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 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, and welcome to Hadassah On Call. I'm your host, Benyamin Cohen. Today's guest is Dr. David Zangen. He's the director of the pediatric endocrinology unit at Hadassah Hospital in Jerusalem. And I was particularly excited about traveling to Israel to speak with him because, growing up, I was unusually short for a kid my age, and my parents took me to a pediatric endocrinologist, so I had a lot of questions for Dr. Zangen. In addition to my own height inferiority complex, we discussed a whole host of interesting topics. We talked about how artificial pancreas are revolutionizing diabetes treatment, how a gene known for cancer is helping with his research on healthy ovarian development and about a special program he works on that trains Palestinian doctors. We had a really informative chat and I hope you enjoy it. So without any further ado, here's my conversation with Dr. David Zangen.

Benyamin Cohen: Hello everyone, and welcome to today's show. Today's show is super special. We are first joined by my friend Barbara Sofer. We are here at Hadassah Hospital Ein Kerem. Welcome, Barbara. How are you?

Barbara Sofer: I'm fine, thank you. And I want to welcome you. It's always a pleasure to have you come here to Jerusalem.
Benyamin Cohen: Thank you. Barbara is the Israel Director of Public Relations here at Hadassah's office in Israel.

Barbara Sofer: More PR and the in-house creative filming, story writing, and I sometimes have the pleasure of working together with doctors, like our guest today, Dr. David Zangen, with whom I've been on a platform abroad as well.

Benyamin Cohen: And neighbors too, no?

Barbara Sofer: Yes, we're neighbors, and he's always the best. If you have a sick child or a grandchild and you know that he might be home with a big house full of guests and you need to interrupt him to find out if we need to go to the emergency room. Yeah, he's a close friend like that.

Benyamin Cohen: Those are the best kinds of neighbors. So Dr. Zangen, welcome to the show.

David Zangen: Thank you very much. I welcome you to Jerusalem.

Benyamin Cohen: Thank you.

David Zangen: Very happy to see you here.

Benyamin Cohen: Everyone's been very hospitable here. I'm really enjoying my time here. Let's talk a little bit about you before we get into what you're researching. Where are you... I'm guessing you are from Israel, by your accent.

David Zangen: Yeah. I was born in Tel Aviv. Two parents that are from a Dutch origin. They made Aliyah in 1955, and they are both Holocaust survivors, lost most of their families, and they made Aliyah in 1955 and I was born a few years later. I grew up here, although we spent some time in America during the fellowship of my parents.

Benyamin Cohen: Where in America?

David Zangen: In Chicago, but I was very young, two to four years old. And then-

Benyamin Cohen: Yeah, I don't detect a Midwest accent.

David Zangen: You shouldn't. And I did visit a lot my only grandmother that survived in Holland. I have kind of both European and American, some experience. Later on during my career, I spent three and a half years in Boston doing a fellowship in pediatric endocrinology at Harvard.

Benyamin Cohen: Oh, wow. I don't detect a Boston accent either.
David Zangen: They didn't either.

Benyamin Cohen: Did you know growing up that you wanted to be a doctor?

David Zangen: The truth is no. I wanted, actually, to experience going to the Army as a soldier, a normal soldier. Before, prior to the army, I did some courses in mathematics and physics, but in the Army I realized that they wanted to be in contact with people. And I wanted a meaningful life, an everyday meaningful life, and this is what I'm actually experiencing every day. That you do something meaningful for somebody. You know, after you treat the patient when he comes to you and says, "Do you remember what you told me?" And I obviously can't remember, but you know, I am aware to the impact of what's going on in the room and outside when they go out.

Benyamin Cohen: How did you land on pediatric endocrinology as a specialty?

