



Season 6, Episode 11

Rehab Reimagined

Maayan Hoffman:

Hello and welcome to Hadassah on Call. New Frontiers in Medicine. I'm your host, Maayan Hoffman. We often talk about those who were killed or taken captive in the war, but what about the survivors, the soldiers who fought bravely and came home with life altering injuries? The civilians who escaped the massacres but lost limbs, their ability to walk or even to perform the simplest daily tasks.

Their battle didn't end on October 7th. It's only just begun. Not long after it opened. I visited the Gandel Rehabilitation Center at Hadassah, Mount Scopus and was struck by the incredible work being done there. Israel was already facing a shortage of rehabilitation facilities, but now in the wake of the war, the need is overwhelming. Gandel is filling a critical gap, helping survivors rebuild their lives. In this episode, we go inside the world of rehabilitation, what it really means, how recovery goes beyond the physical, and why this work is essential for Israel's future. You'll get to hear inspiring stories of resilience and hope and why I'm so proud to be associated with Hadassah.

To discuss the matter we have with us, Dr. Elior Moreh, head of the Department of Physical Medicine and Rehabilitation at Hadassah Medical Organization. Welcome Dr. Moreh.

Dr. Elior Moreh:

Hi. Hi. Thank you for having me.

Maayan Hoffman:

Of course. No, I just wanna get started with the basics, which is the definition of rehabilitation.

Dr. Elior Moreh:

So, rehabilitation is the process of regaining maximal function after an injury or a disease that made a change in function. So, what do I mean by function? The ability to dress yourself or

Dr. Elior Moreh:

going to the toilets or just walking ambulating. So, it can happen following many diseases. It can be a stroke of course, or a car accident or head injury, spinal cord injury or a war injury obviously. So, anything that changed the functioning of a person creates the need for rehabilitation.

Maayan Hoffman:

Now, you mentioned the war, obviously since October 7th, things have looked very different. I know Gandel actually opened after the war. Tell me about what the doctors are seeing and who they're treating since October 7th and how that differs from what you saw beforehand in just the general rehabilitation departments.

Dr. Elior Moreh:

It's been a huge change, of course, because of our regular patients, I would say that the average age is about 50 and many of the patients were with strokes, and now patients our after war injuries the mean ages, maybe 21, and there are very young people in great shape before the injury, and they just sustain injuries to their limbs, usually because they have a helmet and they have a vest and ceramic vest that protects their torso. So, the injuries usually are in the limbs, the upper limbs, lower limbs with either bullets or shrapnel, all kinds of explosions and explosive devices that just made enter all kinds of harming particles to the limbs. So usually there are shattered fractures, and then there is accompanying nerve damage.

So, for instance, a very bad fracture of the humerus, the arm, the bone of the arm and a radial nerve injury, meaning that the wrist is dropped. They cannot raise their wrist and then it's. The hand is not so functional at this point. So, you have, and also you have bad wounds, so very infected wounds and with all kinds of gaps.

I won't enter into too much detail, but anyway, so we had all the compound, the complexity of taking care of the emotional side, of course, psychological side and the wounds and the fracture, and healing, which mean recovering range of motion and strength in the hand.

Maayan Hoffman:

So gimme an idea of how many patients you're treating in a typical, let's say, week or month, and also how long the typical patient stays in the center with the center.

Dr. Elior Moreh:

So, since we moved to the Gandel rehab building, we have doubled our capacity. So, we have 72. Inpatient beds and we have a daycare, a outpatient center in which approximately, I think 220 patients come a week and they come twice a week or three times a week. And about Half of them currently are soldiers. Yeah, because it's a long-term treatment.

Maayan Hoffman:

And define long-term for me though.

Dr. Elior Moreh:

So the mean inpatient stay is 37 days, which is more than a month. So it's been such a huge change that we moved here because the conditions are so good and there's a lot of light and beautiful rooms for the patients, and it's either one patient per room or two patients per room.

