



Episode 32: Dr. Hananel Holzer – The Many Paths to Parenthood

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:

Today's guest is Dr. Hananel Holzer, the head of the fertility department at Hadassah Hospital in Jerusalem. The Hadassah organization in the U.S. recently launched the “**ReConceiving Infertility**” initiative aimed at raising awareness, confronting taboos, and empowering families dealing with fertility issues. To help us better understand the topic, we sat down with Dr. Holzer to discuss some of the causes of infertility, what treatments he's seen success with, and some research he's working on that seems straight out of science fiction. We had an intriguing conversation, and I think you're really going to enjoy it. So, without further ado, here's Dr. Hananel Holzer.

Benyamin Cohen:

Hello everyone, and welcome to the show. I am your host Benyamin Cohen, and today I am thrilled to be joined by Dr. Hananel Holzer. He is the head of the fertility department, and the soon to be head of the OB/GYN department at Hadassah Hospital in Jerusalem. Welcome to the show.

Dr. Hananel Holzer:

Thank you, Benyamin. Hello, New York.

Benyamin Cohen:

Thank you. I'm actually in West Virginia right now.

Dr. Hananel Holzer:

Okay.

Benyamin Cohen:

Yeah, in the mountains of West Virginia. You know, when I heard that I had to be socially isolated and socially distant, the mountains are a great place to be. So how are you doing? Let's just start with that. How are you doing in this time of corona?

Dr. Hananel Holzer:

Very well, thank you. We are working hard. Actually awaiting... we just restarted providing IVF treatments at Hadassah this week. So we are all excited.

Benyamin Cohen:

How has the coronavirus pandemic impacted fertility treatments?

Dr. Hananel Holzer:

Well, around mid-March there was a moratorium on IVF treatments. There are three main issues. First is the medical resources. We didn't know what's going to happen, and we thought we might need all the resources. For instance, in Israel we are expecting 5,000 people to be on ventilators. Hadassah, we were allocated 1,000 beds of the ventilators. So we had to stop to see what we can do with the resources. We also didn't know what may be the effect of coronavirus on pregnancy. And we needed to stop the transmission between patients and personnel and patients to other patients. So there was a moratorium. A few weeks ago once we saw that the curve is flattening in Israel, and we can handle the number of patients, and we learned also how to protect ourselves, we decided to restart delivering fertility care. And actually Hadassah and Tel Aviv Center were the first in Israel to re-initiate this important process.

Benyamin Cohen:

Yeah. I know here in the States, IVF is often considered an elective procedure. And so, people have had to put their plans on hold.

Dr. Hananel Holzer:

Yes. And actually IVF, I would not call it an elective procedure because infertility is a disease and the treatment, which IVF is one of them, treatments are timely dependent. If we wait too long, then the success rate decreases. So, I've heard this a lot, but we look at it as an important treatment, with the treatment should be provided in a timely manner.

Benyamin Cohen:

That's interesting you say that. Because I think a lot of people may not put fertility treatments in the same category as let's say, a life or death cancer issue, or a heart issue. But you're saying it should be looked at as a disease.

Dr. Hananel Holzer:

The WHO, the World Health Organization defined infertility as a disease 11 years ago. Of course it's not a life-saving procedure, and resuscitation or heart conditions are things that could not be postponed. But with fertility, we should remember that the success rate is in a timely manner, and time dependent.

Benyamin Cohen:

Right. So let's just take a step back for a second. I want to hear, before we go too far into the issues of infertility, I want to talk a little bit about you. Where did you grow up? Did you grow up in Israel?

Dr. Hananel Holzer:

I was born and raised in Israel, in Jerusalem. Actually I was born at Hadassah and so were my three children.

Benyamin Cohen:

Wow.

Dr. Hananel Holzer:

Yes. Right after completing my army service, or even a few weeks before completing the three years, I went into medical school, the Hadassah and Hebrew University Medical School. I had my OB/GYN training at Hadassah, and subspecialized in fertility. After a few years, we decided to go to McGill, to Montreal to acquire some competencies. I was supposed to be there for a year. The year turned out to be over a decade. I was offered to be the director of the reproductive endocrinology, the infertility fellowship program. And later I was appointed as the director of McGill Reproductive Center. So, we ended up staying more than 10 years. Recently, I've accepted an offer to come back home, and here we are in Israel.

