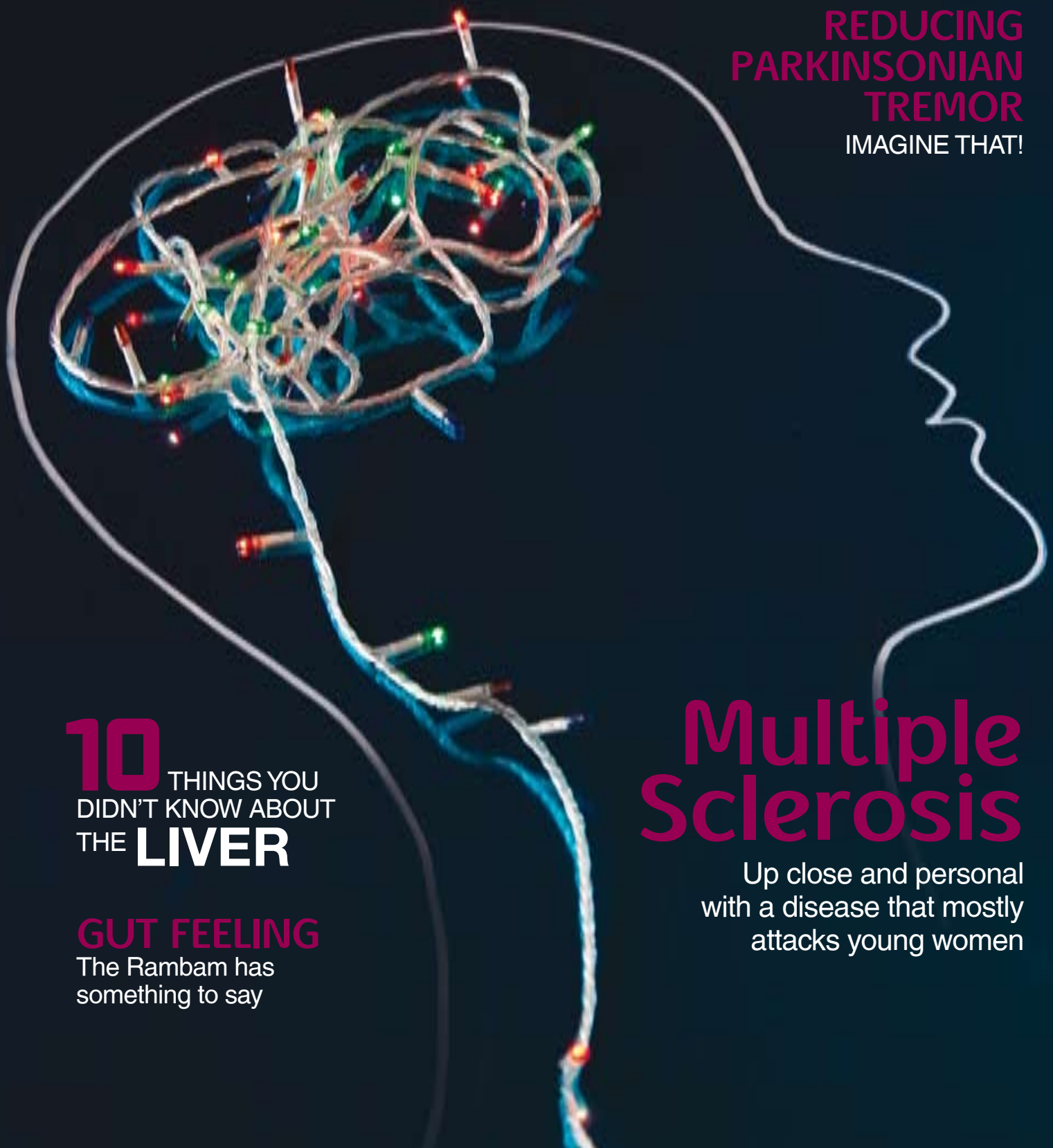
RAMBAM Health Care Campus

Rambam on call

ISSUE No. 11 | March 2013



REDUCING PARKINSONIAN TREMOR

IMAGINE THAT!

Multiple Sclerosis

Up close and personal with a disease that mostly attacks young women

10 THINGS YOU DIDN'T KNOW ABOUT THE LIVER

GUT FEELING

The Rambam has something to say

Dear Friends,

Joyful news has Rambam Health Care Campus celebrating well before Pesach or even Purim this year. In January, we received news that Rambam was selected to administer the newly established Ernest and Bonnie Beutler Research Program (p.33). This was followed in February by equally welcome news from the Leona M. and Harry B. Helmsley Charitable Trust announcing a grant of $5M to equip the Sammy Ofer Fortified Underground Emergency Hospital. Meanwhile, the West Campus above-ground building complex currently under construction is daily growing in beauty (p.28).

In this issue of *Rambam on Call*, we are also pleased to share the optimistic stories of a range of patients successfully treated at our hospital: kids with juvenile chronic joint inflammation (p.6) and limb deformations (p.30); young women with multiple sclerosis (p.18), women approaching menopause (p.14), and women being offered a better method of breast reconstruction after mastectomy (p.22); and a tough Israeli farmer, living on the Lebanese border, who experienced shell shock during the Second Lebanon War (p.10).

Rambam is fortunate. We have compassionate medical professionals, courageous patients, and caring Friends. Thank you, dear Friends, for supporting our success as an Israeli medical hub for healing and research.

PROF. RAFI BEYAR

Director and CEO
Rambam Health Care Campus

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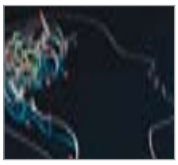

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Departmental Rounds Department of Emergency Medicine

Rabia Salama, 32, married + 2, Coordinating Stroke Nurse in the ER (Department of Emergency Medicine) at Rambam

1 How would you describe your job?
The official description is Coordinating Stroke Nurse in Emergency Medicine. My job is to promote the treatment of stroke patients in the ER in order to utilize the short window of opportunity available for treatment to improve their condition. The two treatments likely to save a patient from a stroke's severe consequences are intravenously injecting *recombinant tissue plasminogen activator* (rtPA), a drug that dissolves blood clots, and catheterization of the cerebral arteries. The drug rtPA can be given only during the first four-and-a-half hours after the stroke, and catheterization can be performed up until eight hours after the onset of symptoms. The treatment is not appropriate for all patients during this window of opportunity, and clear criteria exist according to which a therapeutic decision is made.

2 Why did you choose to work in emergency medicine?
After several years of work as a nurse in an internal medicine department, I requested a transfer to the Department of Emergency Medicine. I like the dynamism in the ER and the large variety of cases that we treat.

3 Of what are you particularly proud?
To be part of the Stroke Division, which has been built through cooperation among a number of departments and units in the hospital. Its success is a result of full cooperation among all the factors—the ER, the Department of Neurology, the Roentgen Institute, and the Invasive Neuroradiology Unit. The project began in February 2010, and since then, we have established our status as the largest stroke center in Israel. Previously, we would catheterize approximately seven cases per year whereas already in the project's first year, we treated approximately twenty-six patients. This is the place to acknowledge the project's partners: [Director of the Department of Emergency Medicine] Dr. Shlomi Israelit, [Head Nurse] Hagar Baruch and the ER staff; [Director] Prof. David Yarnitsky, [Head Nurse] Yael Safran, and Coordinating Stroke Nurse Dima Rozenfeld and the Department of Neurology staff; and Dr. Yaaqov Amsalem and the Invasive Neuroradiology Unit and Nuclear Medicine Institute staff.

4 What are your greatest moments of satisfaction?
Some stroke patients arrive unable to move an arm and leg and to speak. I am satisfied when I see some of them released to their homes on their feet after several days have passed.

5 Is there a breaking point?
Yes. For example, when a young patient is admitted to the ER with stroke symptoms, and after running with him for imaging tests, we discover that there is cerebral bleeding unsuitable for treatment.

6 How does your family cope with your work?
My family has been supportive all the way. My success is important to them, and they understand the nature of my work. Obviously it can be tough, especially on the children, because a large part of my shifts take place in the evening and at night.

My Day

06:30–14:30 I get my kids (aged 5 and 8) ready for school and take them there; go to the gym for 90 minutes; run domestic errands; pick up the kids from school, feed them lunch, and help them with their homework.

14:30 I get ready for the evening shift at Rambam.

15:00–15:30 I begin my professional day. I look through the computerized list of ER admissions to identify any stroke patients needing CT imaging or evaluation by a neurologist and if so, I arrange this for them. I also follow up on patients who have been treated to see if there has been improvement.

It's an intensive job because "time is brain." I'm on call for stroke patients. On an average day, the ER admits approximately 100 patients, and among them, 1–2 stroke patients per day.

15:30–23:00 With a stroke patient, everything must happen in minutes. We send new admissions to the Shock Trauma Room, and immediate therapeutic decisions are made. If it's an acute stroke, we call the neurologist. Dr. Amsalem is involved if catheterization can be used, and then [the patient goes] from catheterization to the Intensive Care Unit (ICU).

I stay with the patient the whole time, also during the catheterization (which can last from half an hour to three hours). I coordinate with the physician, the catheterization staff, the ICU staff, the administrative support staff, and the family. As soon as the patient has entered the ICU, I wait for the next patient.