David Zangen: Well, I did a residency in pediatrics here at Hadassah after medical school here, and I would say the following. In pediatric endocrinology, in general, is a kind of an analytical thinking. You do understand the axis of how the hormones are secreted, where they work, and you can try to analyze each step. You do understand and you do treat and to target. You know that the hormone works here, does this, maybe does another thing. You can actually research into it. There are many fields, I would say, in neurology and all brain research, that we don't understand a lot of it. Like pain, we don't understand. Psychiatry, definitely no. We give medication. It's very important for quality of life. But you do not really understand and you cannot go step by step and study it. This is one aspect. And then the other aspect, is what you really do to your patients. And in endocrinology, when you give treatment, it's really targeting the problem and you solve the problem. Solve, not always totally solve, but to enable life. Let's say, for diabetes, before having the insulin, you couldn't continue to live with Type 1 diabetes. And now when we give insulin and treat, you see that you basically, on a daily basis, you are involved in enabling this person to live, and to live in a better quality of life, and you impact his whole life. I said the understanding, the analytical side. The option to treat: This is true also in growth hormone, in puberty, and so on. And number three, is the follow up. It's not like, okay, you treat and you forget about this person. You know you gave him something, and this is it, and he's gone.

Benyamin Cohen: Right.

David Zangen: Psychiatry, definitely no. We give medication. It's very important for quality of life. But you do not really understand and you cannot go step by step and study it. This is one aspect. And then the other aspect, is what you really do to your patients. And in endocrinology, when you give treatment, it's really targeting the problem and you solve the problem. Solve, not always totally solve, but to enable life. Let's say, for diabetes, before having the insulin, you couldn't continue to live with Type 1 diabetes. And now when we give insulin and treat, you see that you basically, on a daily basis, you are involved in enabling this person to live, and to live in a better quality of life, and you impact his whole life. I said the understanding, the analytical side. The option to treat: This is true also in growth hormone, in puberty, and so on. And number three, is the follow up. It's not like, okay, you treat and you forget about this person. You know you gave him something, and this is it, and he's gone.

Benyamin Cohen: Right.

David Zangen: It usually has an element of family medicine or pediatrics with follow up. These children, they grow up with you, and you are very meaningful in their life for years.
Benyamin Cohen: I went when I was a kid, because I'm very short. I went to a pediatric endocrinologist.

David Zangen: And you recovered?

Benyamin Cohen: No.

David Zangen: Not really?

Benyamin Cohen: It was right before my bar mitzvah. They were debating whether or not to give me growth hormones.

David Zangen: Growth hormone, right.

Benyamin Cohen: And I'm happy they didn't. I mean, because it was probably... You could tell me there's probably lots of side effects to growth-

David Zangen: There's no... Not really.

Benyamin Cohen: No? Well, now it's too late.

David Zangen: Not really, but this wouldn't change... It wouldn't change too much totally.

Benyamin Cohen: Because I am only 5'2, so I ended up being pretty short.

David Zangen: 5'2?

Benyamin Cohen: Even for a Jewish guy, that's pretty short, no?

David Zangen: Stand up. You're more than 5'2.

Benyamin Cohen: Yeah, only 5-

David Zangen: A little bit... Yeah, you're a little bit more.

Benyamin Cohen: Thanks. What a great doctor. He just cured me. I'm bigger. No. My wife's only five feet, so you know-

David Zangen: So you manage.

Benyamin Cohen: I manage. But I only dated girls who are shorter than me.

David Zangen: Sure.
Benyamin Cohen: Yeah. My sister got growth hormones, but it didn't help her that much. She's still short.

David Zangen: You probably don't like growth hormone, so giving growth hormone will not really change too much. It's really four centimeters, an inch, if this is important.

Benyamin Cohen: When we return, Dr. Zangen talks about the latest trends in diabetes, including how an artificial pancreas will revolutionize the field, plus the incredible story of how he's training Palestinian doctors. All that and much more after the break.

Benyamin Cohen: Hadassah, The Women's Zionist Organization of America, leads several trips to Israel every year, and guess what? You're invited. The trips for 2020 are already filling up. In February, the trip will highlight Israel's bountiful nature and ecology. In March, we will unmask the country's vibrant art scene. In the April trip, we'll celebrate Yom Ha'atzmaut, Israel's Independence. In May, participants will visit Israeli wineries. In the August trip, we'll explore the country's vast archeological sites. If this sounds like a can't miss opportunity, head on over to Hadassah.org/israeltravel to explore the full year's itineraries and to sign up. That's Hadassah.org/israeltravel.

Benyamin Cohen: And now, back to today's conversation with Dr. David Zangen.