So it gives really incredible conditions, and, in the outpatient, it can be like even six or seven months of treatment, of course, depending on what the patient needs. We always work with what we call functional goals, which means that we have multidisciplinary team meetings, every week or every two weeks in the outpatient place. And we set functional goals, meaning we think he could, this patient could achieve walking for 500 meters next week. So that's the next goal to achieve, and we think he will be able to use his hand and stress by himself. Okay. So that this is the next goal to achieve. And every time we continue, if there are functional goals to achieve, we keep the patient. If we think, okay, that's the maximal thing that we can achieve at this point. So, it's about time to think of discharging the patient and we prepare the patient for discharge.

Maayan Hoffman:

Now you did mention the mental aspect of rehabilitation as well. Here at Gandel, are you treating the whole spectrum of rehabilitation from mental to physical? And if so, what does that look like?

Dr. Elior Moreh:

Sure. So it's always a very important part of rehab because, mind and body are one in the end. And motivation and good mood are essential for a good rehab. It's a prerequisite almost, because if someone is depressed, he won't achieve all he can achieve. So this is about rehabilitation, it's achieving all that a patient can achieve because of course sometimes there, there is substantial impairment. Injury and not always a patient can recover completely and be like before, but there is a rehab potential and we want the patient to, to regain all this potential. And for that a balanced mood or not to not being totally depressed is very important.

And the patients are seen by a psychologist from the beginning of the war. Injured we put in place a special. System really with an emphasis on emotional support and they would be seen twice a week instead of once a week by a psychologist from the first, from admission until discharge and also after discharge in the new, in the second place in the outpatient setting by the same psychologist, meaning why is it so important? It's because we want the person to really feel safe and not to have to open up to someone else. So it can be like eight months of treatment with the same psychologist. And we also as a team, got a special short education program about how we should talk to patients who sustain difficult things in the battlefield.

Should we ask all the questions? Should we encourage the patient just to talk and talk or not? Maybe it's better to do it in a protected setting. And of course, as almost always, it depends on the patient. So you just feel how you have to talk to the patient.

Maayan Hoffman:

Makes sense. With regards to the need for rehabilitation, I'm assuming that some people come in, they start rehabilitation, but maybe they don't finish it, or someone has surgery and doesn't stick with the rehabilitation.

How integral is it to ensure that you complete your rehabilitation program for the long-term success and ability to ...

Dr. Elior Moreh:

Yeah, that's a very good question. Often, especially with the patients from the war, we have this back-and-forth movement, meaning that sometimes we see that this special nerve damage requires an operation.

So, we send the patient for surgery and then the patient comes back. So, our advantage in Hadassah is that we have very good relationships with all the different departments. It's such a huge hospital and we have all the specialties needed. So we just, as doctors and as medical teams, have very good relationships with the other departments, and we are just in touch. And then we look, we're just arranging that the patient will come back and usually they want to come back because once they've been here, usually they're very eager to stay here.

Maayan Hoffman:

It's a nice place to be.

Dr. Elior Moreh:

Exactly. So usually, our problem is more about discharging people than having. Having, we don't have to convince them to come back here. Usually if they have been here, they want to come back.

Maayan Hoffman:

So, are most of the patients, people that are living in the Jerusalem area or are they from all over the country?

Dr. Elior Moreh:

Most of them are from Jerusalem area, but Jerusalem, is the largest city in Israel. So, it's a million, million people population in the city, and then the area is also used. So, there are people from Hadassah, from Guion, from Modiin. So, it's the whole area.

Maayan Hoffman:

So Jerusalem in the surrounding area.

Maayan Hoffman:

If you like this, you should listen to our previous podcast with Dr Shiri Ben-David, Chief Psychologist at the Hadassah Medical Organization. She explores how trauma has gripped Israeli society since October 7th, 2023, and what it means to heal.

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Dr. Shiri Ben David:

And the way the event is processed and encoded in our brain affects the way we experience it later on. So, for example, one of the things that affects, um, the risk of people developing emotional distress after a traumatic event is how helpless they felt when the event happened, did they feel they have control over the event?

Did they feel that they can do something to protect or to survive? Um, so we know that practitioners like people who provide help or are in a role in the event, they suffer less from PTSD later on because they had something they could do. And also, people who doesn't have a, a specific role, but they find themselves in a way that they can protect themselves or survive or help others. They are less at risk to develop PTSD.