23:00 I drink coffee because it's exhausting. Sometimes patients arrive toward the end of my shift and if so, I don't go home. I stay with them.

24/7 Department of Cardiac Surgery under the direction of Dr. Gil Bolotin

07:30 Morning conference. The experts and specialists go over the day's surgical plan. Suddenly, the director of a hospital heart institute in the North telephones to consult about a youth in danger of his life following a valve infection. Departmental Director **Dr. Gil Bolotin** gives instructions to admit him immediately for valve replacement surgery. **Head Nurse Masha Bozhko** asks **Departmental Secretaries Esty** and **Yael** to make the arrangements.

08:00 The nursing staff in the Cardiac Intensive Care Unit, headed by **Nurse Isam Kadri**, prepares to receive the critically ill patient. Meanwhile, the physicians do the morning rounds. They stop by the bed of a patient aged 50 who has had bypass surgery the day before. The patient expresses thanks: "I woke up this morning like new. I feel great," he says with a smile.

09:20 Nine scrubbed and sterile Operating Room (OR) staff members are ready to perform bypass surgery on a woman aged 87. **Dr. Avishai Ziser**, Director of Cardiac Surgical Anesthesiology, announces that the patient is anesthetized and also ready. **Nurse Rozalia Dardik** is all set with advanced equipment that makes it possible to stabilize the heart without using a heart-lung machine. **Dr. Bolotin** begins to operate.

14:00 **Dr. Zvika Adler** prepares to operate on another young man urgently requiring valve replacement surgery. In a second theater, **Dr. Bolotin** is operating on a tourist who has been flown to Israel from the former USSR for complex surgery to repair a valve using artificial tendinous chords. Due to this corrective surgery, the patient will not have to take Coumadin (warfarin). The morning shift transfers responsibility for the department to the afternoon shift.

19:20 The surgery to replace the young man's valve ends successfully. Meanwhile, an urgent call is received from the OR. A 50-year-old woman has presented with chest pains after frenzied dancing at a wedding. A tear in her aorta is diagnosed. **Technician Rami Haizler**, responsible for the heart-lung machine, connects her to the machine, and **Dr. Victor Kertsman** begins a huge operation to replace her aorta.

00:50 **Dr. Oved Cohen** is summoned to the department. An 18-year-old youth who was stabbed in the chest with a knife during a quarrel has been admitted to the Emergency Room in critical condition and diagnosed with a hole in his heart. Until Dr. Cohen arrives, the on-call physician plugs the hole with the help of his finger. The injured patient and the physician glued to him rush to the OR, where Dr. Cohen sutures the hole. The urgent operation ends at 05:00, and Dr. Cohen sits down in the departmental lobby to drink a cup of coffee.

A Quiet Joint

One of every thousand children will fall ill with juvenile chronic joint inflammation. In the past, such children were sentenced to a life of disability. Today, due to new biological drugs, a large majority of them recover entirely.

>> **Eti Dor**

Fever, swelling and pain in the region of the knees were the first worrisome symptoms indicating that four-year-old Omer (not his real name) was ill with joint inflammation. After his diagnosis, he was forced to give up a considerable part of his childhood games and to cope with pain in his knee joints, the region where the disease had injured him.

During his twenties, Omer was forced to undergo two knee joint operations, but despite this, he continued to suffer from pain and was compelled to use crutches. It's reasonable to assume that he would have had a chance to recover entirely, without need for surgery, if in his childhood innovative biological drugs had taken hold. Precisely this positive outcome occurred in the case of Daniel (not his real name), aged 11.

Daniel became ill at age three but completely recovered after he was treated with the new drugs. "We estimate that due to biological drugs, within ten years joint transplantation in children will not be necessary," says **Prof. Riva Brik**, Director of the Department of Pediatrics B and of the Pediatric Rheumatology Clinic at Rambam Health Care Campus.

The Body Attacks Itself

Joint inflammation is a chronic disease that strikes one in every thousand children under the age of 16. "The disease also appears among one-year-old infants," says Prof. Brik. "Because we're speaking of the childhood process of development and growth, it's important to prevent destruction of the joints."

What causes the disease?

"The exact cause is still not clear although we do know that it belongs to the autoimmune group of diseases. In this disease, the immune system attacks the body's healthy cells because it mistakenly identifies them as foreign cells, and as a result, the membranes and connective tissues of the joints become inflamed. Hereditary and environmental factors also trigger the disease, and it has been proven that a connection exists between infectious viral contagion and development of the disease."

Depending on the Number of Joints

According to Pediatric Rheumatologist **Dr. Yonatan Butbul**, it is customary to categorize the disease as *simple onset, pauciarticular,* or *polyarticular* depending on the number of unhealthy joints involved and the accompanying clinical symptoms.

The simple onset form of the disease appears mainly in young children and is equally distributed among boys and girls. It is indicated by a fever of up to 40 degrees Celcius accompanied by joint and muscle pain and also by a skin rash that appears as pink spots.

The pauciarticular form of the disease, which involves up to four joints during the inflammatory process, is the most prevalent and least serious category. "This disease is more common in girls and is liable to appear already at the age of one," explains Prof. Brik. "Typically, an enlarged knee joint or hand root joint is involved, and a physical exam will reveal that the joint is swollen." The good news is that the majority of children who fall ill with this form of the disease will entirely recover from it.

The polyarticular form of the disease involves five or more joints. It also is more prevalent among girls but usually appears in adolescence. "We are speaking of a severe disease occurrence," explains Prof. Brik. "Approximately 45% of the children ill with it will continue to be afflicted with various symptoms after adolescence."

Does early diagnosis provide a therapeutic advantage?

"Definitely. Early discovery and diagnosis of the disease can assist in the treatment's success."

Revolution in Treatment

Up until now, the customary treatment for the disease has been by means of older generation drugs: anti-inflammatories and drugs that suppress the immune system. The therapy helped to lessen the symptoms of inflammation and the accompanying pain but entailed side effects and did not prevent disease progression.

In recent years, biological drugs have been developed that constitute a real revolution in treatment inasmuch as they interfere with the basic mechanism of the disease. The new drugs reduce the need for steroids, which entail side effects, and prevent the development of joint distortions. "The new generation drugs are targeted and focus solely on preventing the inflammatory process," specifies Prof. Brik. "Their use has caused a revolution in treatment; there are not only patients whose condition has improved but also patients whose disease has been entirely arrested. These drugs can be divided into several categories, and only a rheumatic specialist can tailor the correct treatment to each patient."

Approximately **45%** of the children ill with it will continue to be afflicted with various symptoms after adolescence.

Medical consultant:

Prof. Riva Brik is Director of the Department of Pediatrics B and of the Rheumatology Clinic at Rambam Health Care Campus.


That land is my energy, the thing dearest to me. I planted everything with my very own hands.
Shlomo Azoulay

The Battle of his Life

Injury sustained in the Second Lebanon War by Shlomo Azoulay, a tough farmer rooted in Moshav Zar'it, resulted in his developing posttraumatic stress disorder. The Department of Psychiatry at Rambam Health Care Campus helped him gradually return to himself.

Yael Tal >> Photography: Edward Kaprov

Shlomo Azoulay, aged 53, and his family will never forget 9:08 A.M. on July 12, 2006. On the day when three Israel Defense Forces (IDF) soldiers were kidnapped and the Second Lebanon War broke out, the farmer, a dominant figure at Moshav Zar'it and manager of the orchard there, was also "grabbed." It was the fruit-picking season's first day. His middle son, Pini, was also out in the fields, and when the rocket salvoes started thundering, he called his father in alarm and urged him to save himself. Shlomo didn't have to be persuaded. However, two Sagar missiles fired at his vehicle forced him to stop.

Shlomo was evacuated to the nearest hospital, in Nahariya, suffering from shrapnel throughout his body. On the third day, he waived further hospitalization and signed himself out, returning home wounded and covered in bandages. "I'm afraid of closed places and crowds," he explains.

Moshav Zar'it, which is on the border, resembled a ghost town during these same days. Many families had evacuated farther south, but the strong man who was always in control refused to hear about leaving. He continued caring for the moshav and also directing the chicken farm on adjacent Moshav Goren, where he worked as a salaried manager. Even when Raymonde, his wife, asked that they leave for a while in order to regain strength, he stayed obstinate. "I had remained the only farmer at Zar'it that still worked land. That land is my energy," he says, "the thing dearest to me. I planted everything with my very own hands."

Leaving Home

The war ended, but Shlomo's private war had only just begun. "I couldn't sleep at night. I had attacks of rage and anxiety, dreams that 'they' are trying to kidnap me or hurt me," he relates. "Every time that I had to go to the orchard, the thoughts would begin: How can I defend myself? What do I do?"

He was diagnosed as suffering from posttraumatic stress disorder (PTSD) and presented himself to the hospital in Nahariya for conversation once a week with a psychologist and once a month with a psychiatrist.

"I didn't really treat my soul," he says in retrospect. "I continued to work as usual at a time when I should have stopped and allowed myself to calm down and digest what I had experienced."