Benyamin Cohen:

Wow, very nice. And so you live in Jerusalem now?

Dr. Hananel Holzer:

We live in one of the suburbs, yes.

Benyamin Cohen:

How did you choose fertility as a specialty? Was there some personal connection? Was there fertility issues in your family? Or is it something you just were curious about?

Dr. Hananel Holzer:

Until I was a fifth year medical student I always said, "I'm not going to be a gynecologist." But then I saw, when I was rotating in this department, I saw the profession which was really interesting. And I thought that fertility, it was then as we can say, in the diapers. It was the mid '80s, and IVF just started a few years earlier. And I thought it's the most fascinating field to specialize. It's a happy field sometimes, most of the times, that you help people create life.

Benyamin Cohen:

Is there a clinical definition of infertility? I mean, if a couple tries to have a baby, at what point is it clinically defined as being infertile?

Dr. Hananel Holzer:

So, infertility is defined as a year of trying to conceive without ability to conceive. We start investigations after one year of unprotected intercourse. Sometimes we start earlier if the patient, the female partner is over 35 years of age, then we start the investigation earlier. But, the accepted definition is one year of trying to conceive. If there's an apparent reason, if the female partner suffers from problems with the menstruation period, she doesn't have any, so we know there's a problem with the ovulation. So we wouldn't advise her to wait for a year. We start looking into things earlier.

Benyamin Cohen:

Can there be genetic predispositions? Like if your parents had fertility issues is it possible to be passed down?

Dr. Hananel Holzer:

It's a very interesting question. There are some hereditary components. You know, years ago there was a joke: could infertility be hereditary? And actually it could. For instance, we have extreme situation when the male partner doesn't have any sperm cells. Some of them carry very small deletions in the Y chromosomes. Years ago, these patients who do not have sperm would not have children, or would be referred to a sperm donor. Now we can extract sperm cells from the testicles, and then use it for in vitro fertilization. So the Y chromosome could have these micro-deletions, therefore could be associated even with fertility issues with the next generation. We also know that some ovulation disorders are more common within families. And there are still things that we don't know, and there is much research being done.

Benyamin Cohen:

Yeah. We seem to hear about so many couples struggling with infertility these days. Is it that these struggles are more out in the open, or is there, for lack of a better word, an epidemic of infertility?

Dr. Hananel Holzer:

So, I think it's both actually. I'm not sure I would use the word epidemic in these days. There is more awareness. People are more inclined to discuss this very intimate issue. But also, we know about the world trend of conceiving or setting up a family later in life. And people, not all of them are aware of the fast decline of fertility with age, especially in women. So people develop their careers, and then they come and see us and say, "Now I'm all set. I have a good profession, a good income, financially sound. Let's go into the fertility issue." And sometimes it's too late. On top of this, also we have added some indications for fertility treatments that we didn't have before.

Dr. Hananel Holzer:

Except from infertility patients, we also perform fertility preservation, I'm sure we'll discuss it a bit later. And also we do the genetic testing –what was called before pre-implantation genetic diagnosis, and now it's called PGT, preimplantation genetic testing. When two parents are carriers of genetic disease they have a 1 in 4 chance of having a sick child. So we can perform in vitro fertilization even if they don't have any fertility issue. We create embryos in the lab and then we test the embryos, which one is healthy, and some are carriers of the disease, and some are sick. And we transfer to the uterus only the normal

embryos. So this is a completely new indication of the last two and a half decades. So all three things I would say, people talk about it more, there is a delay in childbirth because of the age related to client fertility is an issue, and also the new indications.

Benyamin Cohen:

So there's age is an issue, genetics could be an issue, are there any other underlying causes of infertility?

Dr. Hananel Holzer:

Oh, there are many. Even environmental issues affect fertility. We know there are more phytoestrogens now around, so it affects both male and female fertility. And there are also things that we don't know yet.

