Benyamin Cohen:
This is “Hadassah on Call: New Frontiers in Medicine.” I’m your host, Benyamin Cohen. In each episode of this podcast, we’ll get an inside look at what goes on behind the scenes at one of Israel’s premier medical centers. We’ll travel to Jerusalem to meet up with the doctors and nurses at the Hadassah Medical Organization. From striving for peace through medicine to performing surgeries with robots, they’re working on medical breakthroughs that are impacting people around the world. That’s what Hadassah is all about: the power to heal our world together. From cornea transplants to developments in pediatric oncology, we’ll learn about the latest cutting-edge research coming out of Hadassah Hospital. All that, plus the inspiring stories of patients who have recovered from near-death experiences. Our appointment starts now. This is “Hadassah On Call.”

Benyamin Cohen:
Hello, everyone, and welcome to the show. Our guest today is Dr. Max Bauer. He’s a senior neurologist at Hadassah Hospital, and this month he's helping open a new headache clinic at the hospital. So we figured it would be the perfect time to have him on as a guest to talk about the ins and outs of headaches, what causes them, what’s the best way to get rid of one, and when it’s actually necessary to seek professional help. So we had a really interesting conversation and I hope you enjoy it.

Dr. Max Bauer:
Actually, it’s my first time on a podcast. But my wife, she has her own podcast. It’s one of the most popular in Israel actually. But I’m always on the side.

Benyamin Cohen:
So now you can tell her that you’ve done a podcast.

Dr. Max Bauer:
Yeah.
Benyamin Cohen:
Dr. Bauer, welcome to the show.

Dr. Max Bauer:
Hi. It's nice to be here.

Benyamin Cohen:
Nice to meet you. Even though it's only over Zoom, I feel like I'm not too far away from you.

Dr. Max Bauer:
Yeah, exactly.

Benyamin Cohen:
Before we get started, I was just noticing your accent. Were you born in Israel? Were you born somewhere else?

Dr. Max Bauer:
Actually, I was born in Lithuania.

Benyamin Cohen:
Wow.

Dr. Max Bauer:
And when I was eight years old, my family and I, we made aliyah to Israel and I finished school here. I went to the army, and then I started studying biomedical engineering, but then I decided to switch and I moved to Germany to study medicine. And after my studies, I came back to Hadassah. I made my internship here in Hadassah and then I finished my neurological residency also here in Hadassah.

Benyamin Cohen:
Wow.

Dr. Max Bauer:
So I had the honor to be in Hadassah already for, let's say, six, seven years I think I'm here in Hadassah. Yeah.

Benyamin Cohen:
So it's your shemittah year.

Dr. Max Bauer:
Exactly.

Benyamin Cohen:
So today we’re going to be talking about headaches, which is something we all deal with. I was thinking before we got on the podcast today. There are a lot of diseases and health topics that we discuss on this podcast – Alzheimer's, Parkinson's, cancer – and those are diseases that are unfortunately very common, but they’re not diseases that every single person will encounter in their life. But a headache is unique in the sense, and correct me if I’m wrong, a headache is unique in that sense that practically everybody has experienced a headache in their life.

Dr. Max Bauer:
Yeah, you're right. So according to studies, I think the majority of the population will have some time in their life a headache, around 75%, at least one headache. But of course we have more than one headache during our lives. And headaches can be something that you suffer a lot from, and sometimes they're sporadic. So if we'll take migraines, for example, migraines are a leading cause of outpatient care and ER visits. And just in the USA the cost is about 13 to 17 billion dollars annually only in the US. There are studies, like for example, in 2018, there was a Global Burden of Disease study, which said that migraine is the sixth most prevalent disorder in the world and the second leading cause of disability after back pain. Okay. So, as you see, headache is really a major issue in our health.

Benyamin Cohen:
That's amazing how prevalent headaches are. Let me ask you, when was the last time you had a headache?

Dr. Max Bauer:
Actually, I think it’s a predisposition for a neurologist to have a headache. Most of the neurologists that I know they suffer from headaches. It's a funny thing. I have them once a month, at least.

Benyamin Cohen:
I know sometimes when I get a headache, a particularly bad headache; I'll start to Google and try to figure out what's wrong with me. Can you explain what actually a headache is?