His wife, Raymonde, and their three children (21, 27, 31) experienced Shlomo's dramatic change in their own lives. From a normative family with a love for life, they became a unit whose head of family was broken. Shlomo had turned into an angry, nervous man inclined to outbursts of rage. His severe sleep disturbances made it harder for him to function at work. A year after being wounded, he quit his salaried job at Goren, and when he would go into the orchard at Zar'it, he would return worn out after a short time.

One morning three years ago, his wife saw him packing his things into a suitcase. He said that he was leaving home and that he had already rented an apartment on Kibbutz Eilon; he didn't want to see his family for a full month. "I let him go and gave him to understand that it was okay and that when he wanted to return, he could," she relates.

Shlomo returned to his family after that month, but eight months later, he surprised them by again deciding to flee. This time, his flight lasted two weeks. His psychological deterioration worsened and became deep

I understood there that I must care for my soul just as a physically ill person cares for his body.

depression. Inside Shlomo's mind, suicidal plans were cooking, and Raymonde stayed close to him like a shadow. Shlomo gave up responsibility for his former tasks: on the moshav committee, at home, on the farm. He passed his days lying in bed and staring at television.

Raymonde telephoned his therapists, who decided to refer him for hospitalization in the Department of Psychiatry at Rambam Health Care Campus, where there are specialists in PTSD and shell shock.

Healing the Soul

On August 31, 2011, Shlomo was hospitalized. He would spend five weeks in the department."The way the physicians related to me, the daily supervision, the interest, all of these caused me to feel that I was in good hands," he recalls. "I understood there that I must care for my soul just as a physically ill person cares for his body."

"When a person is severely depressed, in the first phase we give focused treatment to improve his depressive condition," explains **Zina Levitan**, a psychologist at Rambam Health Care Campus who treated Shlomo during his hospitalization. "Treatment that focuses on trauma calls for emotional resources that the patient soaked in deep depression lacks. When the person becomes more stable, it is possible to begin the specific therapeutic process for trauma."

"The therapeutic program for Shlomo included medications against depression, antianxiety drugs, sleep medications, individual psychotherapy with a psychologist, and participation in such varied activities offered within the department as occupational therapy, support groups, and the building of a treatment plan for post-hospital release," explains **Dr. Kfir Eisler**, a specialist in the Department of Psychiatry at Rambam who also treated Shlomo.

"Shlomo displayed impressive motivation, and cooperated. He gradually bonded with other patients and reported improvement. His emotional awareness awakened and his stress lessened. Under suitable treatment—rehabilitative, psychological and psychiatric—he has an opportunity and a good chance of continuing to improve and perhaps even of recovering fully."

Medical consultant:

Dr. Sarah Marmor is Deputy Director of the Department of Psychiatry and Director of its Hospitalization Unit at Rambam Health Care Campus.

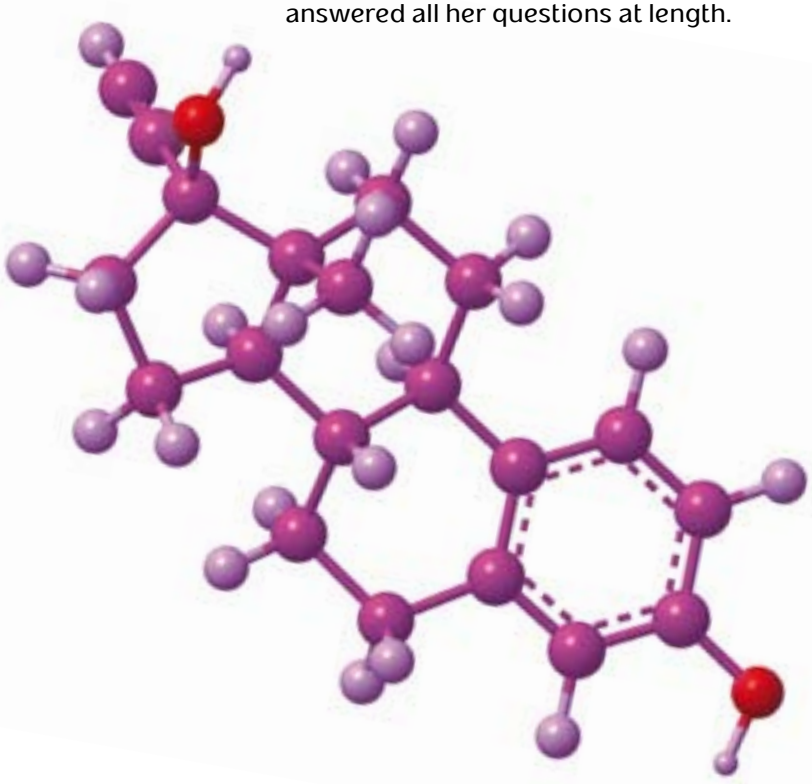
Hormones Return

After years of hesitation regarding hormone replacement therapy, more and more menopausal women are asking for it. Dr. Eitan Peer is for the trend.

>> **Eti Dor**

At age 48, Edna (not her real name) felt that her quality of life had plummeted. Hot flashes attacked her in the morning, a sense of despondency and nervousness filled her, and several additional superfluous kilos padded her body. She understood the connection between these phenomena and the fact that she had stopped having her period, and turned to the Menopause Clinic at Rambam Health Care Campus for help.

Like other patients, at first she expressed hesitation about hormone replacement therapy (HRT) and asked for the truth behind the confusing information on the subject. **Dr. Eitan Peer**, a gynecologist and senior physician at the clinic, who is among the founders of the Israeli Menopause Association, listened to her misgivings and answered all her questions at length.



Edna and other women who have arrived at menopause had heard of the big Women's Health Initiative (WHI) research study published in 2002 that threw into question the trustworthiness and effectiveness of HRT for menopausal women.

The study, which was supposed to have lasted eight years, was stopped in May 2002, approximately three years before the planned finish, after intermediate outcomes indicated apparently worrisome findings: In total contradiction to previous epidemiological studies indicating HRT's protective influence on the heart and blood vessels, these findings indicated that the relative risk of heart attacks among subjects given the hormones was 29% higher than among subjects given a placebo, the relative risk of stroke was 41% higher, and the relative risk of breast cancer was 26% higher.

However, during the ten years that had elapsed since publication, it became clear that many methodological problems had beset the research study.

The Research is Shattered

So what happens to the menopausal woman, and what is the truth behind hormone replacement therapy? Dr. Peer explains that the woman's ovaries, among whose tasks is to produce the female sex hormones estrogen and progesterone, gradually finish these tasks between the ages 45–56. "For the woman, we are speaking of a dramatic change that causes various bodily systems to try and cope with their equilibrium's having been disrupted. This is expressed by such symptoms as weight gain, depression, hot flashes, an accelerated heart beat, sleep disturbances,

skin and vaginal dryness, bladder pressure, mood swings, nervousness, oversensitivity and more.

"When it became clear to physicians that a connection exists between a drop in the production of hormones and these phenomena, which appear in various degrees of severity among 70%–80% of women, they began to treat symptoms by means of HRT: The women received the hormones estrogen and progesterone, with the goal of returning to the body the equilibrium that had existed in it before the appearance of symptoms. In fact, the hormones mimic the woman's menstrual cycle," explains Dr. Peer.

suffered from hypertension, 4% suffered from diabetes, and 8% had heart disease."

So in fact, HRT when given up until age 60 is effective against cardiovascular diseases?

"Yes, but there's a window of opportunity for starting HRT, and it's when the woman is at the beginning of menopausal age and her cardiovascular system is still healthy. The hormones protect the heart. The reason for this is that estrogen regulates the production of blood fats and prevents blood sedimentation on the vascular walls. (But) when the hormonal activities cease, fatty sediments are created in the blood vessels, and when estrogen is (then) taken at a late stage, these fatty sediments flow into the blood vessels and obstruct them and in this way cause heart attacks and strokes."

Hormone replacement therapy is effective against cardiovascular diseases when it is given up until age **60**

How is it that the WHI study found an apparently increased incidence of cardiac events?

