

Transcript:
Season 4, Episode 3: The Truth About Hormones & Women's Mental Health

Hello, and welcome to this month's episode of Hadassah On Call: New Frontiers in Medicine. I'm your host, Maayan Hoffman. By the time you listen to this episode, we should be just a little closer to knowing who the next prime minister of the state of Israel will be. That's right. In case you didn't know, Israel is heading to the polls again. And by November 8th, at least one candidate should have been tapped to form a government and should be working to form a coalition. Israel is just days away from its fifth election in three years with 38 parties running to enter the parliament and somewhere between 11 and 13 expected to cross the electoral thresholds. My children always get excited on election day. That's because they're off school. While I'm busy preparing my analyses and thinking, "What am I going to publish on this website or that one," they're heading to the parks and restaurants with their friends. Even though Israel has more elections in a shorter period of time than any other country in the world, we still like to vote.

At least 70% of us will be at the polls on November 2nd to cast our ballots. For now, it's a good time to talk about fall in Israel. I'm a distance runner and I have to admit, I miss the autumn in Kansas where I'm from. There, the leaves would fall in so many colors, reds and oranges and yellows all over the ground, and I would love to run outside and look at the beautiful fall. In Israel, we have a very small fall, and the leaves fall from the trees. But when they do, they simply stay the same color, fall on the ground, and crumble up. However, my little children do love to jump inside them nonetheless, it's a great activity for a Friday afternoon. We also

recently gained an hour with daylight savings time giving us a little more energy as we head into the winter. We'll need it when the rainy season starts, and the skies turn gray. Winter weather always makes me a little bit depressed; I need a cup of tea and a warm blanket, and I don't really want to get out of bed and go to work.

Speaking of our moods, we have today a special guest, Dr. Inbal Reuveni, a Senior Hadassah Psychiatrist. She's going to talk to us about women's mental health. Welcome, Dr. Inbal Reuveni. Welcome, Dr. Inbal Reuveni. Now, you've been on our show in the past. You were on an episode called You, Me and PTSD, and I encourage of course our listeners and viewers to go back and check that out. And I want to go back and talk more about your background and how you got to Hadassah. But I'd like to start by jumping into one of the questions that I think our listeners are thinking a lot about today is the time is changing with daylight savings time and we're moving closer to winter. Tell me, with the holidays finishing and not so many holidays to come until Hanukkah, is this a time where we experience more depression, more mental health challenges?

#### **Dr. Inbal Reuveni:**

Well, first of all, thank you very much for inviting me again. I'm very pleased to be here. It's a very interesting question, although I don't think I know any research about this, but from my clinical point of view, first of all, the holidays are a pretty difficult time in Israel. We have a lot of holidays very close together. Many people, they get off their normal schedule, no work, being with family a big chunk of the time. And many times, people are more distressed and more stressed out and they don't have any resources to go to because everyone is on vacation. So actually, being back from those vacations are sometimes better for our patients and for people who have mental health issues.

### **Maayan Hoffman:**

That's interesting.

#### Dr. Inbal Reuveni:

So that's one perspective. But we do know that seasonal depression is something that some people experience, and winter can be more difficult when we have less times where there is sun and light outside and less time when you can go and be outside and meet people, then it could affect your mood in some ways.

# **Maayan Hoffman:**

Well now, how would you know if it is an actual illness? For example, if you're starting to experience something like clinical depression or if it's just that time of year or like the holidays, a period in your life?

### Dr. Inbal Reuveni:

That's an important question because I think many people struggle with periods of stress in their lives. But once you feel that this has been going on for a while, we talk about maybe a couple of weeks, more of feeling not so good, feeling down, feeling you can't enjoy things or being stressed about things, minor things. And if it causes you enough distress, so if you're feeling that this is really hurting you and making it difficult for you to function maybe at home with your family or even at work, then this probably requires getting help or even consulting with someone, seeing how you can get help.

# **Maayan Hoffman:**

It's very fascinating. I mean I wonder with that, when somebody goes to get help, who should they appeal to in that first round?

### Dr. Inbal Reuveni:

So, in Israel, the first person you appeal to, the first physician is probably your family physician. That's I think the go-to person in our healthcare system. It's easy, you can make an appointment within a few days and usually they can even start medication if you need anything right at the first meeting. So, I think you can start with that and if you feel things are more complicated, then you can go to a mental health therapist or a psychiatrist.