Barbara Sofer: What's new in treating diabetes for children and for adults? And we always hear that now children are getting adult diabetes, and you have contact with children who grow up with diabetes. What are the trends? Where are we going in this very common disease?

David Zangen: If we talk about the Type 1 diabetes, which is considered an autoimmune disease, that you lose your beta cells that produce insulin in the pancreas. The big jump was actually 100 years ago, with the finding of insulin as the. It's the regulator of the blood sugar that's so important in all our activities in life, and our brain activity, and any other activity of life. This was an unbelievable achievement in 1921, and we're just going to celebrate 100 years.

Benyamin Cohen: Almost 100 years.

David Zangen: But since then, the insulin is now synthesized chemically. So it's not the big origin of the insulin, it's now human insulin. Basically, we are now getting very close to the, what we call the artificial pancreas, which is a pump that pushes the insulin in, and a sensor that sits under the skin, and all the time you can see what are your levels, and basically you have, outside the body, a replacement for this unbelievable machine that is created in us within the pancreas in these small cells. You both sense the glucose, and these are achievements of the recent years, and you give continuous insulin. And one achievement of the last three years is the connection between sensing and secretion, because this was really a barrier for years and years.
David Zangen: Basically, God or nature, created us with no need of us to be aware of how much sugar we have in our blood. Also, we cannot run after it in an efficient way. This is why we are created this way. Even the mice are created this way. We are not also able to think about how much oxygen we need or how many times we have to breathe in a minute. These are all kind of automatic actions of the body and, basically, when you had diabetes in the last 100 hundred years, where you can treat it at all, when you can live at all, you had to be all the time on the run after yourself.

Benyamin Cohen: Mm-hmm (affirmative).

David Zangen: And now when you have this better, artificial pancreas, you can lead more of a normal life.

Benyamin Cohen: Independent, yeah.

David Zangen: Independent.

Benyamin Cohen: I'm in my forties and when I was growing up in elementary, you know, first, second grade, I had a very close friend who had diabetes, and it was a much different diagnosis back then than it is today.

David Zangen: Oh, definitely, because it was a terrible chronic disease. You could not really know what is your blood sugar at the same minute. You measured what is in the urine that represented two hours ago. It's irrelevant. And so on and so on. So the advancements is dramatic.

Barbara Sofer: You've become a pioneer in training doctors in the Palestinian authority so that they get the same treatment. Can you just say a word about how you trained doctors there to bring them up to the level of doctors in Israel?

David Zangen: Yeah. This is very unique in our unit. Before, prior to 2004 or 2005, where we started this project, there was no one pediatric endocrinologist in the whole West Bank and Gaza. Now we trained, and now it's already nine pediatric endocrinologists, that basically all come to our weekly meeting in pediatric endocrinology.

Benyamin Cohen: Wow.

David Zangen: Every one of them spends three years with us, and did a normal fellowship in the field. And what we were very much interested in doing is not only to teach, but to bring them to the front line, so that they will be the first authors on the paper. They will be the one that present in international meetings. And you should understand that in international meetings, there are very few presentations coming from the Muslim world, because it's very competitive and obviously the ones that have more scientific strengths and more innovation,
they are there to present. And when you see a Palestinian guy presenting, they are all basically astonished to see. But this is what we did and they are all successful, and they are all continuing their contact with us. As I said, every week in our meeting.

Barbara Sofer: I think not just a Palestinian guy, but you have quite a few women doctors, whom you have promoted in their careers. Is that right? In the Palestinian-

David Zangen: In the Palestinian Authority? Yes, there are three... Well, four. And some of them, they lead basically the whole service in Hebron area in Ramallah, and doing an excellent job clinically and also scientifically. They continue the contact, so they ask the questions. Then they know that we are asking questions that we want to get to a solution and actually, from their sources, from their bringing the patients, we found new genes, new discoveries that are published in the best medical journals in the world.

Benyamin Cohen: As a Jewish Israeli, why is this so important to you to help elevate these doctors?

