

American Healthcare Professionals and Friends for Medicine in Israel

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Dr. Joseph Hasson fights to preserve fertility in the face of cancer.

"The age at which we diagnose breast cancer, for example, is getting younger and younger. Women are more aware and diagnostic tools have improved, but chemotherapy has the potential to irreversibly damage the ovaries, says the 43-year-old Jerusalem native.

"So, say a 35-year-old woman comes to see me after she was just diagnosed with breast cancer and scheduled to start her chemotherapy. There is a significant chance that if we see her before she starts her chemotherapy, we will be able to help her preserve her option to bear children even if chemotherapy treatment damages her ovaries permanently.

"With modern fertility preservation techniques we can change what was once inevitable. But we've got to raise awareness of preserving fertility before cancer treatment, says Hasson, a two-year APF clinical and research Fellow (2014-2016) at McGill University Health Centre's Department of Obstetrics and Gynecology (OB/GYN), Division of Reproductive Endocrinology and Infertility in Montreal's Quebec, Canada.

"And this doesn't apply just to women. It also applies to men, girls and boys. Chemotherapy treatment can damage the testes as well.

"Patients need to be aware of the different options to preserve fertility. It can be done by surgical procedures or by freezing eggs, sperm and embryos. There are also medical treatments available. But if patients aren't aware of options, they'll do nothing.

"We also focus on raising awareness among our fellow healthcare professionals.

"While not the main part of my daily work, this is one of my passions both in clinics and in research." At McGill Hasson sees far more fertility preservation patients a month than in Israel.

The Hebrew University Hadassah Medical School graduate is a senior physician in the In Vitro Fertilization (IVF) Unit at Tel Aviv Sourasky Medical Center's Lis Maternity Hospital. He also teaches medical and nursing students and gynecology residents. When he returns he will be a reproductive endocrinology and infertility specialist in the same unit.

Hasson's training at McGill provides him with opportunities unavailable in Israel. He chose the internationally-known Canadian program because of the world-renowned clinicians and researchers working in state-of-the-art facilities. Also, the department provides a greater volume and diversity of patients and conditions than in Israel. At McGill Hasson sees four times the number of patients he'd see at home.

"It was necessary to come here as the scale of clinical exposure is incomparable. The variety of skills one is exposed to is huge. And the opportunity to have such extensive training is unique.

Reproductive surgery is tremendously developed here."

Hasson's family has grown since his arrival in Canada. His 40-year-old photographer wife, Yael, gave birth seven months ago to a baby girl, Lia. The couple also has a son, Dan, 2 years old.

Why medicine?

"In the army I was exposed to the work of military physicians in the field and that left quite an impression. "In the end I wanted a career that would encompass my academic, scientific and interpersonal abilities and allow me to use them all in a way that would be significant and meaningful to me as well as to others."

He said that the "disadvantages" of medical training -- all the working and studying -- weren't hard for him.

During medical school he spent several months studying at world-famous Mt. Sinai Hospital in New York City. "I went for the same reason I'm at McGill," he said. "Healthcare issues in New York are much more diverse and complicated than in Israel. I wanted to open my mind and see as much as I could of a different way to practice medicine, of different approaches. The more you see and the broader your view is, the more you grow as a physician."

Hasson did his internship at Tel Aviv's Sourasky Medical Center, with extra rotation months in OB/GYN at Chaim Sheba Medical Center at Tel Hashomer, again to broaden his perspective in his chosen field. Sheba is Israel's largest hospital. Residency was at Sourasky.

Why OB/GYN?

"This field is so diverse and demands so much from its specialists. We have to have a vast knowledge of internal medicine while still being capable of enduring the pressure and stress of surgeries and running an always-active delivery room.

"If, for example, your patient is a woman with inflammatory bowel disease, you have to know about that disease and about the treatments. It may have an effect on her pregnancy," he said.

