to speak.

Carl Cincinnato (10:37): But it's really challenging as a patient to be able to manage that — particularly in the setting of chronic migraine — because it's a fine balance between doing as we're often told by the doctor to keep a diary, manage your triggers, but also not get too carried away with it and not let it control our lives.

Dr. Takizawa (10:57): Yeah, yeah. I totally agree, and thank you very much for sharing your story. As you said, [for] some triggers, patients are having premonitory symptoms, and they might just think that it is a trigger. For example, some migraine patients have hunger as a premonitory symptom.

Dr. Takizawa (11:31): Same thing as you said, with light. Some people get photophobia in the premonitory phase. But patients might consider that because they saw bright light, they got headache. So you have to ask the patients if it's a real trigger or if they're just seeing the premonitory kind of symptoms.

Carl Cincinnato (11:52): Yeah, so the premonitory symptoms or prodrome symptoms.

Dr. Takizawa (11:57): Prodrome. Yes.

Carl Cincinnato (11:58): Yeah. And I mean, that's a really interesting point you bring up, that hunger can be a premonitory or prodrome symptom. And that's otherwise — I've heard the term cravings, that you can have cravings, but I actually never connected it with hunger.

Dr. Takizawa (12:11): That's a better word.

Carl Cincinnato (12:13): But I like the word hunger because it also means that, oh, yeah, you're hungry, you go and crave something. And when I'm hungry, I crave rubbish food. I don't crave a healthy meal. I crave just fast food — something takeaway.



Carl Cincinnato (12:24): And then I can find out I'm having a migraine attack, and I attribute it to the fast food when maybe it was already a migraine on its way versus something that was triggered by the food itself. A lot of doctors, particularly recently, have said that, "Well, maybe that's not necessarily the case." That could be part of the prodrome: those food cravings, that hunger, that kind of sudden hunger. And likewise with neck tension. Has that come up in your research?

Dr. Takizawa (12:50): Japanese patients — same as barometric pressure — they complain about neck tension a lot. We have this term called *katakori*. It's a neck and this part [points to shoulder], Japanese people consider shoulder — neck and shoulder kind of tension — and they complain about this a lot. Some people think that this is like a trigger type thing, but I haven't done a study myself just focusing on neck tension. But I've seen that there are many papers also for the Western countries looking at neck pain and migraine. I think it's not very conclusive yet, but I think it's one of the things that needs to get more attention in the future.

Carl Cincinnato (13:29): Your lab has also studied tobacco and migraine. What have you learned about how smoke or nicotine might provoke attacks?

Dr. Takizawa (13:37): I did my research fellowship with Dr. Cenk Ayata at Massachusetts General Hospital. So there I learned about cortical spreading depolarization (CSD). I collaborated with pulmonary medicine professor Fukunaga, and I asked — they had this setup where the mice get tobacco exposure. So we exposed the mouse with the tobacco smoke, and we looked at the cortical spreading depolarization susceptibility.

Dr. Takizawa (14:21): Interestingly, we found the difference between those two groups in females. In male mice, there was no difference between the group. But in female mice, the CSD susceptibility changed. Which suggests that tobacco smoke induces migraine because cortical spreading depolarization is the pathophysiology of migraine with aura. Also, aura, to be exact. But still I think it's around the mechanism and around the proof to say that tobacco may cause migraine.

Carl Cincinnato (14:55): That's interesting. And when you say cause, do you mean trigger a migraine attack, or do you actually mean cause?

Dr. Takizawa (15:01): It's very difficult to distinguish between the two. We cannot just say whether it causes or it exacerbates just by the CSD setup. There might be either possibility.

Carl Cincinnato (15:16): OK. But it certainly tends to trigger attacks. That's at the very least. It's triggering attacks in female mice. And that's also true for secondhand exposure as well. So you're not actually smoking a cigarette yourself, but the secondhand exposure of being next to someone smoking, for example.

Dr. Takizawa (15:33): Yes. Thank you. Thank you very much. Yes. Secondhand smoke. That's the word I wanted to bring up.

Carl Cincinnato (15:39): For someone who has chronic migraine and has chronic migraine attacks, it's a pretty difficult situation. And it seems like the brain's kind of going from one attack to the next. And there's almost this blur where you can't tell when one attack finishes and where the other one starts. And it doesn't feel like the brain habituates. It doesn't feel like you can kind of — you develop a tolerance to the pain. It's just pain. And then the emotional aspect of it is also really difficult to manage.