### **Maayan Hoffman:**

Interesting. Now, I want to jump over to research just for a moment because I understand that here at Hadassah you just completed some research into what causes premenstrual syndrome or PMS. And also, that the results of PMS on women's mental health were looked at in that study. Tell me about the conclusions that you drew. When women stop getting their periods, do they have more symptoms, less symptoms? And how about menopausal women in general, how do they fit into the research?

### Dr. Inbal Reuveni:

So indeed, we did conduct a large-scale study on premenstrual symptoms. We included especially students from The Hebrew University. It was over-

### **Maayan Hoffman:**

They took part in the study?

#### **Dr. Inbal Reuveni:**

Yes, they took part in the study. Some of them just did some questionnaires, some of them actually went through imaging twice during the menstrual cycle. So that was very interesting. And we've published a couple of papers about this, actually that's what I was doing last night when I was writing until late in the hours. And so first of all, premenstrual symptoms are very common. We're talking about 20 to 30% of women who experienced them. But having the true disorder, as we talked about, having a disorder that causes you difficulty functioning at work

during those days when you have symptoms, that's only about three to 8% of the women. So that's less.

And it changes with age. So, the younger women have it, usually they're not aware of it so much. But when they get older, get more aware, after they get pregnant, sometimes the symptoms worsen and then they go to get help. And there is a connection between this and premenopausal depression. We see that women who have vulnerability towards fluctuations in their hormones and normal hormonal cycle, they will have more depression and anxiety during other stages in their life. So that would be pregnancy, postpartum and perimenopause.

# **Maayan Hoffman:**

That's fascinating. And so essentially, there is a real connection between what's happening physically when you're getting ready to have your period and your mental health condition. Is that correct?

#### Dr. Inbal Reuveni:

Yes. I think to be more specific, there is a subgroup of women that is more vulnerable to these changes. So, some women, as you probably know, they go through these changes and don't experience any difficulties. But some women, probably due to maybe biological vulnerability or other things, they have more chance to experience those symptoms.

## **Maayan Hoffman:**

Okay. And you said that's three to 8% of women?

#### Dr. Inbal Reuveni:

Yes.

### **Maayan Hoffman:**

So now, what implications does research like this have? In other words, what should the impact of this research be on what we do in society?

#### Dr. Inbal Reuveni:

So, first of all, women need to know this exists. I think when we talk about especially what they do now, perinatal depression, we see that women are not aware that this is a possibility. We know more and more and about postpartum depression, not so much about depression during pregnancy and very little about perimenopause and PMS. So, women need to know this may happen. And if they have this vulnerability, if they experience when they're younger premenstrual symptoms, they would have more risk to experience this during pregnancy and postpartum and perimenopause. And I think first of all, they should let their physician know about this and they should think about getting help if they feel these symptoms coming on.

### **Maayan Hoffman:**

And what help should they be getting? Is that getting somebody, like as you mentioned, a therapist or a psychologist? Is there a psychiatric help that they need, potentially medications?

#### Dr. Inbal Reuveni:

It's usually combined. And I don't think I have a one size fits all solution for this, that's what I tell the women who come to me. Each women needs their own thing. And it depends on their background, it depends on other issues, under other psychosocial stressors she has at home. But I think again, the physician, the family physician, maybe your OB-GYN doctor, you should consult with him. And I believe more and more know about mental health and how to connect you to those resources.

### **Maayan Hoffman:**

Wonderful. Is there anything that the women can do for themselves other than appealing for help?

#### Dr. Inbal Reuveni:

So there's a lot of things. First of all, when we talk about menstrual symptoms, it's very interesting that even just having a diary, I'd say put it on the refrigerator, just see when your menstrual cycle and how long it is and when is it coming up. And then okay, now I'm shouting at, whatever, my husband, my boss, I know what's the reason so I can calm down. This is not so difficult, I can prepare. Maybe this is not the time to have a big conference meeting at the workplace. And the other things is if you have cravings, maybe prepare the right food in advance, some salad at home, do more exercise, these are all things that have been shown to be helpful.

### **Maayan Hoffman:**

Great. Now before we go on, I do want to pause just for a minute and take us back so that we can understand just a little about how you know so much about this subject. Could you just give us a little bit about your background and how you came to Hadassah?