David Zangen: Well, I'm very identified with our tradition, with Jewish identity. I very much like my own people and our tradition and our history. I love Jerusalem and its ancient parts, but the Palestinian people are living here. They are human beings. I have a great love to human beings as human beings, and I believe that we have to work as we worked in Hadassah for many years, eyes-to-eyes on the same level with all human beings. Not only giving treatment as a medical doctor, which is trivial, that you treat everybody, but also working with your colleagues on a same level. And in this way, I believe this is my personal contribution to the chance of peace, of really being able to live together. I actually had not long ago this year, kind of a round birthday. How do you call it?

Barbara Sofer: Oh, yeah, a round birthday.

Benyamin Cohen: A big birthday.

Barbara Sofer: Which birthday?

David Zangen: Well...

Benyamin Cohen: 30. No.

David Zangen: Twenty. And then I talked to this one Palestinian woman doctor, and she said, oh, you know, that I'm still very innovative, and I'm very active and energetic. And I said, "Listen, you know, birthdays always a kind of a day that you think back and, you know, what did you really do or what did you really achieve?" And I shared it with this woman doctor that we are... She trained with me, and that we are in very close contact, we have good friends, and she is wearing a hijab. And she told me, "Why are you criticizing yourself? With all what you say." And then she said, "So what are your plans now?" So I said that I want to still achieve
two things, one in the national kind of level, not professional, and one medical professional idea.

David Zangen: And I told her that I want to find out a way how we can really solve or live better with the conflict. So I'm not a politician. And she looked at me and she said, "What do you mean? You did so much on that." So I said, "What do you mean?" So she said, "You don't know that every patient, Palestinian patient, that comes into your office, any resident, any fellow. You don't know how much you change their minds." So you know, I believe that hearing it from her, was very important for me. I believe that living together, looking in the eyes of people on the same level is important to our future here.

Benyamin Cohen: When we return, Dr. Zangen talks about how he recently discovered that the BRCA2 gene, which is most commonly related to breast cancer, was also linked to healthy ovarian development. Plus, the incredible story of how Dr. Zangen is helping children born with ambiguous genitalia.

David Zangen: What are the consequences? Obviously, fertility and gender assignment for the rest of his life, gender orientation for the rest of his or her life. These are major issues that we deal with, and we have here in Hadassah a special team: a urologist, a geneticist, a psychologist, a social worker, but headed by or led by us, because we don't make the real diagnosis and out of this, the consequences will be the decisions.

Benyamin Cohen: All that and much more after the break.

Dina Kraft: I'm Dina Kraft, the host of a podcast called The Branch, which tells the stories of relationships between everyday Israelis and Palestinians, Jews and Arabs. I've been reporting on the lives of Israelis and Palestinians for two decades, and people always ask me, "Will things ever get better?" No doubt, the road is long, but when peace does come, it will be thanks to the groundwork being laid by the people whose stories we tell on The Branch. On our show, you'll meet musicians who perform together every night, teachers in a bilingual school, social activists who share their struggle, and even parents whose children were killed in the conflict, but who have chosen reconciliation over revenge. The Branch, stories of real people forging strong connections and having important conversations, even when it's complicated. Brought to you by Hadassah. Find us anywhere you listen to your podcasts, or at Hadassah.org/thebranch.

Benyamin Cohen: And now, back to today's conversation with Dr. David Zangen.

Barbara Sofer: People often say that if you have a difficult childhood, then you're going to have a life where you become an abuser as well. And I'd like maybe to learn a little bit more about Dr. Zangen's Holocaust parents, and how their children turned out, and what they did for a living.
David Zangen: Well, I should say that there was never hiding of their experience in our home. I had a very lively childhood, happy childhood. And there were no real complaints. The only one element that was a very strongly present, was the fact that we were a very small family. So when Saturday night comes or holidays, you're only your parents and you two children, and later on we were four, but there were no grandparents, no aunts, no uncles, no cousins. It was like, you know, a small family. Later on, it started to grow and now the family is a big family.

David Zangen: But they had no complaints and they felt that they came here to Israel, to build their career, and they built it, and wanted to be the best in what they are doing. And that's how my father used to say that, he doesn't want any revenge towards the Germans who murdered his parents in Auschwitz. But his revenge is that we survive, and the family continues, and that Israel is flourishing.