Carl Cincinnato (16:11): Having said that, when I crawled out of chronic migraine and I became episodic, I felt like I was able to better control my migraine threshold in the sense of doing the behavioral and lifestyle things like sleep and hydration and dietary changes. But also the medication that I was taking as well helped increase my threshold. So for example, if someone's taking one of the new CGRP treatments and getting good results, then isn't that raising someone's threshold?



Dr. Takizawa (16:43): Sometimes patients do not complain about — complain less about triggers after they're on the ... CGRP monoclonal antibodies. For example, patients — some patients always got migraine attacks after they drank alcohol. After they're on this medication, even if they drink, they don't get migraine attacks, so they can go out and drink with their friends. I think these new treatments certainly change the threshold of the triggers. And I tried to do similar research. But I knew that there was a great paper coming from Dr. Sait Ashina's group from Harvard that has already focused on changing the migraine triggers after using galcanezumab [Emgality], if I recall correctly. There are papers already.

Carl Cincinnato (17:30): For people who want to take action, where's the best place to start when it comes to triggers? Is it stress, sleep routines, meal timing, hydration, weather awareness? Where would you start?

Dr. Takizawa (17:41): If they can manage it, I think it's important to have a similar time of sleep. You don't have to be too obsessed with this, but try not to oversleep during the weekends. Some patients get headaches, and I think it's kind of controllable by themselves. Stress — if there's any way you can handle stress, that would be nice. But sometimes we get exposed to stress, and sometimes we cannot do too much about it.

Dr. Takizawa (18:11): As for weather, I said I did some propagation study of the barometric pressure changes, and it's not published yet. We're trying to publish it soon, but we have kind of negative results on this barometric pressure, so we have to know whether it is real or not.

Carl Cincinnato (18:31): I think the point you make about sleep is a really good one, and what we've heard before from other experts that have spoken about sleep is that there are almost three aspects to sleep: there's duration, quality of sleep, and consistency. And you've mentioned the consistency: going to bed the same time, waking up the same time. If [you have] chronic migraine or if [you have] high-frequency episodic migraine — it's a sacrifice — but keep that same schedule over the weekend as well. It pays dividends.

Carl Cincinnato (18:55): It's good for the brain. Sleep is restorative, and if you have a brain malfunction like migraine or like epilepsy, sleep is good. Sleep is going to be really helpful. With stress, we've been given mixed advice over the past about stress. Sometimes it's [to] minimize the levels of stress. Other times it's [to] keep your stress the same. Don't let it vary too much because it's the change in stress that can be a factor.

Carl Cincinnato (19:21): I think there are also tools that we have as humans that can help us process and manage stress, and one of those is sleep. If you get good sleep, you're better able to handle existing levels of stress in your life rather than trying to reduce something that you maybe can't control. Exercise or your movement is also another way that can manage stress. There may be dietary ways of managing stress. There are some suggestions there as well, but it's not about reducing all the stress out of your life.

Carl Cincinnato (19:20): That's just not realistic. It's about better managing and developing those tools — even cognitive tools like cognitive behavioral therapy (CBT), relaxation, meditation, those aspects. Did that come up at all in some of your research?

Dr. Takizawa (20:04): I haven't really researched too much about the CBT kind of thing, but I certainly feel that CBT and psychological therapy, it's beneficial for some patients. It's not just the newer medication that is only effective for migraine patients, and sometimes it's important to teach the patients to cope with the triggers and tell them about what their real triggers are. And yeah, I think those are also important ways to manage triggers.



Dr. Takizawa (20:44): Trying to go to bed maybe 30 minutes earlier — don't stay up too late. And also maybe try not to get dehydrated. Try to not skip meals if that is possible.

Carl Cincinnato (20:56): What's a common myth about migraine triggers that you would like to dispel?

Dr. Takizawa (21:01): In Japan, many patients complain about barometric pressure. And when I listen to their stories, some patients say they get headache right before the barometric pressure goes down. Some patients say they get headache after this barometric pressure goes down. So some people even say — it's interesting — they get headache when the typhoon starts in the Philippines, which is very far from Japan. Many people just blame the typhoons or barometric pressure.