### **Dr. Inbal Reuveni:**

Okay. So, I have done my residency here in psychiatry in Hadassah. And during my residency, I started to do liaison work for the OB-GYN department. And that's where I got the bug as I call it. And since then, I've been very occupied with women's mental health issues during my clinical work and my research. When I finished residency, I worked for a couple of years in the clinic. I was the director of the mental outpatient clinic. And then I went to New York for two years. I did a research fellowship at Columbia University at the Perinatal Pathways Lab with that Dr. Catherine Monk. And that's a lab that researches the effects of prenatal factors like stress, depression, trauma and woman and her baby. So, I started my research there and I continued it when I came back to Israel. And I also founded Women's Mental Health Service. It's an integrated service, we're placed here in Ein Kerem and at Mount Scopus campus. And we work very closely with the OB-GYNs in the hospital.

If you're enjoying this episode, you'll want to check out our previous episode with Dr. Gal Goldstein, Head of the Dyna & Fala Weinstock Pediatric Hemato-Oncology Department at Hadassah Ein Kerem. He talks about the tragedy of kids with cancer. We touch on diagnosis, bone marrow transplants and immunotherapy, the emotional needs of patients and physicians, post-treatment stress and anxiety, precision medicine and research into genetic mutations.

### Dr. Gal Goldstein:

The resources, I think they know that they get a very, very high standard cutting edge treatment at Hadassah. Not in all the countries throughout the world they have the opportunity to have this type of treatment. I don't think there is a treatment that is given today at the pediatric oncology field that we don't give. We are connected to the best centers in the world. We are connected of course to the literature, and we know what's happening. And we didn't ever have any problem in getting any medication. And also, we are very experienced in most prevalent cancer in children oncology, but we are also very capable in treating the most scarce types of cancer.

### **Maayan Hoffman:**

Do you want to know about the innovative work Hadassah is doing to help stop childhood cancer? You can find that episode of Hadassah On Call on Apple Podcast, Google Play, or wherever you get your podcast, or on the web at hadassah.org/hadassahoncall. That's hadassah.org/hadassahoncall. And now, back to our conversation with Senior Hadassah Psychiatrist, Dr. Inbal Reuveni.

### **Maayan Hoffman:**

So now, I want to take us not as far back as your background and not to today, but actually to COVID-19. We are still experiencing some COVID-19, but of course the world has moved beyond. But during COVID-19, we found that there are... Or I should say there are some longstanding effects from COVID-19 on us today and specifically on our emotional health as well as the physical health, but certainly emotional as well. There was a lot of talk during the pandemic about women being the hardest struck on the psychological side even more so than men. Do you think that's true? And if so, why do you think that was?

#### Dr. Inbal Reuveni:

It's actually very interesting because we did a study on pregnant women during COVID-19. We followed them up from the first wave of the pandemic until the fourth, about a year and a half. And actually, we published about the first wave, and we found that women who are pregnant were actually less depressed than women who are not pregnant. So that would be very interesting. I think it has a couple of reasons, maybe one reason that women in Israel are protected by work laws, they can't be fired, they knew that economically they're safe and they were home with their husband, maybe their kids. It was a nice time if you can go back to that time for some people.

So, it's an interesting... I don't know, I think it's more local, but there are not a lot of studies comparing pregnant and non-pregnant women during that time. And maybe after a while, I think we burned out. So, we were like, "Okay, let's do this." At the beginning, everyone is together at this. We do some projects at home, we build things, we renovate. But after a while, we got tired of being at home. We got tired of the changes that we experienced, and people got more depressed, more anxious about it. So I think that's an interesting question. And most studies show more depression, anxiety, more eating disorders during the COVID-19 pandemic.

## **Maayan Hoffman:**

Specifically, among women?

#### Dr. Inbal Reuveni:

Women are always more prone to depression and anxiety. So, I'm not sure that studies are talking specifically about women, but we know this is a difficult time for them. So yes.

## **Maayan Hoffman:**

And are we still seeing that, as I mentioned today, are you seeing an uptake, for example, in women coming into the clinic suffering from these symptoms as a result of COVID?

#### Dr. Inbal Reuveni:

So, I think women who have generally a hard time adjusting to changes in their lives, we see them during COVID have a hard time adjusting to the changes we underwent, but also going back to work and school full-time, everything is very stressful. So, the changes are difficult more than each time at its own.