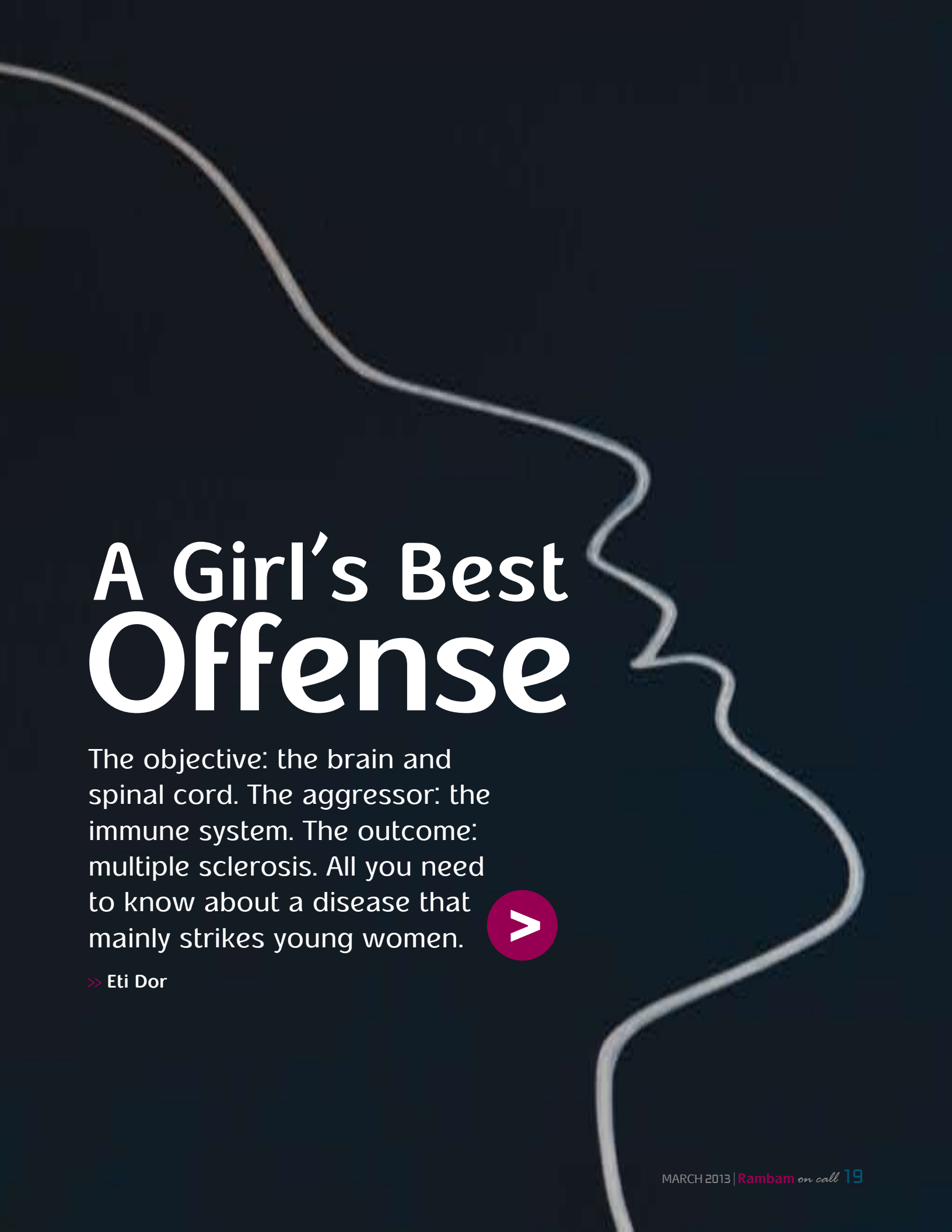
"The average age of the women who begin HRT is 45–55, but 70% of the study subjects were aged 60 and above, and 21% of them were aged 70–80. In addition, some participants had risk factors for heart disease, 70% of them were overweight and half of these were obese, 12.5% suffered from high blood fat levels, more than a third

Is hormone replacement therapy recommended for every menopausal woman?

"It isn't suitable for every woman, but a woman whose quality of life has been significantly impaired shouldn't be prevented from using it."

Medical consultant:

Dr. Eitan Peer is a gynecologist and senior physician in the Menopause Clinic at Rambam Health Care Campus.



A Girl's Best Offense

The objective: the brain and spinal cord. The aggressor: the immune system. The outcome: multiple sclerosis. All you need to know about a disease that mainly strikes young women.

>> Eti Dor

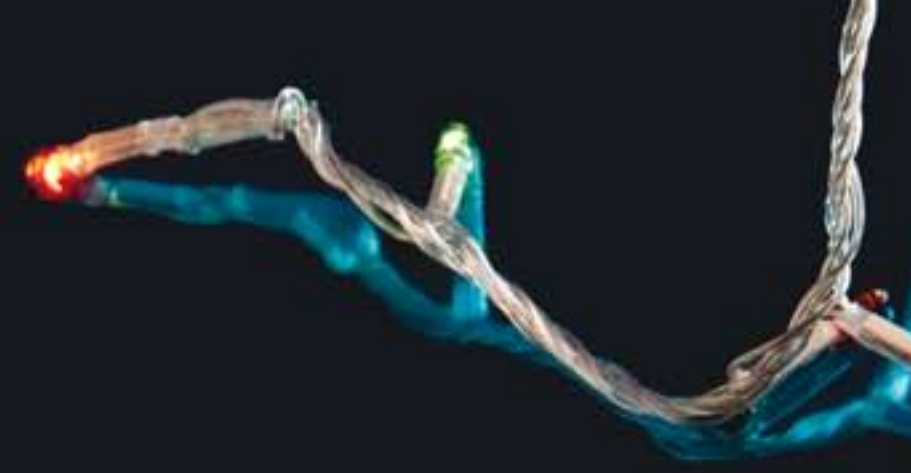
Blurry vision, fatigue, and a lack of balance were the worrisome first symptoms that disturbed the serenity of 31-year-old Osnat (not her real name). When her symptoms grew stronger, she was referred to a neurologist. He suspected that the young woman was ill with multiple sclerosis (MS). The Multiple Sclerosis Clinic at Rambam Health Care Campus confirmed the suspicion after running a series of tests, among them an MRI exam of the brain and spinal cord.

"Osnat came to us after the birth of her third daughter," relates **Dr. Alla Shifrin**, who directs the Multiple Sclerosis Clinic. "Because we are speaking of a young woman, it was important to us to tailor her treatment so that it wouldn't damage her fertility. Luckily, her disease was diagnosed in its early stages so that we could deliver personalized treatment designed to safeguard her quality of life, reduce the frequency of her attacks, and prevent hospitalization. Osnat is today supervised by the clinic, and despite her disease conducts a routine life, works, and is raising her daughters."

The case of Osnat teaches us about the significant advances that have taken place in recent years in the diagnosis and treatment of MS. "Twenty years ago, it took between five to seven years to reach a diagnosis," says Dr. Shifrin. "Today with the help of innovative technology, it's possible to arrive at a diagnosis within half a year from the appearance of symptoms. Furthermore, the indications for starting treatment have expanded to include more patients. While in the past the requirement for starting treatment was the appearance of two clinical events expressed by two sets of neurological symptoms different from each other, today the patient already undergoes evaluation following a *first* clinical event. If the diagnostic criteria are fulfilled, the patient will receive treatment without the necessity of waiting for a second attack, something that makes possible a better quality of life."

The Electrical Signals are Damaged

Multiple sclerosis is a chronic disease during whose progress the immune system attacks the central nervous system—the brain and spinal cord—time after time and causes an ongoing and variable inflammatory process with active and



chronic phases. The disease damages a substance called *myelin*, the most important component of the central nervous system's neural fiber membranes, whose job is to insulate the fibers and enable accurate and quick transmission of electrical signals among neurons.

"As a result of injury to and destruction of the myelin, a disturbance or slowing down is created in the transmission of electrical signals in the brain and spinal cord," explains Dr. Shifrin. "Simultaneously, brain volume diminishment occurs due to degeneration of the cells themselves."

The damage is expressed as functional disturbances in one or more of the nervous systems, among them the sensory system, the motoric system, the posture, the coordination, and the vision.

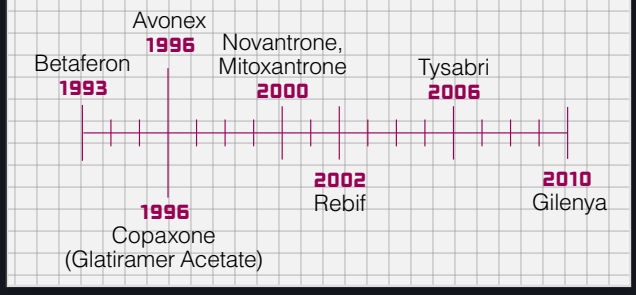
The disease was described in the 19th century by the French neuropsychiatrist Prof. Jean-Martin Charcot. When he studied patients' brain tissue pathology, he was impressed to find that as a result of damage to the myelin, the nerve fibers had produced scars that he named "scleroses." Because these scleroses are disseminated to various locations in the nervous system, the adjective "multiple" was added. Today, we already know a lot more about this disease, but the original name has remained unchanged.

Can Attacks Be Predicted?

"The course of the disease varies from patient to patient," explains Dr. Shifrin. "Not all patients afflicted with it arrive at a condition of functional disturbances and some of them don't suffer at all from basic functional disability even many years after disease onset. In fact, a patient's frequency and severity of attacks varies over the years. In a typical attack, a new symptom will appear for a period of more than 24 hours, persist for several weeks, and entirely or partially improve by degrees. By providing suitable treatment, we can succeed in significantly reducing the severity and duration."

Drug Metamorphosis

Until 1993, there was no treatment for the disease. Since then, once every few years a new drug goes to market.



How is the disease diagnosed?

"Diagnosis is usually based on the clinical process and on MRI imaging examinations of the brain and spinal cord, a lumbar puncture (LP), and also various electrophysiological tests."

What causes the disease and how many are afflicted with it?

"The cause is still not known. There are theories that attempt to explain how the disease is acquired. In Israel, there are approximately 5,000 MS patients, of whom 1,000 live in the North."

In general, at which age does disease onset occur?