Maayan Hoffman:

Dr Shiri Ben-David paints a powerful picture of what it looks like today and how therapists are working to help people cope. She also looks at practical tools for resilience and how committees both in Israel and abroad help create a culture of strength and support.

And now back to our current discussion with Dr. Elior Moreh.

Maayan Hoffman:

When it comes to receiving this rehabilitative care, the team here, you mentioned the multidisciplinary team you working with throughout the hospital. What about in their personal lives? Parents, caregivers, how do they get involved in the rehabilitation process?

Dr. Elior Moreh:

Yeah, that's also a very good question. So, the family is so important for rehab, in the mornings are the treatments between eight am and 2:00 PM the treatments take place. So, it's physiotherapy, occupational therapy, sometimes speech therapy, psychology, social worker, nursing treatments, and medical visits. So, it's a lot of treatments to have. People are very busy here, so often they're not in their rooms and it's very good. We don't want them to be in their rooms. But then the turn for the family come, so they come to visit either from 2:00 PM or later. And also, they can accompany the patients in the treatments. And we tell the families what they are allowed to do. So, if in the beginning a patient is not allowed to move from the bed to the wheelchair by himself and then or to walk with a walker alone, at some point we allow the family to walk with them. And then we encourage them very much to walk with the family so that they can practice because it's all about practice.

Maayan Hoffman:

And ultimately, I guess they're gonna have to be doing that when the patient eventually is discharged

Dr. Elior Moreh:

Yeah, exactly. Yeah. We also encourage people to take the patient home for Shabbat. So as soon as they're able to, they go home on Friday afternoon and they come back on Saturday night. And it's very important for us because first of all, it gives a very good feeling to the patient. It reminds him that or her that hospitalization is temporary. That they have a home that, because sometimes people forget it, like people feel they're doomed to be here. So when they go home for Shabbat, they feel that, okay, it's temporary I have my home, and I have all my centers of interest. And they can just, they suddenly realize that it's just very temporary. And also they see what was difficult for them at home, so they can come back and tell me, the bed is not the same height, and I couldn't get out of my chair and things like that. And then, it's very important so that they can practice these things at the hospital one day back.

Maayan Hoffman:

It's really very interesting. You don't, I guess I, you don't think about that picture that they could learn how to get up and down from the bed here, but then they go home, and the bed is three inches higher and now all of a sudden, they're not able to do it. Yeah, and you have to be able to push themselves.

Now, we talked a lot about the people who came out of the war, the soldiers, but as you mentioned before October 7th, there were patients still being treated in these hospitals and getting rehabilitation. Thinking about older patients, what are some of the main or the classic reasons that someone over the age of 60 would end up at the Gandel Rehabilitation Center here?

Dr. Elior Moreh:

So we have of course strokes, which are very common after the age of 60. And then people usually are paralyzed in half the body or have difficulty talking. We have of course falls and fractures of the neck of femur, usually of the hip, and which just a hip fracture can be a life-changing events for an older person. And sometimes we have also tumors, brain tumors and all kinds of cancer rehab. That's the main reason usually.

Maayan Hoffman:

What are some of the misconceptions that you think people have about rehabilitation?

Dr. Elior Moreh:

There are many misconceptions about rehab. One misconception is that you just have to give time to people and they will heal. So of course, time is very important. Time is a key question in rehab, but it's not that time will heal everything because so many bad things can come in between. So, a huge portion of rehab is about preventing complications. For instance, if I just I don't know, pay someone and tell the person that she will be ventilated for three months. I will just, I'm doing an experiment, and this person will lie on her back for three months and be ventilated and gets food I don't know, in an IV or something. When this person wakes up, she won't be able to walk, and she would have terrible impairment in range of motion. Meaning that the tendency of our tent is to get very short. So then the person is like this, it could be irreversible. Irreversible for three months, from three months of immobilization,

Dr. Elior Moreh:

because all our tendons just get stiff and short, and this by itself can just hinder the ability to walk or to use the hands.