Dr. Max Bauer:
A headache is a pain that results from different signals interacting among the brain, the blood vessels and the surrounding nerves. And during the headache, a certain mechanism that we think we know, but we are not sure and we change our mind every few years about the exact mechanism, it activates specific nerves, which affect the muscles and the blood vessels. And then you have different types of headaches, different regions in your head where you can feel the pain, and sometimes you have other symptoms like visual symptoms that accompany the headache.

Benyamin Cohen:
What are the most common causes of headaches? Is it loud noise? Is it something external or is it something internal?

Dr. Max Bauer:
So actually, if we talk about headaches, there is a typing or classification of headaches. And actually we have a book of classifications, which is named ICHD-3 currently. It's the International Classification of
Headache Disorders, the third edition. And there are more or less, I don't know, around 200 types of headaches.

Benyamin Cohen:
Wow.

Dr. Max Bauer:
Top types, let's say. But when we talk in general, we talk about primary headaches and secondary headaches. And primary headaches, these are originally the headaches, which the main cause is a biological cause let's say. And secondary headaches, they are secondary to a certain process in our brain or in our body. When you have a cold and then you have a headache, it should be a secondary headache because it's secondary to a cold. So if you ask me how common these headaches are, 80 or 85% of all headaches are primary headaches. Okay. So loud noise or secondary headaches due to a cold or due to a tumor or due to other processes or other illnesses. They are much less common than primary headaches. And when we talk about primary headaches, there is also classification and there are a few headaches that we all know or heard of like tension headaches, or migraines or a cluster headache.

Benyamin Cohen:
I've also gotten headaches I know from things like dehydration sometimes.

Dr. Max Bauer:
So it's a secondary headache, for example.

Benyamin Cohen:
What's the best over-the-counter medicine? If it's not a headache where we need to see a doctor, what's the best over-the-counter medicine that you would recommend? Is it Advil or Tylenol or is it just a good nap?

Dr. Max Bauer:
Okay. So actually I agree with you. So we should start always treating the headache, first of all, not with a medication. So a good nap or a good rest should be the first thing that you should do if you are not familiar with your headache. And then I would also advise to eat something and to drink and to see that you're not dehydrated. Okay. Then if this doesn't help, so I would start with the NSAIDs like Advil, or a Tylenol or paracetamol that we give here. This would be the basic treatment I think in my opinion. And then if there is a certain or a specific type of headache or the patient is already familiar with his headaches, there are different kinds of medications that we can give. But the basic treatment will be rest and drink and eat something and NSAIDs or Tylenol.

Benyamin Cohen:
Yeah. And what's the typical length or duration, like how long should a headache last?

Dr. Max Bauer:
Hmm. So it's a tough question actually because if we talk about primary headaches, for example, there are tension headaches, which are caused because of a tension in our muscles and this the most common primary headache. We usually feel like a band in our head or tension in our neck. It might last few hours.
Migraine, for example, which is a different primary headache might last be between three hours and three days. Okay. And there are other different primary types of headaches, which might last minutes, but then a patient might have few episodes of this headache during a day. So is there a typical headache? I wouldn't say, but maybe we can say tension headache, tension headache might last for a few hours. Okay. If it's a headache due to dehydration and also might last few hours due to cold, maybe few days even.

Benyamin Cohen:
I've heard of a cluster headache. What's that?

Dr. Max Bauer:
Actually cluster headaches, it's really not a nice headache to have.

Benyamin Cohen:
Are there any kinds of nice headaches?

Dr. Max Bauer:
It's really excruciating pain that people feel like stabbing pain around the eye, which is really, really, I think if you have a scale between 0 and 10 and 10 might be, you can imagine like surgery without anesthesia, so cluster headache would be like eight to 10 usually. It might last tens of minutes until three hours and it's called a cluster headache because it arrives in clusters of time. It means there is a cluster of days, like a period of days, week, two weeks, three weeks where a patient would have this headache on a daily basis, even few times a day, this agonizing pain. And we can help those people as well. Okay. There are certain medications that help with this headache or oxygen might help also with this headache. But it's really agonizing. But as I said before, a primary headache like cluster headache or a migraine, it's not a dangerous headache. People suffer from that, but it's not a sign of danger.