"Usually, the age range is 18–50, with the typical age for diagnosis the second decade or the beginning of the fourth decade of life. The prevalence of the disease is greater among women."

Medical consultant:

Dr. Alla Shifrin is the Director of the Multiple Sclerosis Clinic in the Department of Neurology at Rambam Health Care Campus.

21st Century Medicine

>> Erela Tarlev Ben-Shahar

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Flesh of her Flesh

An innovative microsurgical method making possible tissue transplantation from one area of the body to another is the basis of a novel technique for reconstructing breasts. Meet the DIEP Flap system.

What is microsurgery to reconstruct breasts?
Microsurgery enables transplanting tissue from one place in the body to another and is based on linking up small blood vessels. In microsurgical breast reconstruction, the most commonly used tissue is lower abdominal fat and skin; however, it's also possible to use fat and skin from the buttocks or thighs.

What is the DIEP Flap method?
In a DIEP Flap procedure, the physician transplants lower abdominal fat and skin, together with their blood supply, to the post-mastectomy breast area (also performing a tummy tuck in the process) and uses microsurgery to link the tissue flap's blood vessels to the chest's blood vessels. The fatty tissue constitutes an excellent replacement for the breast tissue that has now been removed.

When was the method invented?
The first operations were performed in New Orleans, USA at the beginning of the 1990s. During the 2000s, in the USA and the whole world, an improved method began to be used. In Israel, the Department of Plastic Reconstructive Surgery at Rambam established a service dedicated to the subspecialty of microsurgical breast reconstruction and appointed at its head Senior Physician Dr. Liran Eldor. This facility is among the leaders in Israel in the practice of the DIEP Flap method and is the only such center in Israel to frequently perform this kind of reconstruction on both breasts simultaneously in the case of double mastectomy.

What are the other methods of reconstructing breasts?
The most common method uses a prosthesis made from silicone, which is in fact a foreign body whose purpose is to replace the breast tissue. Another method uses the muscle and skin of the lower back but also requires the use of a silicone prosthesis in most cases. An older method, called TRAM, is based like DIEP on using a flap of tissue from the abdomen, but this method risks injury to the abdominal muscles.

What advantages does the DIEP Flap method have over other methods?
The use of silicone implants can include such characteristic and not infrequent complications as infection, the accumulation of fluids, and what is called in the professional lingo "capsular contraction," a phenomenon in which the tissue surrounding the silicone becomes hard and distorted, and whose risk goes up when the woman needs radiation. The TRAM method, on the other hand, is not accompanied by these complications, but does require the use of an artificial net in order to strengthen the abdomen because a risk exists of developing weakness there. In comparison, according to surveys, the DIEP Flap technique creates breasts that provide the woman with a more natural sensation because the breasts are constituted of living tissue, are supple and warm and maintain body temperature, enlarge or become thinner in accord with fluctuations in the woman's weight, and are in fact "flesh of her flesh." A further advantage intrinsic to the surgery—the woman benefits from a taut, aesthetic tummy.

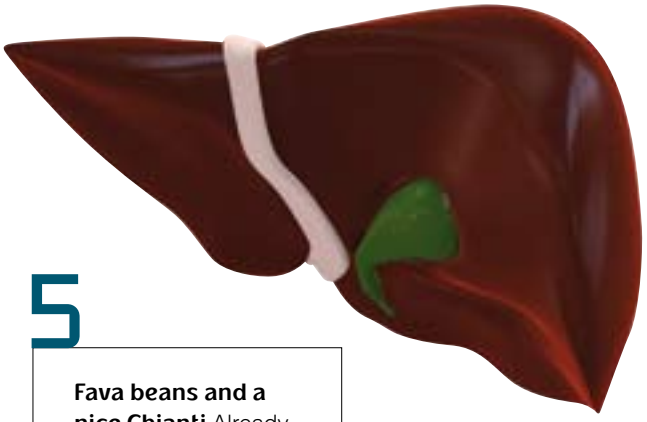
What technologies and skills are required in order to perform surgery by this method?
Microsurgery uses an advanced microscope whose enlarging lenses facilitate the cutting and suturing of small blood vessels (1–2.5 millimeters). It also requires a skilled staff that has specialized in the technique. The success rate of microsurgical breast reconstruction stands at 98%–100%.

Medical consultant:

Dr. Liron Eldor is Director of the Microsurgical Service in the Department of Plastic Reconstructive Surgery at Rambam Health Care Campus.

The Liver

10 things you didn't know about the body's chemical factory



1 **Weighty subject** The liver is the largest and heaviest organ in the body after the skin.

2 **Multitasker** The liver specializes in a number of functions: breaking down toxins; producing proteins, fats and glycogens; and accumulating, storing and managing secretions.

3 **Liver come back** The liver has an amazing ability to renew itself. In a case of having been cut, it can regenerate the missing piece.

4 **Just a slice** Due to the liver's ability to regenerate quickly, it's possible to donate only a section of it. The part that remains inside the donor will regrow, and the piece that has been donated will become in time an entire liver.

5 **Fava beans and a nice Chianti** Already in ancient Greece, the writers of mythology knew about the liver's impressive ability to renew itself. When Zeus, king of the gods, punished Prometheus for stealing fire on behalf of humanity, he bound him to a rock and sent an eagle to eat his liver every day anew.

6 **Deliver us!** One of the common diseases in our day is fatty liver disease, which is caused by the accumulation of fat in the liver. The prevalence of the phenomenon in the general population stands at 20–40% and among the overweight climbs to a prevalence of 60% and more.

7 **3-D** Alcohol in large amounts causes damage, disintegration and destruction of the liver. If you wish to protect your heart without hurting your liver, drink only a small amount of wine.

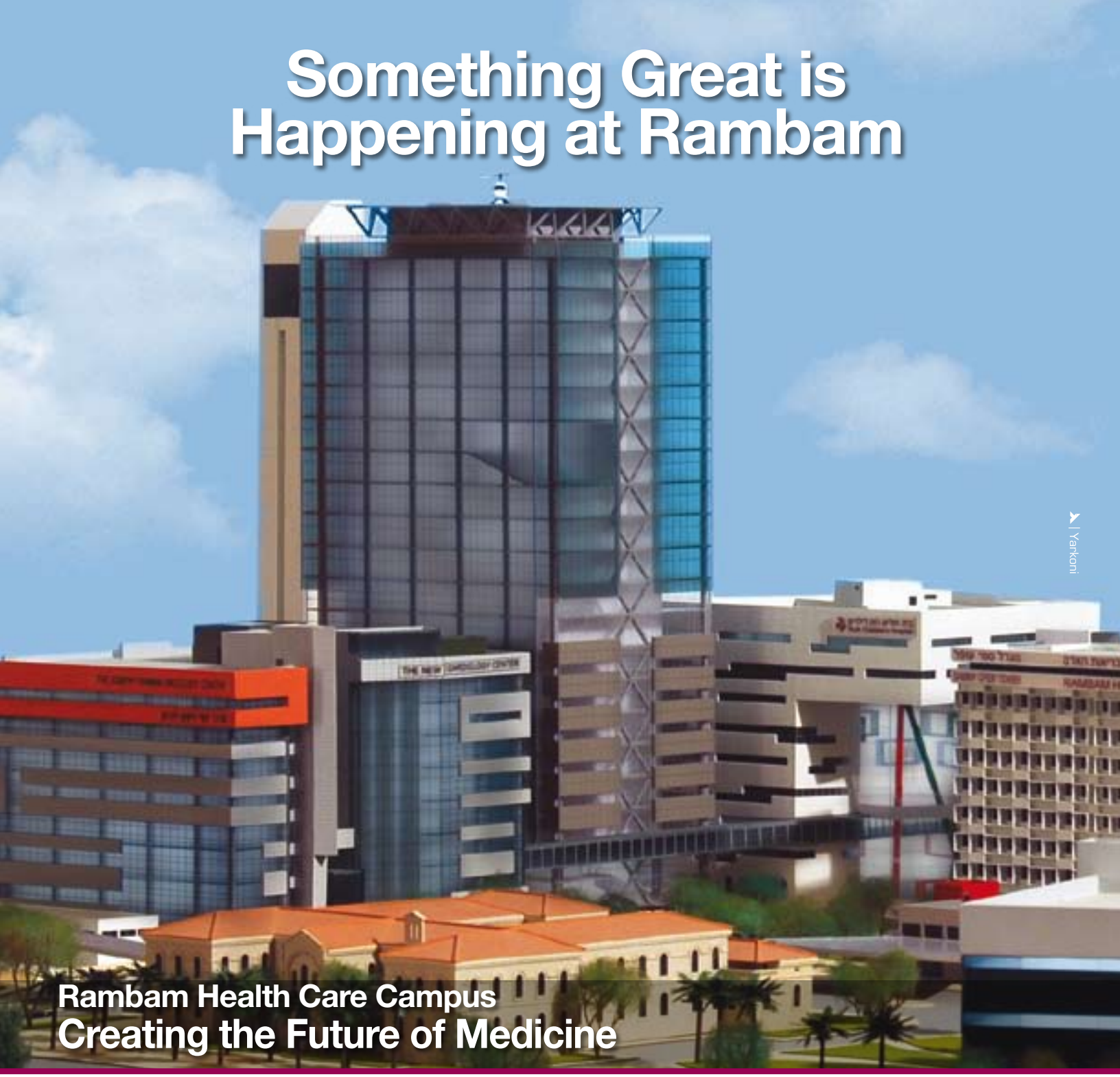
8 **Jaundiced baby** The tendency of babies toward jaundice comes from the fact that they're born without sufficient enzymes for the secretion of bilirubin, the waste matter produced by the normal breakdown of red blood cells. Luckily, babies' ability to produce this enzyme improves within a short time.