Benyamin Cohen: Right, and that you succeed.

Barbara Sofer: Your mother was a well-known doctor, is that right?

David Zangen: Yeah. My mother is a family doctor, but did it in a very meaningful way and became the head of the Israel Medical Association.

Benyamin Cohen: Wow.

David Zangen: Yeah, the first woman and until now, I think the only one.

Benyamin Cohen: Wow.

Barbara Sofer: Are you all doctors?

David Zangen: Well, my older brother's a doctor. My younger brother is a researcher, but also in biology, brain research, and then we have a very competent sister who is a lawyer.

Benyamin Cohen: At family reunions, if somebody gets sick-

David Zangen: There are several people, because there are two sisters-in-law that are also doctors.

Benyamin Cohen: We've talked a lot about diabetes. And I know you're the head of the pediatric endocrinology division here. There's probably lots of people who want to talk to you and we're taking a lot of your time. So I know there's patients waiting, so I want to get to some other areas of your research. One of the things I was reading about you was... We're all familiar with the BRCA2 gene, and how it's... Did I pronounce it right? BRCA2.

David Zangen: BRCA.
Benyamin Cohen: BRCA. And then how it's related to... Usually people think about it in terms of breast cancer, and Angelina Jolie famously made it very much on top of people's minds, but you've discovered something else about the BRCA2 gene. What's that?

David Zangen: Yes. Well, one of the major fields that I deal with, actually related to our previous subject that we talked, is disorders of sexual development. And this is when you are born: How do we develop into a male or a female, and what are the genes that are important for this development, that you will have an ovary if you are a girl, if you are an XX chromosomes, if chromosome 23's XX, or how to develop a testes when you are chromosomes XY, and when your chromosomes are including XY. So there are quite a number of cases that come to us that the gender is not very clear. They are born ambiguous, they are born with no clear sex, and then-

Benyamin Cohen: This is a newborn baby.

David Zangen: A newborn baby. Or they come when they are into their adolescence and don't develop into puberty.

Benyamin Cohen: So like a 10 year old kid?

David Zangen: A 12 year old or 14 years old girl that didn't develop any breasts or then go into menstruation. A kid that at 14 years old, has not grown anything in his genitalia. And know that he looks like a five-year-old and you know, this is a crisis obviously for these families, either when they are born with something not clear in the genital areas or when they are not growing into, not going into puberty. And so they come to the pediatric endocrine clinic and as I said, related to the previous subject, when you are coming from consanguineous families, you can try to track down the gene that is responsible for this. And sometimes it's a novel gene. It's a new gene. That was not known before. And then you understand the whole mechanism and it can solve a lot of problems, or you can bypass or you can treat or you prevent further cases.

David Zangen: If you have a child that is XY and grew like a male, and grew up all the years as a girl. And then this XY male doesn't have a uterus but looks like a female, what do you do? What are the decisions? What are the consequences? Obviously, fertility and gender assignment for the rest of his life. Gender orientation for the rest of his or her life. These are major issues that we deal with and we have here in Hadassah a special team: the urologist, the geneticist, the psychologist as a social worker, but headed by, or led by us because we both make the real diagnosis and out of this, the consequences will be the decisions. Back to your question about the BRCA. We had BRCA2 gene. We had the two Ethiopian girls came, immigrants from Ethiopia-

Benyamin Cohen: Sisters?
David Zangen: Sisters, yeah. One came after the other three, four years after. That as we had two sisters, we analyze the genetic background.

Benyamin Cohen: So just to be clear, these two sisters came to you and they were-

David Zangen: They came at the age of 15 and the other one came at the age of 17 with no pubertal development at all, looking like a 10, 11 year old girls. And they were concerned that they don't develop into puberty. So we started analyzing and we found that they basically don't have ovaries. In spite of the fact that they have normal female chromosomes, XX. And then we started to analyze the genetic background. We did a whole exome, which means sequencing all the genes of a person. And we found that they have two different mutations coming one from the father, one from the mother and the BRCA 2 gene.

David Zangen: That was obviously a real surprise to us, because BRCA 2 was always considered that mutations in BRCA 2 are cancer promoting-

Benyamin Cohen: Negative gene.