So a lot of rehabs is just to do the stretching and preserving range of motion. And if you don't do it on time, it'll be too late, so then maybe we will be able to repair it. But you feel it would take surgery and a lot of pain and difficult treatments. So it's not about healing, it's about a set of things that we have to do during the healing process because it's true that the body needs time, but there are lots of things to do and lots of things to prevent.

Okay. So that's one misconception. The other misconception I think that often can be a challenge is that. It's all about will and motivation. So of course, motivation is so important, but sometimes motivation cannot do everything. So you also have to realize at some point that life has changed, and it won't be like before. So sometimes. And it's my job as a rehab doctor to tell the patient what we expect. So maybe I want to tell the whole truth at the beginning. It's a process of adapting to the new reality and understanding what can be done and what is out of scope. So my job is to disclose the news and at some point, to do what we call a family meeting and tell the patient, look. This and this. I think you will achieve that, but other things will be different now and you have to adapt to it. And it's a process. It's very difficult to adapt to it. And some people, I had this patient traumatic brain injury patient. Its five years since the injury. And he came to my clinic last week and he had just a ski accident and a very severe traumatic brain injury.

And he would tell me, look, my motivation is in the sky, but reality doesn't fit. And I was trying to explain to him that sometimes motivation five years after is not enough and he has to do some changes. He wants to work as an engineer like before, and he doesn't want to do any. Even small changes.

And he told me motivation is what brought me here. Because I've achieved so much. People told me I wouldn't walk, I wouldn't do this and that, and now I'm walking, and I can use my hands. Yeah. So it's beautiful. Motivation is beautiful, but sometimes you have to tell the patient, this is what you can achieve, and you have to do slight changes in your life and accept the new reality.

Maayan Hoffman:

Are there any times though that miracles happen? Do you have any, obviously anonymously, but stories of where you really thought maybe this person wouldn't be able to achieve the goals, but they did.

Dr. Elior Moreh:

Of course. I see many miracles. I always tell patients, I, I'm for miracles. I want miracles to happen, but I work meanwhile with reality. It's like it's two streams; it's two different streams that we have to work on because rehab is always about compensating for things that for now you cannot achieve and restoring function. So, it's two different streams that we work in, work on in parallel with a miracle story. Yeah, I've seen many miracles in fact, but I've seen

Dr. Elior Moreh:

lots of inspiring stories. I will tell you the story of a young soldier. He is 21-year-old handsome, very nice and funny guy soldier, and he had something exploded just in his hand in Gaza.

So he had a very bad injury of both his hands and partial amputation of fingers in one hand, in the right hand, so the dominant hand, and very bad fractures in the left hand, and of course wounds, very bad wounds. And he couldn't, he was hospitalized here and picture this guy, 21-year-old. He isn't able to use his hands at all so he can walk on his feet, but he cannot eat. He cannot dress; he cannot go to the bathroom. Forgive me. And it's so difficult. And more than that, he was not able to look at his hand. It was so difficult for him to look at the amputated fingers. And it just, every wound dressing change would take about two hours of convincing him and doing it so gently with a playlist of music, very nice music that he liked. And all the doctors were there and the nurses and we're trying to make it as gentle as possible and he wouldn't look at his hand and so much that he just started developing, like a short neck muscle, he was like this because he wouldn't look at the, he didn't want to look at the right hand. So he was looking for a bit to the left, always. Yeah. It was very extreme, and I would tell him, Hey, look, if you continue that way, your neck wouldn't be symmetrical anymore. You have to be more, to, I don't tell you to look at the open wound, but just. Keep your neck normal.

So in a normal place. So with a lot of treatment and time and psychological support and the whole team very, being very gentle with him, he, in the end, everything the fractures in the left hand recovered and he got, the wounds, got closed and not infected in the right hand, and now is. We recovered the complete function of his hands, and I see him downstairs in the occupational therapy sessions, and he's happy, smiling, always very positive.

And he has now these special treatments that we give people for scars. But he is using his hand and looking at it. He's gone through a long thing and he had of course issues before that because he, I don't want to get into details, but the lost fingers reminded him of a personal loss of a loved one. So it's always intricate, we're human beings. We are, we have a history. We're never blank paper sheet, so ...