### **Maayan Hoffman:**

For sure. Now, you mentioned something that I feel is a stereotype that women are often seen as more emotional than men. So, I'm assuming it's not just a stereotype since you mentioned it. Talk a little bit about that and why that is.

#### Dr. Inbal Reuveni:

So, I don't know what more emotional means, but we do know that women are twice more prone for depression and anxiety than men. But this is true for the reproductive age. So actually, we think that's because of the hormonal changes they undergo. So, think about having a hormonal storm at least once a month, this can be very troubling and cause depression and anxiety. And so that's one of the reasons this happens. Of course, there are other psychosocial issues. Women are more prone to experience domestic violence and trauma. So, this is I think taken together to what we see in the epidemiological studies. But also, when a woman comes to a doctor and says she's experiencing maybe chest pain, difficulty breathing, he would be more likely to diagnose her as having a panic attack than maybe a heart attack. And we talk about this a lot when treating women, just not dismiss their symptoms and just being the emotional ones.

It's a little bit scary. And when you talk about reproductive age, what is that age range just so our listeners know?

#### Dr. Inbal Reuveni:

So, we talk about the menarche, it's changing I think, it's getting younger these days. What we are talking about age 12 and until perimenopause, which is about 45-years-old.

## **Maayan Hoffman:**

Okay, wow. Now, are women in Israel different than women in the U.S.? Women, for example, here are now starting to take on all these new combat roles, they're joining the Tank Corps and others, all these fighting units, are these things going to be factors? Will there be any difference in what we see?

#### Dr. Inbal Reuveni:

First of all, I think we talk about women in the U.S. and what I learned when I was in New York is there U.S. is so diverse and so different. So, I don't know, there are a lot of women in the U.S. I don't like to talk about women as a group. I do think there are differences. And the second thing is women in the U.S. have been in the military for quite a while, even in combat roles. So, I think they know more about that than us actually. But I think something in the social construct of Israel, I think family here is very strong, is very close, even the proximity of you don't have to fly a plane across the states to meet your family, but you just go, maybe worst case, three hours by car. So family is very close, social support is very strong here. And that may be some protective factors that we see for mental health.

## **Maayan Hoffman:**

That make it easier for Israeli women.

### **Dr. Inbal Reuveni:**

May make it easier.

#### **Maayan Hoffman:**

May make it easier. Interesting.

Living in Israel, I get to experience 3,000 years of history every day from the inspired to the inspiring. And now that the world is opening up again, travel with Hadassah to Israel. Check out our exciting new tours featuring a family trip to Israel this December, a Purim celebration in March 2023 and there's no better place to celebrate Israel's 75th birthday in April than with Hadassah in our homeland. Experience the magic of Israel's sacred places, the famous Chagall windows, the sights, and smells of Jerusalem's famous outdoor markets. Contact Hadassah Israel Travel for detailed itineraries or questions at 1-800-237-1517. That's 1-800-237-1517. We

can't wait to see you in Israel. And now, back to our conversation with Senior Hadassah Psychiatrist, Dr. Inbal Reuveni.

### **Maayan Hoffman:**

Now, aside from the research that we spoke about toward the beginning of this podcast, are you and Hadassah engaged in any other research that we should know about regarding women's mental health?

### Dr. Inbal Reuveni:

Yeah. So actually, I have a very exciting research project going on. It's a very large-scale project. We have interdisciplinary work with psychological questionnaires and imaging work where we recruit women who are planning to become pregnant, which is a very interesting group that there is very little research about. And we look and see if they have any risk factors to develop depression and anxiety later on during their pregnancy and postpartum. And we look especially about their background and if they experienced childhood trauma in the past, which this is very interesting for me specifically.

### **Maayan Hoffman:**

Have you gotten any preliminary results or is there anything you can tell us about that research today?

#### Dr. Inbal Reuveni:

We've got some preliminary results, although we are still in the midst of the research. We can see that women who have experienced childhood trauma from different angles, they have more depression and anxiety. They have difficulties attaching to their unborn child or baby. But we still need to continue this research.

### **Maayan Hoffman:**

And when do you think you'll complete it?

#### Dr. Inbal Reuveni:

Oh, hopefully next year, I think. Almost, we have more than 100 women in our study, we're about 40 babies which is very exciting.

### **Maayan Hoffman:**

Wow, that's great. So, I'll have to mark the calendar and we'll call you back to find out how it goes.

#### Dr. Inbal Reuveni:

I'm always happy to talk about the research.