Benyamin Cohen:

Right, right. Like you were just saying, infertility could be an issue with a man or a woman. It's not necessarily tied to just one person in a relationship.

Dr. Hananel Holzer:

Yeah. Actually, fertility is a fascinating field of medicine which normally affects two individuals with various degrees of infertility or fertility. So, sometimes it's a combination. And we think there is a main factor informed in almost half of the cases that we see.

Benyamin Cohen:

When we return, Dr. Holzer talks about why infertility is more prevalent in the Jewish community. Plus, the impact on a couple can be just as much an emotional burden as it is a medical one.

Dr. Hananel Holzer:

Our approach is a comprehensive approach for fertility. The emotional and psychological burden is tremendous. I always talk about it, and when I speak I compare it to driving a... going on a roller coaster, an emotional roller coaster.

Benyamin Cohen:

All that, and much more, after the break.

Benyamin Cohen:

In recent days, the world has been socially distancing themselves from others. Terms like “flattening the curve” have become part of the common lexicon. And working from home has, for the time being, become the new normal. So, if you're looking for something to keep you company while you're at home, check out the “Hadassah On Call” podcast archive. If you're listening to this podcast on your phone, you can simply download all of our previous episodes right from your podcast app. Or you can head on over to hadassah.org/podcasts to see a complete look at our archives. You can hear our interview with an Israeli midwife, whose research on the “Me Too” movement is impacting her profession. Or listen to our conversation with an ophthalmologist who is doing the remarkable work of corneal transplant surgery. Those are just some of the topics you'll discover in the “Hadassah On Call” archive. And now, back to our conversation with Dr. Hananel Holzer.

Benyamin Cohen:

Here in the United States studies have shown that one in eight couples have trouble getting pregnant, or keeping a pregnancy. And within the American Jewish population it's even higher. I've read as high as one in six couples. Do you find the same statistics in Israel? And are there reasons for this that maybe it's a little more prevalent in the Jewish community?

Dr. Hananel Holzer:

So, we think that around 15% of the couples trying to conceive would have difficulties, which makes it one in eight. However, in certain populations, people seek advice even earlier. We know that the first commandment is "*Pru urvu*" – be fruitful and multiply. It's a special, very important issue for the Jewish community. On top of that, we like to have control of our life and health. So we seek advice earlier. We also find it difficult to accept the failure. So we see people earlier and for longer periods of time. For instance, in Israel, fertility treatments are covered by health insurance –the most generous coverage in the world. People will have as many treatment as they need to the age of 45, until they have two mutual children. So yes, there's special attention to the "*Pru urvu*" issue within the Jewish community, both here and abroad.

Benyamin Cohen:

And I would think, because of that, there's probably some stigma. I mean obviously... I come from a large Jewish family, I'm one of six children. Many Jewish families, Arab families as well in Israel, they normally have a lot of children. So is there more of a stigma about infertility that maybe would prevent someone from seeking help?

Dr. Hananel Holzer:

I think there is a stigma of not having children. But I think it's the opposite. People would seek advice earlier. Even the Orthodox and the ultra-Orthodox community, they come and see us. Both here and in Montreal, I have the most extreme ultra-Orthodox communities come to seek advice and accept treatment. So there is a stigma. People feel very, very hard if they don't have children. But they would see us earlier even. Or, I could tell you that, to be approached by people who have already five or six children come to a fertility clinic, I think it's only among the Jewish or Muslim population. Both here and in Canada, I had patients like that. And other people look at that and say, "Seriously? They have five children. How come they come and see you?" I even had a patient who had 11 children and came to see us for IVF.

Benyamin Cohen:

Do you see a lot of Arab patients as well?

Dr. Hananel Holzer:

For sure. Fertility is a very important issue also for the Muslim population. Most of the Arabic population around Jerusalem are Muslims, but we also have Christians. And because we have one clinic in Mount Scopus where there is more of Arabic population, I would say that 30-40% of our patients in one of the campuses are from the Arabic population.

Benyamin Cohen:

Wow. You know, for couples that are dealing with infertility, it's just as much an emotional burden as it is a medical one. I know you're a medical doctor, but is there some kind of emotional or psychological advice that you give to your patients who are struggling through this process?