Maayan Hoffman:

Sure. And everything's tied together a hundred percent.

Maayan Hoffman:

Despite difficult challenges in the US and in Israel, Hadassah was unwavering in advancing our mission in 2024. Hadassah 2024 Impact Report details our steadfast commitment to helping soldiers and civilians heal, forging ahead with medical innovation, speaking out when women's voices were being silenced about rape and torture, standing tall against antisemitism and championing reproductive rights. You can view this report and find out more about how our Hadassah supporters make our work possible. Read Our Impact at go.hadassah.org/impact24

Maayan Hoffman:

And now back to our current discussion with Dr. Elior Moreh.

Maayan Hoffman:

Now the Gandel Rehabilitation Center opened in the middle of the war, and I know that there was already like quite a shortage of rehabilitation facilities in Israel even before October 7th. Can you talk just a little bit about the impact of having this facility available since the war started and the difference it's made in the overall treatment options in the state of Israel?

Dr. Elior Moreh:

Sure. So the numbers, the number of beds in the Jerusalem area was almost the lowest in the country, so it was way below the norm.

Maayan Hoffman:

And that's after you said that we are the largest city in Jerusalem.

Dr. Elior Moreh:

Exactly. So we are really lacking beds, inpatient beds and facilities for rehab. And if I can say so it was a chance that the Gandel building was planned to be opened because it was supposed to open a year later, but we have already started recruiting people. So, when the war began, we already doubled the number of psychologists, the number of physical therapies, the number of doctors, so we were half prepared. Let's put it that way.

Maayan Hoffman:

And you fast tracked it to open it up earlier.

Dr. Elior Moreh:

Yeah, it was incredible. Everyone worked so hard and in Hadassah and Hadassah women organization and everyone also the government, there were a lot of aids and we managed to just hustle up the work here, and we would visit here and there was nothing, there was, it was like a work construction site, but they, people just worked 24/7 and it opened on January 16th, so three months after the war instead of almost a year later. So, it was incredible. And yes, it has changed. It has changed a lot because we have much more space. We have beautiful rooms for treatments and we all already have the best technology and incredible state of the art advanced technology, the anti-gravity and the lokomat, robot, and a robot for the hands in occupational therapy and computerized state-of-the-art cognitive treatments. Lots of incredible things, but now we have so much room. So yeah, it has changed the conditions of the patients, very importantly.

Maayan Hoffman:

Yeah. And one of the things I actually wanted to ask about was technology and new treatments. First of all, you know how Israel in general stands up to the rest of the world in terms of that kind of innovation. And specifically, of course at Hadassah, if there are unique technologies or unique opportunities that you're able to offer the patients.

Dr. Elior Moreh:

Yeah, so we have really state of the art equipment and as always, Israel startup nation, so on. So, we do use some special robotic devices that have been developed in Israel like the ReWalk,

Dr. Elior Moreh:

which is an exoskeleton which enables completely paralyzed persons to walk. And we also do research here with the Gate lab. We have a gate lab, which enables us to assess, which is the specific problem that prevents a person from walking symmetrically or in a more efficient way, energetically speaking. So it's a lab in which there are cameras in three dimensions, and you put infrared markers on the different joints. I think you're a runner. No?

Maayan Hoffman:

Yes. I don't know how you know that, but yes, I'm a runner.

Dr. Elior Moreh:

Yeah. So, you understand that, so every little movement can make a different movement can change all the energy, all the efficiency of walking. So, it's very important to us to put all these markers on the joints. To get computerized output of the difference. What are the angles in each limb in the knee, in the ankle, in every step of the gait of the person. And then according to that, you can personalize treatment. Say, okay, he needs Botox injections to the knee, which is not to ...

Maayan Hoffman:

it's not to make it look smooth and

Dr. Elior Moreh:

No, it's not. You use a lot of Botox here. But we call it biotin toxin, but it's the same substance that people put in their face. We inject it into knee or ankles, usually in neurological patients several after a stroke or a head injury, and then it relaxes the muscle and range of motion would be improved and it would improve the whole ability to walk, for instance. Yeah.