David Zangen: And here you'll see, that this same gene is important actually for the development of the ovary-

Benyamin Cohen: The healthy development of the ovary.

David Zangen: So if you don't have-

Benyamin Cohen: Interesting.

David Zangen: The normal function of the BRCA gene, you don't have ovaries. So, you know, understanding this and then when you go and analyze it, we know that the BRCA 2 gene is a kind of a DNA repair gene. And as a DNA repair, so if you don't basically copy the DNA in a proper way. If you don't do good repairs, then you are prone to develop a breast cancer. And so, but what we now understand is that, during the development of the ovary, there are typical stages, where you have to cross the chromosomes and you have to break them and to repair.

David Zangen: And basically if you don't break them and repair, you don't develop any eggs in the ovary and then you won't have an ovary. This finding, that we found led us to understand that without the BRCA 2 gene. You don't have ovaries and this basically we the lack of BRCA 2 gene in flies. And it was very impressive that the flies didn't have ovaries exactly like the human beings. That led us obviously to this New England Journal of Medicine publication just 10 months ago. And following this publication, there were letters from all over the world, so there is a cases in Italy that for years they didn't know what's the reason – and one from Hong Kong or China and one from Yale. It now comes to the awareness of all the
world that you need proper DNA repair to have ovaries and you need normal BRCA 2 gene to have ovaries.

Benyamin Cohen: This discovery was made here in Hadassah. How are the sisters doing today?

David Zangen: Well, they are doing fine. Unfortunately, at that point when they are already grown up, we cannot fix the ovaries that are not already there. But, for example, in this family it was very important, because finding the mutation, BRCA 2 gene, and the genealogy for no ovaries, we ask the mother to be surveyed for cancer and we found an early stage ovarian cancer in the mother. This basically, also leads towards-

Benyamin Cohen: Saved the mother's life.

David Zangen: And maybe saving so many other people all over the world, when there is problems in puberty screening for this screening for DNA repair and saving families and people around them.

Benyamin Cohen: If you and I were to meet again in five years or 10 years, where do you hope to be? What are your dreams and aspirations for the next few years – in another big round birthday?

David Zangen: Well first of all, I want to be happy with my family. Four children, I have three grandchildren. I hope that the family will be happy, flourishing and having more happiness and fulfill-ness within the family. This is the most important within the family in this country, that we'll flourish and excel in all what is done for the Jewish people and for the country. If you talk about the medical fields, well, I have some major questions that possibly I will try to study, research and come back to you then if I achieve that. It's actually very high in significance, in meanings, but I don't know if it's achievable.

Benyamin Cohen: What happen to other sequel? A part two of the interview and we'll see what happens.

David Zangen: Yeah, why not? You look young. You're 20, no?

Benyamin Cohen: I'm 20 and you are 30.

David Zangen: Yeah, that's right.

Benyamin Cohen: Lastly, before we let you go, is there anything we did not ask you that we should have asked you?

David Zangen: Maybe. The show is for the audience mostly in the USA. And I want to express my brotherhood to the audience that hears us across the ocean. To quote again my
mother, who used to say that Israel is a kind of a situation of a theater where you have the actors on the stage and you have the audience that comes and buys a ticket and support. And there is no theater without actors. There is no theater without the audience. And an active audience is so important and I so much appreciate the support of the Jewish community and the U.S. community in general. And I wish that they will be active both as players and as audience.

David Zangen: And I would say that Hadassah is the greatest example for what I just mentioned. Hadassah women that are getting up every morning and thinking of a hospital that is 5,000 miles away. This is not a trivial thing. I want to express my thanks and express the thanks of the whole State of Israel. This has enabled this hospital to become a leader of medicine in Israel and in the world.

Benyamin Cohen: Thank you Dr. Zangen, I'm going to let you go so your patients will be very appreciative. So thank you so much for joining us today.

David Zangen: And thank you so much for your kind and nice questions.

Barbara Sofer: Thank you. And both, as in my professional role here and as a neighbor, I look forward to seeing how all the achievements of the next decade are realized with you and I'm sure they will be.

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 Podcast 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.