Dr. Hananel Holzer:

Our approach is a comprehensive approach for fertility. The emotional and psychological burden is tremendous. I always talk about it, and when I speak I compare it to driving a... or going on a roller coaster, emotional roller coaster.

Benyamin Cohen:

Yeah.

Dr. Hananel Holzer:

And, for sure. So we offer some services to help them cope with these emotional stress. Such as, every fertility center should have a counselor. We had in Montreal, her name was Janet Takefman. She was one of the most experienced people in this field in North America. For instance, we developed a yoga project. When fertility treatments started being covered by the government, we had an eight months waiting time. So people were really stressed. So one of my ex-patients, she was a Jewish lawyer before, she came to see me and she told me she is now a yoga instructor. So I took told her, let's do a course for people waiting to have the treatments. And it was very successful. We even had published a scientific paper. We also do it now at Hadassah. So that's yoga, another expressive arts therapy. I now have a project at Hadassah with expressive art therapy. All to ease up the emotional burden.

Dr. Hananel Holzer:

Because it's not like, when you have appendicitis, you have surgery, and you have the appendix removed. The chance of being successful is very high. But infertility, even with the younger couples, less than 35, their success rates are maximum 50% per cycle. So, most of the patients will have to go through more than one or two cycles. So this is a long, long voyage, they go through. It affects your physical health, but also their psychological health. It's a major burden of a couple's life.

Benyamin Cohen:

Are there certain things that couples can do outside of a doctor's office that have been shown to help with infertility issues? Like, I don't know, stress management, or acupuncture, or eating certain foods?

Dr. Hananel Holzer:

Okay. Let's start with a diet. I'm happy this is broadcast and not a TV interview. Weight and BMI affects the success of fertility treatments. So we really recommend to maintain a healthy lifestyle. Sometimes on the other side, too much exercise could interfere with fertility, with ovulation. Again, I'll share a story with you about the patient I had from New York, from the ultra-Orthodox community. She had a problem with ovulation, and she was young. And I looked at her and said, "Are you over-exercising?" And she said, "No, I've reduced in the last year. I'm not running more than 60 miles per week." And I said, "Well, when you exercise that much, you have more endorphins released into the system and this suppresses ovulation." So this is about a lifestyle, it's good to maintain a healthy lifestyle. But everything should be done in measures.

Dr. Hananel Holzer:

On the other things you've mentioned, whichever improves the quality of life of the couple is important. So, I don't think that acupuncture itself increases the success rate. There are many, many studies about this. But if the patient's wellbeing is better, then it improves their quality of life. And this could increase the success rate. So we're recommend counseling, acupuncture if it relaxes them, yoga if it relaxes them. It's very individual. Myself, if you'd ask me to do yoga, then I would be out of my mind after a short while. But some people, they relax and it improves their quality of life.

Benyamin Cohen:

When we return, Dr. Holzer tells the stories of some of his most inspiring patients. Plus, he explains the fascinating work of freezing the eggs of pediatric cancer patients, so that the chemo treatments they're having now won't impact their fertility later in life.

Dr. Hananel Holzer:

So what we can do, we could remove parts of the ovaries or whole ovaries sometimes for people who are as young as a few months old and freeze it. In the future, when they want to become... if they're infertile because of the treatments, we can transplant pieces of ovarian tissue and then they would be fertile again.

Benyamin Cohen:

All that, and much more, after the break.

Benyamin Cohen:

It seems that news headlines about the coronavirus are changing by the hour. Keep up to date with everything that Hadassah Hospital is doing to help combat this deadly disease. To find out how we're dealing with the crisis, visit our website at [hadassah.org/covidupdates](https://www.hadassah.org/covidupdates). We're posting frequently about how our doctors, nurses and researchers are working to fight the further spread of COVID-19. You can also follow Hadassah on our social media accounts – on Facebook, Instagram and Twitter. Also, we're looking to you, our listeners, for which medical experts you'd like to hear from in the weeks ahead on this podcast. Please let us know by sending an email to us at marketing@hadassah.org. That's marketing@hadassah.org. And now, back to our conversation with Dr. Hananel Holzer.