9 **Foie gras** The disease that attacks the liver at the highest prevalence is fatty liver disease. After that come Hepatitis B and Hepatitis C and after them, cancer.

10 **Get your goat** Already among the ancients, the liver was respected and valued as the "litmus strip" for testing bodily disease. Potsherds teach us that in keeping with this belief, healers would ask a sick person to exhale into the mouth of a goat, kill the poor animal, remove its liver and, according to that organ's condition, diagnose the patient's condition. This diagnostic method is perhaps not impressive, but it does indicate the understanding that if something in the body has been damaged, an expression of this can be found in the liver.

Medical consultant: **Prof. Yaacov Baruch** is the Director of the Liver Unit at Rambam Health Care Campus.

Something Great is Happening at Rambam



Rambam Health Care Campus
Creating the Future of Medicine

Rambam Health Care Campus is undergoing an unprecedented construction effort that will significantly improve patient services, therapies, and treatments, as well as clinical research. The impact will reach far beyond the citizens of Northern Israel. New facilities will include:

The Sammy Ofer Fortified Underground Emergency Hospital—Normally serving as a 1,500-car parking lot, this facility is also a 2,000-bed hospital constructed to withstand all types of warfare.
The Ruth Rappaport Children's Hospital—Designed with the motto "Pain Free," this hospital will meet the unique physical and emotional needs of children and their families.
The Biomedical Discovery Tower—This building will facilitate high caliber clinical research collaboration with subsequent implementation in patient care.
The Cardiovascular Hospital—Expert clinicians using the best equipment available will provide innovative approaches to cardiovascular disease.
The Joseph Fishman Oncology Center—This new center will enable heretofore-unavailable cancer treatments and therapies.

Support our Vision at: **www.rambam.org.il**

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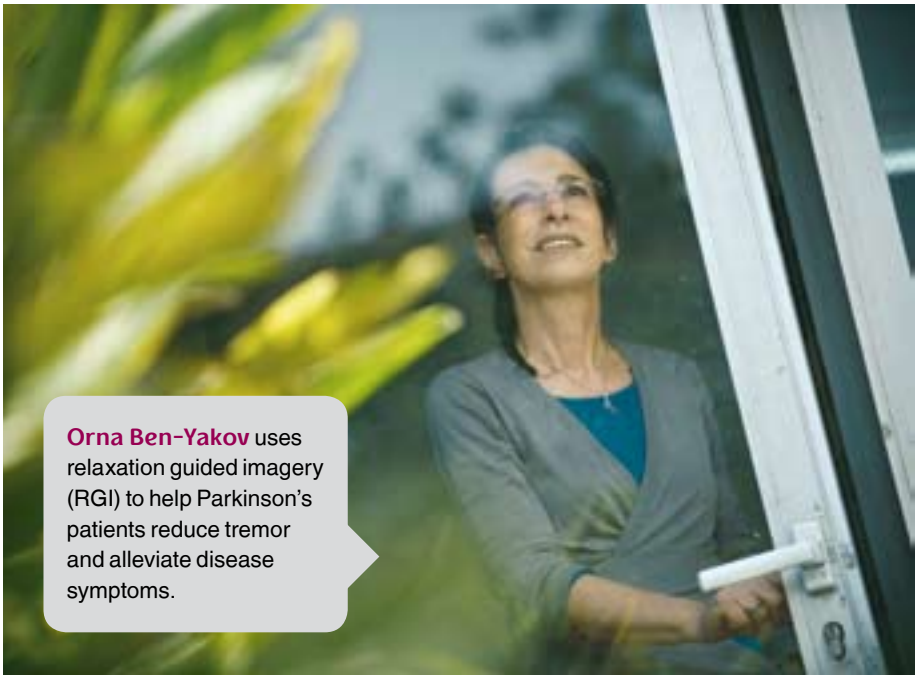
The Power of **Imagination**



Orna Ben-Yakov uses relaxation guided imagery (RGI) to help Parkinson's patients reduce tremor and alleviate disease symptoms.

My tips for relaxation (not just for patients)

1 **Go on vacation in your imagination.** The response of your body will be the same as if you had really gone on vacation.

2 **Focus on what is.** Instead of seeking what's missing in life, focus on that which is present.

3 **Listen to quiet music.** This is always pleasant and calming.

4 **Experiencing difficulty?** Remember events in which you had a successful experience.

What is relaxation guided imagery?
It's a technique from ancient times that became a practical technique at the beginning of the 20th century, based on our natural ability to imagine. The brain responds identically to an event that happens in reality and to an imagined event, and the body responds accordingly. During RGI, physiological functioning slows down and produces a feeling of tranquility. By this method, it's possible to ease a wide variety of physical and mental symptoms that are worsened by tension, such as tremors, itching, sleep disturbances, anxiety, pain, and nagging thoughts. It's possible to tailor the guidance to treatment of a particular problem and thus to assist patients in improving their functioning. For example, Parkinson's patients.

How does it work?
Relaxation guided imagery, just as it sounds, is done in a guided and deliberate manner, in a serene ambience, using tranquil language and helped by images, symbols, and the senses. With guidance, the imagination is nourished by positive information tailored to the patient's needs and goals. The person is like a spectator at a movie within his own world.

How did you discover that relaxation guided imagery helps Parkinson's patients?
For about five years, I've conducted a support group for Parkinson's patients. Three years ago, I decided to add RGI, a technique that I've studied and in which I've specialized, within the group framework. Most of the patients in the group suffer from various degrees of tremor. The first time that I used RGI with them, their tremor stopped. I thought that I was imagining things, but at the end of the process, there was great excitement among them. No drug today succeeds in making tremor disappear in this way. I noticed that the phenomenon recurs and reported this to Senior Neurologist Dr. Ilana Schlesinger, Head of the Movement Disorders and Parkinson's Center at Rambam. Together, we researched the phenomenon by means of objectively measuring degrees of tremor during RGI. Our research study was published in 2009 in the scientific journal *Movement Disorders* and awakened a lot of interest in the world.

Orna Ben-Yakov, RN, is Nursing Director of the Specialized Internal Medicine Units Division and of Ambulatory Care Services. She is also a rehabilitation and support group counselor and a senior consultant in relaxation guided imagery (RGI) and neuro-linguistic programming (NLP—a system that provides cognitive and emotional tools for coping with change and difficulty).

Easy Exit

What the Rambam Said:

There was an intelligent young man, and I examined him and found hemorrhoids in the entry of his rectum. . .and because they had afflicted him many times in the past, he thought that they should be surgically removed in order to uproot this disease at its source so that it would never again recur. And I told him what puts him at risk is his dehydrating himself and to beware of overly salting or spicing his food . . . and that the diet to prevent recurrence should include fatty chicken meat, and chicken soup is the best. . . and that also there are very effective grains. . . .

(Excerpted from a treatise by the Rambam about the medical treatment of hemorrhoids, which appeared in an anonymous translation published by the Rav Kook Institute in 1965.)

And in simple translation:

The Rambam relates to a young man who has come to him because of recurrent hemorrhoids. He warns against a cause of hemorrhoids, dry food, and suggests that the boy eat a variety of foods, such as pistachio nuts toasted in sesame oil, casseroles, grains, and especially chicken soup.

What do medical experts say today?

Dr. Jesse (Yishai) Lachter:

Hemorrhoids are enlarged anal veins that bleed or cause irritation or pain. Already more than 800 years ago, the Rambam knew how to classify them as internal or external, closed or open, those that could be narrowed and those that were prolapsed. He described surgical options to remove them but understood that even after surgery they would be liable to recur if their cause was not eradicated. A research study done in England describes an approach similar to the Rambam's, and research studies conducted in the USA and in Israel show that old hemorrhoids may recur in cases where nutritional habits don't change.

One of the central reasons for hemorrhoids is associated with internal dehydration caused by the eating of 'parching' foods, those that have no liquid (toast for example), or by having had too little to drink. For this reason, in order to prevent hemorrhoids, it's advisable to eat liquids such as soup, especially chicken soup, and furthermore to use such oils as sesame or olive oil to flavor food. It's also recommended to increase the intake of the dietary fibers that are found in leafy greens and in seeds (spinach casserole, for example, is good for this).

Six Tips to Prevent Hemorrhoids

1. Don't read on the toilet. If you don't have a bowel movement within five minutes, leave and return only after two–three hours.