Benyamin Cohen:
Yeah. We were talking a minute ago about treatment and taking over the counter medicine. Sometimes when I feel the beginning of a headache, let's say I have a 10% headache, I sometimes take the medicine, take a Tylenol or something right then to kind of stop it from getting, turning into a real headache. Am I making that up or does that actually help?

Dr. Max Bauer:
No, that this should help. As I said before, if it's a headache that you're already familiar with and you know how it evolves and how it behaves and it's not the first time and you know what helps you, I would treat it as soon as possible. In fact, in migraines, there are certain medications like triptans. I don't know if the audience is familiar with. It's a medication that people take on acute attack of a migraine. It's not a preventive medication. It prevents from the migraine attack to start or to evolve, but it doesn't prevent the attack from appearing next time. So for example, triptans, you should take on the beginning of the attack. If you will take it after a few hours, it won't help already. So I think your way of thinking is correct. If you are familiar with your headache, I would advise to stop it as soon as you can.

Benyamin Cohen:
Yeah. I actually get migraines and my doctor gave me some vitamins to take and other kind of medicines just to take on a regular basis to help prevent a migraine. Are there things that you would recommend that people could take if they get headaches frequently just kind of on a regular basis?

**Dr. Max Bauer:**
A good nutrition is really, really important and crucial. And we also know what not to take. For example, if people, people who suffer from migraines, there are certain types of food, maybe the audience already knows that, but certain types of food like chocolate or red wine or aged cheese are all known of causing migraine headaches. Sometimes caffeine might also cause migraines in some patients. In other patients, it might help with migraines. But I would advise a good nutrition and a good sleep are an important factor for prevention of headaches.

**Benyamin Cohen:**
It can be debilitating, a migraine headache.

**Dr. Max Bauer:**
Totally, totally.

**Benyamin Cohen:**
I mean, you have to be in a bed under the covers, dark lights, can't do anything.

**Dr. Max Bauer:**
Exactly. And sometimes one attack can last for three days.

**Benyamin Cohen:**
Yeah.

**Dr. Max Bauer:**
So imagine that you cannot do anything for three days. And so in the last years there was a huge revolution with medication to prevent those kinds of headaches. And if you've heard of anti-CGRP, which are injections that you take to your thigh or subcutaneously once a month or once in three months. And they really showed an improvement in the headaches in the days of the headaches that people have and reduced it by 50%, at least 50%. So it's a huge improvement. And today, or in the last months, there are also new medications that you could take orally and not in an injection to prevent also migraines.

**Benyamin Cohen:**
This is a major breakthrough, because I know migraines are, I mean, impacts so many people. And I wasn't aware. Wow.

**Dr. Max Bauer:**
Yeah. So it's really something new in the last years. Actually it's a medication that people started to develop in the 1980s and only now 30 or almost 40 years passed until they came to the market.

**Benyamin Cohen:**
And what's a visual migraine?

**Dr. Max Bauer:**
Okay. So a visual migraine, you probably mean that people have visual signs before the migraine. So 15% of people that suffer from migraine, they have what we call an aura. These are signs that appear before the headaches appears before the headache appears. So most of the people would have a visual migraine. That means they would see spots in their visual field or a zigzag sign in their visual field, which would start half an hour before the headache starts and then it will stop and then the headache will appear.

**Dr. Max Bauer:**
And we think it has something to do with cortical spreading of signals in our brain. And we think it starts in the occipital lobe, behind our brain, and goes along the brain. Then the signals stop and the headache appears. 15% of people suffer from that. I personally also suffer from that.

**Benyamin Cohen:**
Really.

**Dr. Max Bauer:**
And it might be really debilitating when you are in a hospital. You are seeing a patient and suddenly you stop seeing well. So at the beginning, it's really, when it happened to me the first time, I was really scared that something is happening to me. You shouldn't be afraid because you know it will be there for 20 minutes and then it will pass and then you might have a headache.

**Benyamin Cohen:**
When we return, Dr. Bauer gives us a behind the scenes look at Hadassah's new interdisciplinary headache clinic.

**Dr. Max Bauer:**
So we have orthopedic doctors, we have anesthesiologists, we have neurologists, and we have family practitioners.