Excellent. So, if we were to speak about this issue of women's mental health in five or 10 years, what advancements do you hope that we would see in the field or in your research?

#### **Dr. Inbal Reuveni:**

First of all, I think I would like to see the stigma go away, okay? We can talk about mental health. I think actually COVID-19 helped us with that. We've been talking about mental health since then a lot more. So, I want people to be aware, especially women, to be aware of those issues, to feel free to approach their family physician with those issues and ask for help. I would be happy if the resources would be more available for them, and they could come and seek help and get help whenever they need. And the other thing is talking about my research, maybe we can find more specific risk factors.

So, when I talk about childhood trauma, and we know this is a very powerful risk factor for actually general health throughout life, so obesity, cardiovascular disease, but during pregnancy, pregnancy complication and so on, so that physicians would ask, "Did you experience any trauma in your life?" So, this is important for your physical health, for your pregnancy, for your unborn child. And the last thing is, I don't think five or 10 years, but maybe later on we could find biological or more quantifiable ways to assess risk and before women start their pregnancy or reproductive events.

### **Maayan Hoffman:**

In other words, you would be able to actually prevent them developing some of the mental health challenges disorders that we see.

#### **Dr. Inbal Reuveni:**

Yes. I am a big fan of prevention. I think if we can help women before those symptoms arise, this is the best thing that could happen for them, for their family, for their child.

#### **Maayan Hoffman:**

So Inbal, tell me, is Hadassah Medical Organization different, advanced, unique in any way in the area of women's mental health?

### Dr. Inbal Reuveni:

Well actually, I think we are the only place in Israel where we have an integrated mental health service. So that means that we are integrated within the OB-GYN department here Ein Kerem and at Mount Scopus Hospital. So, there are other women's mental health clinics in Israel, especially in Tel Aviv actually. But we are the only one that is really truly embedded within the OB-GYN. And it sounds like it's a very technical issue, but actually it's a very fundamental issue for me when I founded this service. So, I think this ensures the close relationship between me and the OB-GYNs in the department.

Again, referring women when they go to their OB-GYN, this is their primary care physician throughout those critical years. And when they have a problem, they refer to him or her. And

when we sit in the next room beside them, it's easier to refer to us, it's easier to think about mental health issues as another issue you need to take care of. So, you go to your OB-GYN, and you say, "Oh, I need this and I need that." He says, "Okay, go to the ultrasound room and the next room by that is Dr. Reuveni, the psychiatrist. Maybe you can consult with her." So, this is very important. We feel this reduces stigma and increases accessibility of women to mental health care especially here in Jerusalem.

## **Maayan Hoffman:**

Are there any success stories that you can share with us, maybe an example of some time that that really proved to be specifically effective for a woman?

#### Dr. Inbal Reuveni:

I'm glad to say we have a lot of success stories, but I think one story that is very touching for me, and I still see that woman, so I'll be very vague maybe with the details, but I think it's a story that's shared by many of our patients is we see women that have experienced childhood abuse in their past. And they come into pregnancy feeling very scared and stressed and anxious about the changes in their body, but also the delivery itself, the delivery process. So, when we see those women, usually again, the OB-GYN sees her first and then he refers her to us. We talk about her history, and we try to, as I say, tailor the treatment especially for her. And one of the things we do here is we have joint work with the delivery room nurses and the senior staff where the women go and meet with them before they give birth.

They talk about their past, what they're afraid of, what will help them go through this process more easily and feel more comfortable during this time. And it's very, very touching. It's always very emotional for everyone involved. And the women feel sometimes for the first time in their life that someone is respecting them, respecting their body, seeing their need in this situation. So, this is always very, very important to me. And when we follow them up, we hear how much this experience was so important to them. And this woman I'm thinking about while talking, I've been here for three years since I got back, it's her second baby. Well, it's Jerusalem, we have this going on a lot, but it's her second baby. She's been through a lot in her childhood but being here in Hadassah has been such a special experience for her. So, I'm glad we're a part of this.

### **Maayan Hoffman:**

That's really special. And I'm sure there are hundreds of women that you're helping in that way. Well wonderful. Thank you so much, Dr. Inbal Reuveni, a Senior Psychiatrist here at Hadassah Medical Center for joining us today. And this is Maayan Hoffman signing off from the Hadassah On Call: New Frontiers in Medicine podcast. Have a great day.