2. Drink as much as possible. At least four cups of water or another liquid, not including coffee.

3. Eat a lot of leafy greens, fruits and vegetables.

4. Keep your weight normal.

5. Don't neglect "light" hemorrhoids. They are liable to worsen.

6. If you suffer from bleeding during bowel movements, check the source. Report it to your family physician.

Medical consultant:

Dr. Jesse (Yishai) Lachter is a Senior Physician in the Institute of Gastroenterology and the Head of the Endoscopic Ultrasound Service (EUS) at Rambam Health Care Campus.

Stork on its Way

Ruth Rappaport Children's Hospital

The lug soles of civil engineer Mr. Kobi Bossel crunch across the gravel and debris strewing the surface of Rambam's West Campus building site, for which he is Project Manager.

The new Ruth Rappaport Children's Hospital is currently approached across this site, where several new buildings are under construction at once. The beams recall the Erector Sets of childhood, and the workers perched inside tower cranes or balancing on scaffoldings and suspension platforms appear like LEGO men, or gymnasts, or sailors in the rigging.

This last isn't too farfetched: the new hospital's skeleton already rises to its utmost nine storeys, and less than 100 meters beyond it, waves collide with the Rambam breakwater. Viewed from high up, the toy cars in the municipal parking lot shine like silver buttons, a toy container ship navigates the bay, and white specks of gulls are cradled and rocked by troughs and swells.

The higher the workers climb, the more encompassing the view—southwest toward Stella Maris Monastery at the top of Cape Carmel, southeast toward the Bahai Gardens and the Carmel range (whose terraces and slopes appear green and silver, bathed in rain and sunlight), east toward Haifa Bay, and north toward open sea.

Recently, the children's hospital's wrapping of blue steel scaffolding was removed and the exterior has stood revealed, a perfectly formed iconic structure resembling an open gift box. Several panels of white or silver aluminum cladding have been affixed halfway up the massive south wall so that architect Arad Sharon and the Rambam leadership could make final decorative decisions. They have chosen "the whitest white," Mr. Bossel says. This is in keeping with the architect's original design, and will make for a sleek, luminous gift box.

In December 2012, however, the building presents a paean to 20th century Brutalist aesthetics: soaring walls of reinforced raw concrete; window openings that look as if they have been carved from wet clay with a scalpel; an interior infrastructure of exposed ducts, wiring, and color-coded conduits for medical gases and suction.

The new building's interior is accessed via roughhewn stairs with makeshift railings. A rain-freshened sea breeze flows unimpeded through the as-yet unenclosed lower and upper atria, the window openings, and the gaps between vertical aluminum supports for dry wall panels that have yet to be installed. The higher one climbs, the deeper and more dizzying appear the structure's open elevator shafts; laundry and garbage chutes; and especially the chimney wells, which rise through the building all the way from the minus-three level generator room of the Sammy Ofer Fortified Underground Emergency Hospital (the building's foundation).

The ribbon-cutting for the Ruth Rappaport Children's Hospital is slated for May 2013.

A handsome, coffered soffit juts high above the entrance plaza.

Three pillars brightly painted or cladded red, green, and blue (to suggest the children's game of jackstraws) will burst through the glass-curtained façade and support the building's cantilevered two top floors, which will close the top of the box like an overhanging lid.

Care to help?

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ContactUs@rambam.health.gov.il

First Steps First

Sofia (Moscow, Russia) and Dennis (Lviv, Ukraine) were born with limb distortions that prevented them from walking. At about age six, each came to Rambam for corrective surgery unavailable in their home countries.

During Sukkot, Sofia and her family made the long journey from Moscow to Haifa with the goal of enabling the little girl to use her legs for the first time in her life. The sparkling child had been born with bent knees that couldn't straighten. In a complex, six-hour surgical operation, Dr. Mark Eidelman, Director of the Pediatric Orthopedic Surgery Unit at Rambam, made incisions to her thighs and shins and the soles of her feet, and straightened and reset her limbs.

The surgery was successful, and after a month's recuperation in Israel and a short visit home to Russia, Sofia returned to Israel for rehabilitation therapy at ALYN Hospital in Jerusalem. Julia, Sofia's mother, sent poignant videos to Dr. Eidelman from Jerusalem documenting her daughter's first steps on the way to a normal life. He also visited mother and child in Jerusalem in order to encourage Sofia. Just before returning to Moscow, Sofia again saw Dr. Eidelman at Rambam; this time, he had to run after her. He says, "When I see Sofia walking, sliding down a slide, and descending stairs, I feel as if I am accompanying a baby on her first steps!"

Sofia after orthopedic surgery at Rambam Health Care Campus

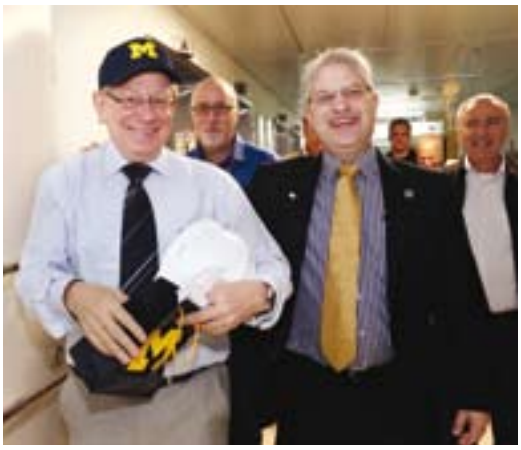
***

Another child recently operated on at Rambam by Dr. Eidelman is Dennis, now aged seven, from the Ukraine. This lovely boy was born with rigid joints, but there is no pediatric orthopedist in all of Lviv. After a series of failed treatments, Natalia, Dennis' mother, made up her mind to bring her child to Israel.

In a surgical operation that also lasted six hours, Dr. Eidelman corrected the congenital defects in Dennis' knees and the soles of his feet and in one wrist. After a month-long rehabilitation at ALYN, Dennis was able to play soccer, swim, and write his name, all for the first time in his life. Upon his return to Lviv, the boy, who had been home-schooled until then, was able to enter a regular first-grade class, and finished the year with an excellent report card. Several months ago, Dennis returned to Rambam for a checkup. While his mother spoke with Dr. Eidelman, Dennis drew a picture and dedicated it to the surgeon who had made it possible for him to use his hand.

Dr. Mark Eidelman and Dennis

Visitors Professorial, Ambassadorial, Mayoral



Right to left: Prof. David Pinsky (University of Michigan) hosted by Prof. Rafi Beyar on a tour of the Sammy Ofer Fortified Underground Emergency Hospital.

> Why Israel? Because Israel has some of the most advanced technological and medical innovations in the world and a spirit of entrepreneurialism and we can each benefit from working together, and as a side effect it's important for the world to know that through our cooperation, we can affirm the importance of collaborative science and make the world a better place—that's an important message to get out.
>
> **Prof. David Pinsky**

Michigan on a Mission

"You've thought of everything to deal with emergencies that are unthinkable in the United States—from the essential but mundane like toilets and showers to medical imperatives like piping for oxygen and backup power for electricity. One of the things I'm most impressed with is that you can create a kindergarten underground so that hospital workers whose husbands or wives are at war can have their children cared for while they care for the sick."

Prof. David J. Pinsky, M.D., Chief of Cardiovascular Medicine and Director of the Cardiovascular Center at the University of Michigan, shared his impressions of the Sammy Ofer Fortified Underground Emergency Hospital during a recent visit to campus.

Prof. Pinsky came to Israel as head of a 20-member delegation to the 2nd Annual D. Dan and Betty Kahn University of Michigan/Technion Collaborative Cardiovascular Research Symposium, a project of the University of Michigan-Israel Partnership for Research. The symposium took place on December 6th at the Rappaport Faculty of Medicine on the Rambam campus.

Prof. Rafi Beyar, Director of Rambam Health Care Campus, hosted the Michigan delegates. "We are interested in strengthening the link between the Cardiovascular Center at Michigan and the Cardiovascular Division here," he said in welcome. "Rambam is currently constructing a Cardiovascular Hospital, which makes this a fitting time to collaborate with one of the best centers in the world."

Ambassador Gao Yanping of the People's Republic of China presents Prof. Rafi Beyar with a book about the history of the Jews in China.

Fine China

In late January, Rambam was honored with a working visit by Her Excellency Ambassador Gao Yanping of the People's Republic of China to the State of Israel.

Bilateral cooperation has flourished between the two countries ever since diplomatic relations were established twenty-one years ago. The ambassador's visit took place in the context of ongoing Sino-Israeli scientific and technological cooperation. She expressed particular interest in learning about the practice of Level-1 trauma emergency medicine at Rambam and about the hospital's mass casualty situations (MCS) preparedness.

Ambassador Gao is known for warmly and graciously reaching out to the people of Israel. She has said, "China and Israel, two most ancient, great civilizations with glowing vitality in modern times, share a long history of genuine friendship."

Goals to Newcastle

The Lord Mayor of Newcastle upon Tyne, Jackie Slesenger (2nd from right), appears flanked by her husband, Councillor David Slesenger, and (far left to right) their hosts at Rambam, Ms. Maayan Katz, International Relations Coordinator, and Dr. Esty Golan, Chief Operating Officer.

The Lord Mayor of Newcastle upon Tyne, Jackie Slesenger, and her husband, former Lord Mayor and current Councillor David Slesenger, came to Rambam Health Care Campus in early January 2013 for a lively exchange of views.