**Benyamin Cohen:**
All that and much more after a quick break.

**Benyamin Cohen:**
If you're anything like me, you have trouble going to sleep at night. I've tried almost everything -- from sleep aids, to sleep therapy. And if you don't sleep well, it could lead to all sorts of health issues. So you can imagine how excited I was when I got a chance to talk with Dr. Joel Reiter on a recent episode of the “Hadassah On Call” podcast. We talked about his latest research, plus the various aspects of our lives that contribute to poor sleep, like living through the stress of a pandemic.

**Dr. Joel Reiter:**
Because you take something like insecurity. Insecurity about your workplace, about your parents, about your health, and add to that, the quarantines, staying at home for entire days and nights, and not getting out of bed, and you get an increase in sleep problems.

**Benyamin Cohen:**
You can listen to that episode right now at hadassah.org/cantsleep. That's hadassah.org/cantsleep.

**Benyamin Cohen:**
And now back to our conversation with Dr. Max Bauer.

**Benyamin Cohen:**
At Hadassah, there is a new headache clinic that recently opened up. Can you tell me a little bit about what happens at the headache clinic?

**Dr. Max Bauer:**
So we're planning to see patients that need more than a basic treatment. I mean, they went to their general practitioner. They maybe started the treatment with NSAIDs, acetaminophen. It didn't help them. Then the doctor gave him another medication, but then he said to himself, "Okay, it's too much for me. I need a neurologist to continue treating the patient. Maybe he needs some other medications that I'm not familiar with." And then we are seeing those patients. Most of the patients are patients with primary headaches, migraine, as I said. And this is the art of medicine to understand the headache that the patient suffers from and to see what can I treat normally with other medications and which other headaches I should send him for other investigations and to see if it's a secondary headache and I have to look for a cause. So it's something that you learn with your profession as you're seeing more and more patients with headaches.

**Dr. Max Bauer:**
So the headache clinic is a designated clinic with neurologists in it under the pain clinic here in Hadassah. And we're planning to see all those patients consult with each other because not always the treatment is helpful, and then we have to think of other treatments. So we have the options of medications, different kind of medications. And as I said, there are new medications that in the last months even came to the market. We can do injections to certain areas in our head, in our scalp. This is also something that we do. We can do Botox injections, which is also a treatment for a chronic migraine. And another thing is that in our pain clinic, we have also psychological service, which can also give tools to patients that suffer from chronic pain and chronic headaches, there are cognitive behavioral treatments that we can offer. So I think it's a really designated specialized clinic that patients can profit from.

**Benyamin Cohen:**
I've interviewed a lot of doctors at Hadassah, and they've talked about different clinics at the hospital, and many of them are interdisciplinary clinics. I was speaking recently to the person, the doctor who set up the post-COVID clinic for people who've already had COVID and have recovered. And he was telling me there's PTSD doctors and neurological doctors and lung doctors and all these nurses and all these people who work together across disciplines to figure out the best solution to a patient's problem. So it sounds like this is what's happening, what's going to happen at this headache clinic.
Dr. Max Bauer:
Yes. Actually, the whole pain clinic as itself, it’s an interdisciplinary clinic because in the pain clinic we have... People who work in pain clinics, they have a fellowship. That means they did their basic residency in certain field. And then they did another fellowship in pain clinic. So we have orthopedic doctors. We have anesthesiologists. We have neurologists, and we have family practitioners. So the pain clinic as itself, it's a really interdisciplinary clinic.

Benyamin Cohen:
Right, right.

Dr. Max Bauer:
I think it’s really a good place to do this headache clinic because we have different points of view on patients.

Benyamin Cohen:
Right? Is there a patient that you've had that it sticks out in your mind, a memorable patient?

Dr. Max Bauer:
So I have many patients and from different fields of neurology. But I have one patient with a headache. She's an artist. And she was painting archeological findings. And she had really headaches on a daily basis and she couldn't work because each day she had a migraine attack. She had to rest. She had to lie in her bed. And she came to me half a year ago, maybe a year ago. And I started following her. I tried few treatments and then I found the best treatment that helped her. And actually she came to me one month later and she told me her life has changed. She can do an everyday activity and she works every day and she's happy and active. And it's really nice to see that you make a difference. So headaches, it's not always something that you can cure, but you can always help people.