Dr. Takizawa (21:29): So I think it might be real for some patients. But for some patients, at least in Japan, it might be kind of a myth. We are doing this propagative study of putting the patients into this chamber, which can change barometric pressure. We recruited about 60 patients, and [for] half [of] the patients, they went into the chamber, the barometric pressure changed; but for half of the patients, we did not change.

Dr. Takizawa (21:54): The patient did not know which group they were going into, and there was no difference in the incidence of headache attacks, actually, after the chamber. But even the patients who got headache in the sham, when they came back to my office, they believed that their barometric pressure changed. I told them, “You just got the sham exposure,” [and] they were very surprised. So they just blame everything on barometric pressure. It's not for everybody, but I think it might be real. But [in] some aspects, it might be myth.

Carl Cincinnato (22:29): Yeah, that's interesting. So barometric pressure: trigger for some people, not for everyone.

Dr. Takizawa (22:35): Yeah.

Carl Cincinnato (22:36): The other thing I've found personally is that I've had a migraine attack triggered by the storm. I've been driving home, nothing else is going on. There was a storm, so it wasn't bright. And then there was a crack of lightning, thunder, and rain, and I had a migraine attack. There was nothing else I could chalk it up to, and that was when I was [having] chronic and frequent headache attacks — migraine attacks. Nowadays, there can be multiple storms, and fortunately, now that I'm episodic and under better control, they don't trigger migraine.

Carl Cincinnato (23:06): So in the same person, based on that threshold, it feels like you can have varying levels of sensitivity. And maybe one day you have a migraine triggered by a barometric pressure and a storm, and maybe because you've been drinking or you were out, you didn't have good sleep the night before, or you were fasting at the time, and those things can cause an attack.

Carl Cincinnato (23:24): And then likewise, if everything else is being well managed — you're hydrated, you've been eating, you're sleeping well — storm comes along, no problem. And I think that there is that sort of variability in the individual. Is that something that you've seen as well in your practice and in your research?

Dr. Takizawa (23:43): Thank you. I totally agree. I think it's a combination of the triggers that can ask if the patient goes to the threshold or if they can be below the threshold, I think. So I think there is a combination with barometric pressure and stress and sleep and everything together. They might get headaches, but I agree.



Carl Cincinnato (24:03): What upcoming research or direction in your own work makes you optimistic that people will get better control over their triggers in the coming next few years, in the near future?

Dr. Takizawa (24:16): Thank you so much. I'm interested in doing animal studies and also propagative studies — not just about the barometric pressure, but other things as well. I think it is something that my institution can do because we work in the university hospital and that's what I want to aim for. And also, I'm interested in prevention — how to prevent if they get headaches. So new treatments are coming up, maybe some kind of situational prevention, just doing prevention before they get triggers. That can reduce the patients having headache. I think the treatment and new approach using the medication is also an interesting topic that I'm interested to do in the future.

Carl Cincinnato (25:05): Thank you so much for your interest in this topic. You're the first person that's compared 42 countries and looked at the triggers across different continents and cultures and has sort of fascinating research and has even presented on that topic to the leading experts in the world.

Dr. Takizawa (25:21): Thank you, Carl, for this great opportunity. Last of all, I'd like to acknowledge my excellent team members, especially fellow Dr. Keiko Ihara, who has been working with me for three years. She has done a lot of studies. She has contributed to the tobacco study and also the barometric pressure change study that I introduced. She has been doing a great job. She's now in the [United] States doing a research fellow[ship] and hoping to go into the university residency. I couldn't have done this much work without her effort, so I'd like to acknowledge her.

Dr. Takizawa (25:57): And also, I was able to learn about the triggers such as Ramadan and also [how] watermelon is [an] important [trigger] in Brazil. So it's [that] kind of thing I presented at IHC 2025. I'd like to acknowledge my colleagues from IHC for giving me a lot of information about my interest. We hope to publish a review soon on this topic. So when it's out, I hope people can read it. Thank you.

Carl Cincinnato (26:23): Yeah, we'd be very happy to share that on the speaker notes on this page. We greatly appreciate your time here at the Migraine World Summit. Thank you, Dr. Takizawa.

Dr. Takizawa (26:33): Thank you.