Maayan Hoffman:

Super fascinating. So, is there anything else that you wanna add or that you think that people should know that we didn't talk about?

Dr. Elior Moreh:

Yeah, I don't know. So, I've talked to you about research, so we, our maybe vision is to go towards personalized medicine, personalized rehab. I have done a PhD involving brain imaging. What I started to do now is try to do some diffusion tensor imaging, which is an advanced brain imaging technique for many patients. And in my vision, I would like to do it to almost every neurological patient, meaning after a stroke or head injury, what this special research imaging technique does, it's not a normal MRI, you put a person in the MRI machine, but for a shorter time, not the 15 minutes that are usually required it's too difficult. So, I put them for 15 or 20 minutes and then I get a special sequence in the MRI, it's called DTI, I and it measures the diffusion of water molecules in the brain.

And following that, I can with the computer program reconstruct the brain wide matter pathways in the brain. So simply put, it means that I really can draw the path like the roads in

Dr. Elior Moreh:

the brain of this specific patient so I can see what is preserved and what is harmed and correlate to the patient's impairments, like to the phenotype to what we see.

If someone has aphasia, which is difficulty talking, I can measure the patient's problems talking or finding words or repeating something or understanding speech like what we call semantics or phonetics. Compare it to the specific tracks of the brain of the person and see what is preserved and what, and there are numbers also.

It's not only drawing, it's also so we can get figures and understand from there what is the potential, understand better, what is the potential of the person and which tracks are more preserved, and we should work on them. And then maybe it'll help to recover function? So this is something that I would love that we could do, and it's so advanced, the techniques, it's not about a brain scan in which you just see the lesion. You really see the, it's very colorful, very beautiful. I can show it to you later. You really see what is happening in the brain of this specific patient, and it's incredible. It's something that we couldn't think of 20 years ago. It was impossible to think about it.

Maayan Hoffman:

So I know, piggybacking off of what you were saying, that there will eventually be a real focus on r and d here in the building. As we walked around today, we saw some of the floors are open, but there are still several floors that are not. Describe the vision and how that's going to change the way that we do business here at Gandel, how it'll affect everything?

Dr. Elior Moreh:

Yeah, sure. There are only three open floors at the moment. And the entrance floor is supposed to be the one for clinics and for a huge R&D center in which we will do research. We have how do you call it? Innovation lab that will be with 3D printers and with just several labs that are planned to open there. And we will have two more inpatient boards on the fourth floor. And so we're not done yet. We are in, we're in the middle of the process actually, and we're just waiting for the building to be completed. And at that point we will be able to receive much more patients. At the current moment, there is still a quite long waiting list for rehab. So, we are still lacking beds and we're still not able to take care of everyone. There is a huge need for opening the rest of the floor and we hope it'll be soon.

Maayan Hoffman:

Yeah. So we'll definitely check back, in another year or so and see where things are holding, hopefully even before.

Dr. Elior Moreh:

You are very invited. I will, I would be delighted if I can show you already the new departments open and I'm looking forward for the lab to be open because I also have to, I am supposed to have a lab there and I want to recruit some students. And it'll, it's just thrilling that we will have this place to continue what I've talked to you about, the personalized medicine and advanced imaging, brain imaging techniques, and we could apply it for other conditions.

Dr. Elior Moreh:

For instance, multiple sclerosis and brain injuries, and we already started a new program last year about pain, processing of pain in chronic pain syndrome patients with pain in their hands or their legs. We put it in the MRI, put it into the MRI and we look, and we can see that the processing of sensation and of pain is totally different in the brain. So it's really interesting because there are several pain conditions that are not understood at all in current medicine. This will increase our understanding of how we can help with dealing with chronic pain, which is such a huge problem in modern society. So I think that we, if we can do that, it'll have all kinds of repercussions.

Maayan Hoffman:

Wonderful. Thank you so much for your time today.

Dr. Elior Moreh:

Thank you so much for having us and. We were so happy, so excited about the Gandel new center and it's really a pleasure and an honor to be taking care of all these wounded soldiers and of all the patients in the Jerusalem area.

Maayan Hoffman:

And I know that they appreciate it. Thank you.