The idea for the visit came about in May 2012 when the Mayor of Haifa, Mr. Yona Yahav, wrote to congratulate the Lord Mayor on her election. Jackie and David Slesenger are Jewish and feel at home in Israel, they say, adding that decades ago, Newcastle and Haifa were first twinned at the initiative of another Jewish married couple whose partners also both served as Lord Mayors.

The Lord Mayor and her husband were hosted at Rambam by Chief Operating Officer Dr. Esty Golan. They also met with Prof. Lior Gepstein at the Sohnis Family Research Laboratory for Cardiac Electrophysiology and Regenerative Medicine, which he heads.

The lab was busy turning skin cells into pulsating heart cells, and Prof. Gepstein made it sound so easy. "We're reprogramming skin cells backward to resemble embryonic stem cells and then forward to resemble any part of your body," the brilliant young clinician-scientist explained. "We've just taken skin cells from an 80-year-old cardiac patient, but his (reprogrammed in vitro) heart cells are similar to the status of his heart cells when he was born." Prof. Gepstein was visibly delighted to welcome the ambassadors from Newcastle, a city that he called "the leader in the UK in stem cell research."

> The Lord Mayor's office is apolitical. This visit isn't about politics, it's about knowledge and research. The idea is to revive the relationship between Newcastle and Haifa. Israeli research and Israeli development have helped the world, and humanity is the beneficiary. We are aware of your amazing technological achievements and are enamored.
>
> **Lord Mayor Jackie Slesenger**

Marrakesh Express

Attending Physician Dr. Gamal Hassoun of Rambam's Institute of Allergy, Immunology & AIDS traveled to Marrakesh in mid-December to share Israeli best practices at an international conference of HIV/AIDS specialists. Experts from Algeria, Egypt, Lebanon, Morocco, Hungary, Romania, Serbia, Turkey, and the U.K. also participated.

The two-day event took place under the auspices of the European AIDS Clinical Society (EACS), the European AIDS Treatment Group (EATG), the UK-based JUSTRI project, and the joint United Nations Programme on HIV/AIDS (UNAIDS).

Dr. Hassoun described to conference participants the treatment model developed at Rambam for serving a mixed population of native-born Arab and Jewish Israelis and new immigrants from Ethiopia and the former Soviet Union. Prof. Shimon Pollack, who directs the Institute of Allergy, Immunology & AIDS, has assembled a multidisciplinary, multicultural team including pediatric and adult immunologists, specialist nurses, a psychiatrist, social workers, a clinical pharmacist, translators, and a clinical nutritionist.

The Rambam method recognizes the differences in cultural norms among major HIV carrier populations and works on the principle that interveners (public health workers) should come from the same origin as the troubled populations. This sensitive approach, respectful of diversity, has yielded among the world's highest rates of patient compliance and treatment success.

Rambam is on the (Genomic) Map

Ernest & Bonnie Beutler Research Program of Excellence in Genomic Medicine

Rambam Hospital has been selected to administer Israel's newest nationwide competitive grants program for the advancement of clinically relevant scientific research in genomic medicine.

Mrs. Bonnie Beutler has chosen to honor her husband's memory by establishing in Israel the Ernest & Bonnie Beutler Research Program of Excellence in Genomic Medicine. In the words of the endowment charter, "The program will utilize rapidly emerging conceptual and technical breakthroughs in genome science to yield research discoveries with a significant impact on our understanding of human health and disease."

The program's terms stipulate that every year for a period of five years, two separate Israel-based researchers (not necessarily medical doctors) will be awarded research grants of up to USD 500,000 each (USD 100,000 x 5 years). Several concurrent genomic medical investigations will thus receive overlapping support, with a total of ten projects to be completed within a decade.

The Scientific Advisory Council (SAC) is tasked with recruiting the best of Israel-based genomic research talent without regard to race, religion, or gender. The six-member council is chaired by Prof. Rafi Beyar, Director and CEO of Rambam Health Care Campus. Its members include Professors Jacob Rowe, Yitzhak Apeloig, David Wallach, Howard Cedar and Bruce Beutler. Prof. Bruce Beutler, a son of Ernest and Bonnie Beutler, directs the Center for Genetics of Host Defense at UT Southwestern Medical Center (Dallas, Texas), and won the 2011 Nobel Prize in Physiology or Medicine.

The SAC members have held a range of top leadership positions at first-class medical and scientific institutions: Rambam Medical Center; the Technion-Israel Institute of Technology; the Technion's Rappaport Faculty of Medicine and Rappaport Institute; the Weizmann Institute of Science; the Hebrew University of Jerusalem; the Scripps Research Institute; and the University of Texas Southwestern Medical Center.

Rambam is ideally positioned to attain the Beutler Research Program objectives, Prof. Beyar says, because the hospital uses systems biology approaches, is affiliated with the Technion Faculty of Medicine, and works hand-in-hand with Technion researchers in the life sciences, computer sciences, biotechnology, and related engineering disciplines. The selection of Rambam to administer the program attests to the hospital's intellectual, scientific, and academic standing nationally and internationally.

The Beutler Research Program has designated nephrologist and molecular geneticist Prof. Karl Skorecki as its first grant recipient. Prof. Skorecki plans to use the generous terms of the grant to study "Functional Genomics and Chronic Kidney Disease and its Complications."

The Ernest & Bonnie Beutler Research Program of Excellence in Genomic Medicine is scheduled to be formally inaugurated at Rambam on March 6, 2013.

Who was Ernest Beutler?

Throughout a distinguished career spanning more than half a century, Prof. Ernest Beutler (1928–2008) combined the practice of clinical medicine and scientific research. He is considered one of modern hematology's fathers, and made huge contributions to the understanding of iron deficiency or iron overload, various leukemias, and Gaucher's disease. A deeply curious man, throughout his life he remained "a step ahead" with regard to research advances. Prof. Beutler always pulled the newest research tools from the forge as soon as they took shape. In the last years of his life, he continued to utilize the most advanced tools in order to investigate the genetic, molecular, and biochemical basis of major diseases of interest to him.

Snapshots October 2012 – February 2013

Raising the funds needed for purchase of six ventilator incubators for at-risk babies in the Department of Neonatology is the 2012–2013 focus of activities for British Friends of Rambam Medical Centre.

Newly established Amigos de Rambam celebrate Sukkot together, hosted by (R) the organization's President, Dr. Robert Stern, and his wife, Rebecca.

Oct. 2012, Torremolinos, Spain

Pupil Hilary Warrens receives the 1st Rambam Hospital Prize for Bio Medical Sciences on Immanuel College Prize Day. Her dad is Anthony Warrens, Prof. of Renal and Transplantation Medicine at Imperial College London; she hopes to follow him into medicine.

Nov. 2012, Hertfordshire, UK

Prof. Hedvig Hricak (center), Chair of the Department of Radiology at Memorial Sloan-Kettering Cancer Center and a member of Rambam HCC's Scientific Advisory Board, and Mr. Heeralall Mohabir (far L), Manager of the Department of Radiology, host Prof. Rafi Beyar, Director and CEO of Rambam (2nd from L); Ms. Michele Segelnick, Executive Director of AFORAM (2nd from R); and Ms. Lea Bernstein, Associate Director of AFORAM.

Dec. 2012, New York City

Eden Levine, aged 12 (almost), from Kibbutz Yahad in the Galilee chose to anticipate her Bat Mitzvah by visiting her birth hospital, Rambam, in the socially responsible role of donor and volunteer. Accompanied by her parents, Uri and Gila, Eden distributed new toys, games and books donated by kibbutz members to Children's Hospital inpatients.

Jan. 2013, Rambam HCC

This ventilator incubator was purchased for the Department of Neonatology by British Friends through the bequest of Gerda Fisch and with proceeds from BFRAM's spring fashion show in London.

Nov. 2012, Rambam HCC

L-R: Mr. Eyal Ofer, Mr. Sandy Weill, and Prof. Rafi Beyar are pictured at an American Friends of Rambam Medical Center gathering during Chanukah at the home of Marilyn and Eyal Ofer. The evening's theme was "Vision to Reality."

Dec. 2012, New York City

The Children's Hospital at Rambam has acquired clinical stress testing equipment thanks to the contribution of Mr. Hadar Kimchi and Mr. Israel Lazar from the League against Tuberculosis and Lung Diseases Haifa-Moriah. The equipment will be used to help evaluate thousands of kids. Mr. Kimchi appears flanked by (L) Dr. Fahed Hakim, Prof. Lea Bentur, and (R) Dr. Ronen Bar-Yoseph, all physicians in Rambam's Pediatric Pulmonary Unit, which Prof. Bentur directs, and (far R) Ms. Ilana Meller, Community Relationships Director of the Rotary Club of Haifa-Moriah.

Feb. 2013, Rambam HCC

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An IDF officer being transferred to Rambam Health Care Campus from the front during the Second Lebanon War

We have built the Sammy Ofer Fortified Underground Emergency Hospital

The largest of its kind in the world

We need 2,000 medical beds for it to be fully operational.

Help us care for Israel's citizens and soldiers by donating now.

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Rambam Health Care Campus is Northern Israel's main referral hospital, serving more than 2 million people.