Benyamin Cohen:

So, we've talked a lot about IVF. Tell us about some of the other types of treatments there are.

Dr. Hananel Holzer:

Yes. So, every fertility treatment conceivable, we offer at Hadassah. Amongst them, what we call a third-party reproduction. It's an important part of fertility care. Sperm donation – we have through sperm banks, egg donation that we can discuss these projects. And also gestational carriers in case women cannot carry pregnancy. So we offer all these services. But fertility treatments is not just IVF. IVF is not the first line in many cases. So if we start, you know we have patients with ovulation disorders. Sometimes lifestyle modification is all what they need. So we send them to a dietician and to exercise more. Then if there's an ovulation problem, we treat them with oral agents to induced ovulation. We start sometimes with a treatment that is less invasive than IVF. It's called intrauterine insemination, we perform this. And if this fails, then we go to in vitro. In vitro fertilization is the first line treatment in case there is a severe main factor, or if the fallopian tubes are not functioning, or from pre-implantation genetic testing. As we said, in this case it is the first line. Usually we have less invasive treatments.

Benyamin Cohen:

And, IVF is when you're using sperm and egg from the couple themselves?

Dr. Hananel Holzer:

IVF is when we fertilize eggs in the lab with sperm. It could be the husband's sperm and the wife's egg, or ovocytes. It could be a single woman who is using a sperm donor. Or if the woman herself is not fertile anymore we can use an egg donation. Or, if we have a gestational carrier, she could carry the fertilized egg of another couple. So we have many combinations.

Benyamin Cohen:

Combining all of these methods together, what would you say is the overall success rate? If a couple walks into your office and is infertile, and you try as many methods as you need, is it a 50% success rate? Or are there numbers out there?

Dr. Hananel Holzer:

There are many numbers. We should look at them very carefully. The success rate is age-dependent. For couples where the female age is younger than 35, then the success rate per treatment is approaching 50%. But then it declines. After the age of 35 it's around 30%, after the age of 40 it's 15%. And amazingly, between the ages of 43 and 45 with own eggs, the success of having a live birth is less than 3%. So it's really per treatment, it's age-dependent. So what I mentioned is per treatment. We should look at the cumulative success rate. If we have a couple who is going through ovocyte collection for IVF, we transfer first one embryo. We want to avoid multiple pregnancies. And then we freeze the rest. So, if you look at the cumulative success rate per treatment or per year. I would say that most couples that see us can eventually have hopefully their lifelong dream of extending their family.

Benyamin Cohen:

You mentioned freezing eggs. Is that the cryopreservation I read about?

Dr. Hananel Holzer:

Yes.

Benyamin Cohen:

It sounds like something out of a science fiction movie, cryopreservation.

Dr. Hananel Holzer:

Absolutely. I'll tell you, embryo freezing has been an essential part of the fertility treatments for many years. However, egg freezing was much more challenging, because the egg is sensitive to the freezing. And I can tell you that the first pregnancy and live birth as a result of thawing frozen ovocytes in Israel was at Hadassah. I have a picture from 20 years ago, and 40 pounds less of myself, holding the babies conceived through egg freezing. And in Canada, the first patient who delivered babies from frozen ovocytes was also my patient. So egg freezing is the ability to freeze eggs. We use it in certain circumstances. For instance, patients who are facing... going under toxic treatments, treatments for cancer.

Benyamin Cohen:

Like, if they're about to go and have chemotherapy or something, they would do this before the chemo.

Dr. Hananel Holzer:

Exactly. So for a couple with established relations, then we freeze embryos. It's a more established option. But for women who do not have a partner or still they are not certain in their relationship, we freeze eggs. In the beginning, it was very challenging to freeze eggs. In Canada it's very easy. You just take the eggs outside, it's minus 25... just kidding.

Benyamin Cohen:

In Jerusalem it's not that could usually.