"You need to treat her infertility issues if she is infertile. You may have to follow a complicated pregnancy and then you may have to deliver the baby with an emergency C-section, so you will be there in the delivery room doing surgery. And you will be there when she is holding the baby. So you made it all the way with her and this is very challenging and very satisfying.

"Also, it's about people skills. In a field like OB/GYN when you deal with women in the delivery room or women trying to become pregnant, it's such a major part of their womanhood. For both women and men this is a very vulnerable position in their lives. Being sensitive and delicate is so immensely important and I feel I am good at it and I enjoy doing it."

Why reproductive endocrinology and infertility?

"During residency we rotate among the different sub-specialties in OB/GYN. Infertility was the first one I did. My mentor there was quite an enthusiastic infertility specialist. He had spent some time in England studying it when he was my age. I was influenced by his love of this field.

"It really caught me; it's the wonder of life. It's the making of life and it's just fascinating to me, the endocrinology of it all."

Hasson explained further the joys of treating infertility.

"When you have an infertile couple, you can go all the way from the basics of finding the problem and treating them and, there again, all the way to the delivery room.

"And then every year you get a child's birthday card that says, 'from our baby who wouldn't be here except for you.' And the oldest one is now about seven years old. But still every year his parents send me this card.

"To get these cards every year, it's the best feeling."

The Fellowship is very intense, involving both clinic and surgical work, with some research. (More concentrated research hours are yet to come.) Days start about 7:30 a.m. and can easily end 12 hours later, with 50- to 60-hour weeks. Weekends 'on call' typically occur once or twice a month.

But much of the program's work, about 70 percent, is non-surgical. This includes male and female patients in clinics and a lot of the practice is managing IVF cycles, Hasson says.

"One day I did 17 egg collections and 13 embryo transfers into the uterus. That day ended quite late and was quite a challenge. You need to stay focused for so many hours. But I always remember -- for that specific patient these are the most important moments of the month."

The surgical aspects of the Fellowship program include extensive training in treating pathologies of the fallopian tubes, removing uterine fibroids (benign tumors that may disrupt fertility) and treating uterine cavity abnormalities. Sometimes fertility preservation specialists will relocate the ovaries from their natural pelvic location to a higher position in the abdomen in order to prevent damage by cancer-treating radiation. Most surgeries are done by an endoscopic technique which allows major procedures to take place through minimal incisions using an intra-body fiber optic camera.

Fellows also take part in patient psychological counseling that goes on in the unit, with a specially-trained psychologist and medical ethics specialist. "We learn so much, it's amazing to be involved in this part of the process. We see, and learn to handle, all kinds of ethical dilemmas and legal issues that rise in the daily routine of this delicate field.

"It is so busy here, and fellows get to be part of everything, not just read about it afterward."

Speaking of reading about it -- Hasson has published 18 journal articles and travelled internationally to

present research. Already his time in Canada has spawned four to six new expected publications.

What does Hasson hope to take back with him from Canada to do differently in Israel?

"A lot of things have already changed. I have changed and refined my techniques," Hasson says. "For example, I've changed my embryo transfer technique and I feel I'm doing it much better.

"I'm also going to establish a reproductive surgery service in my hospital in Israel. I will try to adopt the model of incorporating this service into the reproductive endocrinology and IVF unit the way I've seen it being done here.

"And here, continued medical education is very developed. There is a lot of focus on the teaching of fellows, in a way I'd like to take back to my unit and hospital in Israel."

Even though Hasson truly enjoys seeing infertility patients from "start to finish" in Israel, he will miss being able to give extended periods of time simply to reproductive endocrinology and surgery. At McGill pregnant patients are transferred out of the unit to obstetrics after 10 weeks. And, unlike in Israel, there also is no need to cover the OR and ER.

"Here there is the time for an attending to sit with you and explain, to have a discussion. There is the 'virtual space' to ask the questions and look for answers, time to think. It opens your mind to research."