Benyamin Cohen:
Headaches can be a warning sign, and we're talking about the clinic and people who feel they're having more serious issues with headaches. Headaches can be a warning sign of a more serious underlying problem.

Dr. Max Bauer:
Mm-hmm (affirmative).

Benyamin Cohen:
What issues could the headache be telling a doctor? What kind of diseases could it be talking about?

Dr. Max Bauer:
Okay. So if we talk about headaches that are warning signs for something, we talk about 2% to 5% of headaches, okay, which are secondary headaches. So the most important things that you have to be aware of, it's what we call, for example thunderclap headache. It’s a headache that arrives suddenly, and this is the most excruciating pain that you had in your life. I mean 10 out of 10. And it arrives suddenly like a thunderclap. It might be a sign of hemorrhage in your head, for example, in your brain. This is one type of headache that you should go to for medical checkup and check it as soon as possible.
Dr. Max Bauer:
The other is it's a new onset headache that you are not familiar with. You can't find any medication that helps against the headache, but I mean, it's a new onset of headache and headaches that awake you in the night. It's unusual for a headache that cause you to wake at night and a headache that appears mostly in the morning. It's also a sign that you should check what could be the underlying cause. It could be meningitis for example. It could be, as I said, bleeding. It could be a tumor. So these are things that you don't want to miss.

Benyamin Cohen:
When we return, Dr. Bauer talks about patients who have survived COVID but continue to have neurological issues.

Dr. Max Bauer:
A really high percentage of people that had COVID, they have later headaches.

Benyamin Cohen:
All that and much more after a quick break.

Benyamin Cohen:
As one of our podcast listeners, you've been hearing all about how Hadassah is here, healing the world. Every day, innovations from Hadassah's hospitals save lives in Israel, the US, and around the world. Being a member of Hadassah means you're a part of it, and that's something to be proud of. Hadassah is here for you, here for each other, and here for the world. Learn more about the many advantages of membership at hadassah.org/hadassahishere. Membership starts as low as $36 a year. If you're already a member, think about making someone you love a part of our healing work. Membership makes a beautiful gift. That's hadassah.org/hadassahishere.

Benyamin Cohen:
And now back to our conversation with Dr. Max Bauer.

Benyamin Cohen:
Recently there's been some evidence that COVID-19 can cause headaches with specific characteristics. Have you seen any patients who have had COVID and they still have lingering headaches or other neurological issues afterwards?

Dr. Max Bauer:
Up to 50% of COVID patients may suffer from headache.

Benyamin Cohen:
Even after they recover, you're saying.

Dr. Max Bauer:
After recovery, which might stay for even half a year, maybe a year, sometimes more. It's too short now to say what happens later. But we see patients with headaches. They sometimes feel like tension
headaches. Sometimes feel like migraines. There are some schemes of treatment, but I didn't find any protocol that helps exactly for post-COVID patients. Sometimes people try to treat that with steroids. It helps to a part of the patient, but you treat it symptomatically. I mean, if it sounds like a migraine’s headache, you treat it like a migraine. If it sounds like tension headache, you treat it like tension headache. But it’s really high percentage of people that had COVID they have later headaches. Headaches, sometimes tinnitus, sometimes changes in paresthesias when you feel numbness that comes and goes,

**Benyamin Cohen:**

Is it too soon to know what kind of long-lasting neurological impact that COVID would have on a patient?

**Dr. Max Bauer:**

Yeah, I would say it's too soon because it's a new virus that no one knows what will be in two years, in five years, in 10 years. So we try to treat the symptoms. We try to bring the patients back to full functionality, but no one knows what will be later. I hope the symptoms will just subside and the patients will return to their normal activity and normal health. But no one knows what's going to be.

**Benyamin Cohen:**

Right. As we were talking about no one knows what's going to be, but looking at the past, since you entered the field of neurology and headaches, how has the field changed since you started as a doctor?

**Dr. Max Bauer:**

When I started my neurology residency which was seven, eight years ago, we didn't have anti-CGRP treatments, for example.

**Benyamin Cohen:**

Right.