Dr. Hananel Holzer:

Yeah. So the older method of cryopreservation was not really successful. In the first 10 years of ovocyte freezing, then there were only five live births around the world. Now in the late '90s, early 2000s, a new method was developed. It's called vitrification. It's putting the egg in a very, very concentrated solution that draws the fluids outside and then rapidly freezing in minus 196 celsius degrees. And that's called the vitrification, because vitreus is glass in Latin. And the highly concentrated fluid becomes like a glass when it's frozen. And that helps us to freeze eggs in a very efficient manner. And yes, sperm freezing has been done for over 50 years. It's easier. With males, the more challenging thing is to preserve fertility for prepuberty boys who cannot produce sperm, and we want to preserve their fertility potential. So this is highly experimental with a lot of advancement at Hadassah to freeze testicular tissue. And the person who conducts this research project, Dr. Dr. Myriam Safrai has an interesting story herself. She lost a child to cancer which motivated her to perform research in this aspect.

Benyamin Cohen:

So this is pretty fascinating. We're talking about pediatric cancer patients, that you're helping them preserve their fertility potential before they undergo cancer treatments as a child. Can you explain that?

Dr. Hananel Holzer:

Yeah, yeah. We cannot use the methods we use for adults like egg freezing or sperm freezing, because they don't have mature eggs, prepubertal girls for instance. So what we can do, we could remove parts of the ovaries or whole ovaries sometimes for people, girls as young as a few months old, and freeze it. In the future, when they want to become... if they are infertile because of the treatments, we can transplant pieces of ovarian tissue and then they would be fertile again. This is very challenging, and it's been done in Hadassah for years now. For boys as I said, there hasn't been success in the world yet with transplanting testicular tissue. But we are working on it. And we offer it now. There hasn't been a success story yet around the world from testicular tissue freezing. But we give them hope. And we should look at the families that are demonstrated being diagnosed with malignant disease, and also hearing that their child might be infertile in the future. And we offer them a potential fertility preservation, potential treatment to preserve their fertility. So it gives them hope.

Benyamin Cohen:

So, obviously you've dealt with a lot of patients. You said Israel has one of the highest per capita fertility treatments. Can you share with us maybe an inspiring patient story?

Dr. Hananel Holzer:

Actually, I have to tell you, every time I see a positive result of a pregnancy test of a patient I'm thrilled. Whenever I get the picture of a child that I had to conceive, I'm thrilled. But there are a few stories that one cannot forget. I had a patient who was diagnosed with breast cancer a couple of weeks before she got married. We didn't have enough time to stimulate the ovaries, so we removed the eggs that were immature from the ovaries, and we matured them in the lab. She got married, she had the treatment, and three years later she was infertile. So she came to see me, and we thawed what we had frozen before, we did the transfer to the uterus. She conceived and she had the baby, a girl, which was the first pregnancy live birth using in vitro maturation of oocytes. We call it IVM for fertility preservation. So that's one story if I can share with you.

Dr. Hananel Holzer:

I can share with you another story of a patient who came to the fundraising gala that we did, and she showed everybody the marks on her shoulders. She said, these are not tattoos, these are marks from radiation. And she spoke about it when she came to see me for egg freezing. And then there was a public debate on funding fertility and fertility preservation treatments. When I was sitting there at the panel I got a text from her that she gave birth. So this was really for me, fulfilling. And I can tell you another breast cancer story. I have a patient who had breast cancer. She froze eggs before the treatments, but she used them up. And she came to see me, and she said, "I'm a carrier of BRCA or BRCA1. I don't want my child to go through the same way, or "Via Dolorosa" that I went through. So I want to do in vitro fertilization and PGT, preimplantation genetic diagnosis for BRCA."

Dr. Hananel Holzer:

Which we did. And she gave birth to children who don't have this burden of carrying this pre-cancer mutation. But then she came to see me for another pregnancy. We did the scan and we saw a small finding close to the ovary. You know that people who carry this gene, they have also a higher risk of developing ovarian cancer. So because she came to see us and we did the scan, she was operated within a few days, and we really caught the ovarian cancer the earliest stage. So we helped her to preserve fertility, to have children, to have children who don't have this sword over their head of carrying the BRCA gene, and also we helped her for early detection. I don't know how much time you have, because I have like so many inspiring stories.

