



Episode 250: Tyramine Headache: Foods, Triggers, and What to Know

Lindsay Weitzel, PhD:

Hello everyone, and welcome to HeadWise, the videocast and podcast of the National Headache Foundation. I'm Dr. Lindsay Weitzel. I've a history of chronic and daily migraine that began at the age of four. I am super happy to be here today with Dr. Amelia Barrett. Hello, Dr. Barrett, how are you?

Amelia Barrett, MD:

Hello there. I am well, thank you. Thank you for having me today.

Lindsay Weitzel, PhD:

Thank you for being here. Dr. Barrett is a repeat guest that we all know and love. She is a board-certified neurologist and the creator of the Migraine Relief Code. Today we're going to talk about something that we have just never brought up before on HeadWise. We're going to talk about tyramine headache. Dr. Barrett, I have a lot of questions related to what people call tyramine headache today because there's a lot of overlap with migraine triggers. And some of these foods are a little bit confusing to me, honestly, when it comes to my personal headache journey. So, we're going to we're going to talk about what this is, why it exists, how to avoid it, etc. Let's start with what is the main.

Amelia Barrett, MD:

So tyramine is basically, you can think of it as similar to a protein but different. We call it a biological amine. And all it really means is that it is something that comes in your food. And the problem happens when your body's not able to break it down. That's the important part to remember.

Lindsay Weitzel, PhD:

Why does it trigger headache in some people?

Amelia Barrett, MD:

So this particular chemical actually works in a very interesting way. It sort of sneaks in to the cells that release norepinephrine, your stress response chemicals. They sort of sneak in there and make those cells spit out a lot more norepinephrine. So it's almost like a food that essentially causes the release of stress chemicals in your body. And that's what triggers the headache.

Lindsay Weitzel, PhD:

What does tyramine headache feel like? How severe is it? Where is it located for most people? How long does it last? All that good information. Do we know?

Amelia Barrett, MD:

.There's nothing that's absolutely specific for tyramine headache. So, if you get migraines, it can cause one of your typical migraines. If you don't, it can cause whatever your typical type of headache is. So I think the thing that's different about it though, is that for some people, a tyramine headache just can be shorter than a migraine. As we all know, those of us who have struggled with migraines, those things can last several days. And tyramine headaches don't always because it's only having that headache effect while the chemical is in your body doing its thing. And then for people who don't have migraine, oftentimes that headache will go away. So that can be a distinguishing feature, that tyramine headache might actually just be fairly short.

But it can also be a migraine trigger. So it can kind of go either way in terms of how it feels in your body. It might trigger your same old regular three-day migraine, one sided, throbbing, sensitive to light, sound, nauseated, all the things. But what's different about it is that for some people, it's really just causing a headache while the levels of the tyramine are high in your body.

Lindsay Weitzel, PhD:

I'm going to jump ahead then so people know what we're talking about. Let's go over some of the foods that are high in tyramine that might trigger a tyramine headache.

Amelia Barrett, MD:

So, the tricky part about this is, is that these are a lot of the foods that people with migraines are sometimes trying to prioritize, especially if they notice food triggers, gut symptoms, things like that. What have people heard? People have heard, well, eat foods that are high in probiotics. Those natural probiotics are good for your body. What are those foods? Those are fermented foods. Those can be things like sauerkraut, kimchi, yogurt, and unfortunately, a lot of those are also things that raised tyramines. So this can be really, really tricky. It can be part of the reason that people aren't getting better when they're trying to focus on gut health.

Lindsay Weitzel, PhD:

Are there other foods besides that? Are there other tricks or are things that we leave in the refrigerator, stuff like that? What do we do to our food that increases tyramine levels?

Amelia Barrett, MD:

Yeah, absolutely. Basically anything that's stored. So if you think about ancient humans, what did we need to do? We needed to preserve meat to make it last longer, so we cured it. We smoked it. Both of those things increase tyramine. There are essentially little tiny bacteria working on those meats to preserve them long term and that's why it works.