**Dr. Max Bauer:**

Something that was in the pipeline, someone talked about it, but it really made a difference when it came out. And now there are also new treatments in the pipeline, which really can affect the field of headaches. So I think the future will be exciting in the treatment of headaches, especially migraines.

**Benyamin Cohen:**

Yeah. Well, what do you see in the future, what do you think will change in the next five to 10 years regarding headaches and pain management?

**Dr. Max Bauer:**

So neurology in the last 10, 20 years or 15 years really evolved. So I think the next 10 years I hope ... I mean, there are big steps. I mean, I think... I cannot say we can stop or prevent migraines completely or headaches, but I really think there will be a major improvement. If we can help now 50% of patients, I hope we'll be able to help 80 or 90% of patients in the future.
That would be amazing. I always ask the doctors this question. For you, what makes working at Hadassah unique compared to other hospitals in Israel or even other hospitals around the world?

**Dr. Max Bauer:**
You can talk to your colleagues in different levels. I mean, senior doctors and residents in the same level, and it's something unique to Israel I think, but it's really unique for Hadassah and I think to my department also, both neurology and pain clinic. I feel really happy working with my colleagues and I feel free to talk with them about anything. And I really feel that we're a part of a big team. And I don't know if it's something that you feel in different places.

**Benyamin Cohen:**
Yeah. There's a lot of camaraderie even when I'm there and I'm walking to down the halls and I see doctors from different departments talking to each other. It goes back to, I think, to that interdisciplinary partnerships, I think.

**Dr. Max Bauer:**
Both. And I think the Israeli mentality it has also good, good things. So I think that this is one of the best things that we have here. Yeah.

**Benyamin Cohen:**
Yeah. It's an attitude of thinking outside the box, I think.

**Dr. Max Bauer:**
Also. Yeah. But I mean also the... How do you say? The people don't have distance between them, and it has pluses and sometimes there are also negative things. But I think in this case, it's really, really, really nice.

**Benyamin Cohen:**
I only have a minute or two left of our interview. I want to know: I asked you a lot questions about headaches. Is there any question I didn't ask you that I should have asked you?

**Dr. Max Bauer:**
Headaches, it's something that we can treat. So if people suffer from headaches and they go to their general practitioner and he says, "Sorry, I cannot do anything," you should go to a headache specialist. Okay. Sometimes people have a different point of view, more experience, and it's always like this. When you go to a specialized clinic, they see much more cases from the same field. So I think it's important not to miss the possible treatment.

**Benyamin Cohen:**
Yeah. That's a great point. Well, Dr. Bauer, I know it's nearing the end of the workday in Israel, and I know you're busy and I really, really appreciate you taking the time to chat with our audience today about headaches. Thank you so much.

**Dr. Max Bauer:**
Thank you. Thank you. It was my pleasure. Thank you very much.
Benyamin Cohen:
Thanks so much.

Benyamin Cohen:
Hadassah On Call: New Frontiers in Medicine is a production of Hadassah, The Women's Zionist Organization of America. Hadassah enhances the health of people around the world through medical education, care, and research innovations at the Hadassah Medical Organization. For more information on the latest advances in medicine, please head on over to hadassah.org/news. Extra notes and a transcript of today's episode can be found at hadassah.org/hadassahoncall. When you're there, you can also sign up to receive an email and be the first to know when new episodes of the show are released. Subscribe to our show on Apple Podcasts, Google Play, or your favorite podcast app. If you haven't already, please leave us a review on the Apple Podcasts store. It only takes a minute. And when you do it helps others discover Hadassah On Call. The show is edited by Skyler Inman and produced by the team at the Hadassah offices in both New York and Israel. I'm your host, Benyamin Cohen. And thanks again for joining us today. We'll see you next month.

Benyamin Cohen:
“Hadassah on Call: New Frontiers in Medicine” is a production of Hadassah, The Women's Zionist Organization of America. Hadassah enhances the health of people around the world through medical education, care and research innovations at the Hadassah Medical Organization. For more information on the latest advances in medicine, please head on over to hadassah.org/news. Extra notes and a transcript of today's episode can be found at hadassah.org/hadassahoncall. When you're there, you can also sign up to receive an email and be the first to know when new episodes of the show are released.

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