Benyamin Cohen:

Yeah, yeah. Well, those are really interesting. What I'm hearing is that, as long as you've been in the business, you're not jaded. You're still... you experience the miracle of life every time you have a patient that passes the Rubicon and comes out on the other side.

Dr. Hananel Holzer:

Absolutely. But you know, even earlier than that, every time we see on the screen in the procedure room, the embryos before we transfer them. And I always say, "*mah rabu ma'asecha Hashem.*" I'm always intrigued and inspired by what we do to help patients. I think that a fertility career is the most fascinating field of medicine. I enjoy what we do. Actually I love... I guess you are right. I still speak like a young, inexperienced physician, yes.

Benyamin Cohen:

That's pretty neat to have that kind of joy and curiosity that you would have had at the beginning of your career. But before I forget, you said a Hebrew phrase, "*mah rabu ma'asecha Hashem.*" In English that means, how great are the wonders of God, right?

Dr. Hananel Holzer:

Yes. Wonders and action, yes. And I'm not an Orthodox person myself. But when I see, yes, I say this message.

Benyamin Cohen:

You know, we've talked a lot about these treatments. But I'm sure you have patients who have tried, and tried, and tried. Is there a time where you as the doctor say, "We've tried, we've been doing this for several years. You're both very old. Nothing's happening." Is there a time where you tell a couple, "There's nothing else I can do. Maybe you should try adopting or looking at some other avenue"?

Dr. Hananel Holzer:

Well, I'm happy that you bring it up. Because the issue of end of treatment is very important. When to say enough is enough. So there's no one stage for everybody, it's very individual. But once you see that the patients are going through so many treatments, and the success rates, you have to be really open and clear to explain. So, offer other options. But there are always other options for patients who have tried in vitro for many times, and their ovarian response is lower. We can offer egg donation, we can offer a sperm donation. And eventually some of the patients will not be able, but it's a minority of them to conceive on their own, so they would adopt. But the decision affected by so many factors, including also the funding.

Dr. Hananel Holzer:

You know, in Israel that we have such liberal generous funding, it's also a problem to say when it's enough is enough. Only after eight treatments, the regulations say that we have to reconsider the treatments. Imagine people spending \$20,000 on a treatment and then thinking of reconsidering. So it's different between couples and also between countries. But there have been many books written about this, when to say enough is enough. We cannot make the decisions for the couples, but we should guide them and provide them the tools to make the right decisions.

Benyamin Cohen:

In my own family, my brother and sister-in-law who are in their mid to late 40s had several IVF and other fertility treatments, and they eventually decided to adopt. And now I have a beautiful nephew.

Dr. Hananel Holzer:

I'm happy to hear that. So, we help the couples extend their family. There are many ways to do it. So we should be open and discuss all the options.

Benyamin Cohen:

I was wondering, as a fertility doctor, do you relate to your own children any differently or in a unique way?

Dr. Hananel Holzer:

I've always been a fertility doctor, so I really don't know. I think that they are affected by this. My son, both in the JPPS in Montreal and his school here, gave talks about fertility and so did my daughters. And he is now a medical student. I don't know where he'll decide to subspecialize or to specialize. But maybe I think... you know, having fertility is part of their lives. Also being stopped, when they go out and told, "Oh, you know, that your father is the father of my children as well. These are his children as well." So some children would look at this as awkward. But they're already used to it.

Benyamin Cohen:

Right. It's like they have a lot of half-siblings all around the world.

Dr. Hananel Holzer:

Yes. So my son as I said is a medical student. He had a patient in the emergency room, a child that he treated. And the mother said, "You don't happen to be the son of Dr. Holzer who helped me conceive this child?" So yes, it's part of their life as well.

Benyamin Cohen:

Dr. Holzer, we really appreciate you taking the time to chat with us today. I know Hadassah is working on some infertility initiatives, and so it's really exciting to be able to speak to you, and to hear what the hospital is doing behind the scenes. So, we really thank you for your time.

Dr. Hananel Holzer:

Oh, thank you.

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.

Benyamin Cohen:

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.