But unfortunately, in that process tyramine is made. Same with cheese, so aged cheeses can be a very high source of tyramine. Sometimes wine or beer can have high amounts of tyramine. Even leftovers that have been left in the refrigerator for a while can have high sources of tyramine. So if you think about it, it's basically anything that alters food from its natural fresh state is going to be higher in

tyramine. That's an easy rule of thumb, easy way to remember which foods are going to be high in tyramine.

Lindsay Weitzel, PhD:

There does seem to be some overlap between the list of foods that can cause tyramine headache and the list of foods that trigger migraine in some people. Why do you think that is?

Amelia Barrett, MD:

Yeah, absolutely. Well, part of that is just underlying shared genetics. We know that people who are genetically not able to tolerate tyramine as well are more likely to have migraine, so there can be some shared genetic susceptibility there. We know that the tyramine basically causes a release of your stress chemicals, so that's going to cause more migraine. So, I think those are the origins of that link between tyramine and migraine. That's what's really happening under the surface for those people when those migraine triggers are a factor for you. This is probably the explanation for why.

Lindsay Weitzel, PhD:

Just so that we're sure we're giving out complete information, are there medications that some people out there might be on that can make tyramine headache worse or more likely to occur?

Amelia Barrett, MD:

Absolutely. There is a chemical in your body called MAO-A (monoamine oxidase A) and that's what breaks down tyramine. That's what gets rid of this chemical from your body. So, your body has ways to deal with this issue. Now the problem is that there are medications that inhibit MAO. They're not prescribed very often anymore and usually your doctor will make a really big deal about this if they are prescribing one of these for you, because they really want you to know this long list of side effects of this class of medications. But yeah, MAO inhibitors can absolutely make the tyramine problem worse because when those medications are on board. There's not enough of the enzyme around to degrade the tyramine and clear it out of your body.

Lindsay Weitzel, PhD:

So if we've already triggered a tyramine-related headache, what are the best medicines to take to maybe stop it?

Amelia Barrett, MD:

I usually encourage people to take their usual medications. Once the process is set in motion, you are likely to respond to your usual migraine medications. Obviously try not to make the situation any worse. Don't eat any more foods that might be high in tyramine. And since we know that it's a stress related response too, I think it's a good time for some nervous system rewiring, whatever that looks like for you, meditation, yoga, prayer, deep breathing, good time to layer that in as well.

Lindsay Weitzel, PhD:

You mentioned this enzyme, some of us might have less of it or more of it. Do you know if we can be tested to see if we are at greater risk for tyramine headache?

Amelia Barrett, MD:

Absolutely. This is a very commonly performed genetic test. It's MAO-A. If you have had any kind of genetic testing done, you can go look that one up and see if that enzyme has higher activity or lower activity.

Lindsay Weitzel, PhD:

Interesting. Is there anything else that I've perhaps missed that you think we can add to this discussion of tyramine headache?

Amelia Barrett, MD:

I think that I do want to just circle back to the gut health issue for a minute, because I know that people are working really hard trying to eat those probiotics and heal their gut. And I just want to throw out there another option for you. If you're in that situation and you're like, well, what the heck do I do to try to make my gut better now? And this is a topic that we have actually talked about before, fiber. There are pretty decent studies showing that increased fiber intake reduces migraine frequency and severity, number of headache days in a month. So, I don't want people listening to feel like, oh my gosh, what do I do now, another piece of confusing advice about what to eat. You can safely eat fiber, no matter what. That's typically found in vegetables, fruits, in high quantities and things like beans, lentils, chickpeas, green peas, legumes. Those are still going to be safe. They're not going to cause any kind of a tyramine reaction for you, as long as they're not leftovers that you have had sitting in the fridge for a week.

Lindsay Weitzel, PhD:

Thank you so much for joining us. And thank you, everyone, for listening in to this week's episode of HeadWise. Join us again for our next episode. Bye bye.

Resources:

Low-Tyramine Diet for Individuals with Headache or Migraine

<https://headaches.org/resources/low-tyramine-diet-for-individuals-with-headache-or-migraine>