

Mega Pesach Edition

APRIL 2019 // NISSAN 5779 // ISSUE 39

# WELLSPRING

THE MONTHLY MAGAZINE FOR HEALTHY LIVING

## Special Theme Section

### The Road Not Taken

Conversations with  
David Zulberg  
Dr. Miriam Knoll, MD  
Jacqueline Kimmel, PT  
Esther Marilus

Health Coach  
Sarah Wolhendler's  
**secret to  
a good life**

**I'm not a  
superwoman.**  
This is how I  
take care of  
myself.

**Why am  
I always  
tired after a  
meal?**

**The one  
nutrient your  
body needs  
to prevent  
constipation**

Make your  
own blanched  
almond flour

**Matza is  
not the only  
kosher-for-  
Pesach carb**

## At 12 years old he took a deep breath—and his first step

**What One Deep Breath  
Could Do To Your Body**

Dr. Mary Massery's  
groundbreaking work  
on the breathing-  
musculoskeletal  
relationship

**Expanded  
Wellbeing  
Section!**

NY/NJ \$5.99 // OUTSIDE NY/NJ \$6.50  
CALIFORNIA \$7.00 // CANADA \$7.00  
UK £5.50 // EUROPE €6.50  
ISRAEL ₪19.9



# זנשימה תהלל קה



על כל נשימה

# THE POWER OF ONE GOOD BREATH

At 12 years old, he took a deep breath—and his first step.

By Shiffy Friedman

**The entire existence of the human being is hinged on his breath. In... out... in... out... 25 to 30,000 times per day oxygen enters our lungs to fill our body with life and then exits in the form of carbon dioxide. With every breath we take, we enable the many complex systems in our bodies to fulfill their vital roles, not only keeping us alive but enabling optimal functioning. While it's common knowledge that breath is life, the extent of the effect breathing has on us is not. Here is one fascinating piece of proof.**

When we moved into our current apartment, the first thing I noticed about the Hirschbaum family living next door was the child-sized wheelchair outside their front door. When Ruchama, who has turned out to be the dream neighbor in every way, came to say Hi!, a platter of cut-up fruit in her hands, two of her young sons came along, one standing next to her and the other in a crawling position. “These are my twins,” she announced. “They’re nine years old. He’s Moishy, and he’s Pinchas,” she said, looking toward the floor. In a lower voice, by way of explanation, she turned to me and said, “They were born early.”

Over time, we’ve forged a connection, and often speak about Pinchas, Ruchama’s now twelve-year-old son, around whom her life revolves. Even as a full-time medical secretary and a very astute homemaker, frequent hostess, and mother of six, Ruchama spent hours every day at the various therapy centers that are geared toward children with needs like his, children whose mental and emotional capacity are completely up to par but whose physical disabilities profoundly impact their lives. Children—I only recently learned—with cerebral palsy (CP).

“Until last year,” Ruchama recently confided, “my husband and I didn’t tell anyone, including my parents and in-laws that Pinchas has cerebral palsy. All these years, we decided to keep it a secret. Everyone understood that his complications were a result of his premature birth. Because of the misconception that CP always results in cognitive impairment, we felt it would be better for him to grow up without the risk of being wrongly labeled. He’s a brilliant


child, who does great in cheder. He’s beloved by his friends and does well in all areas, except in moving his legs.”

Indeed, I’m constantly awed by the joy of life Pinchas exudes. Despite his challenges, he’s particularly on the ball and with the program, exactly as his parents want people to view him. To all of us, even my young children, he’s Pinchas, the smiling, cheerful, normal Pinchas, who happened to be wheelchair-bound—until last year. Just about a year ago, the Hirschbaums experienced an incredible miracle. Hashem’s messenger was world-renowned physical therapist Dr. Mary Massery, who was flown in from Chicago for just two weeks to teach her groundbreaking method to physical therapists in Israel. Providentially, Pinchas was the child she used as her model.

oooooooo

In January 2007, when Pinchas and his twin brother Moishy were born, Ruchama was overcome with emotion. Not only was she blessed with two healthy baby boys, but her seven-month bedrest had finally come to an end. Since the twins were born at 29 weeks—a full 2 months premature, Ruchama expected, as with two of her older children who were born early, that their development would be delayed to some extent. “It was such a miracle to look at the two beautiful little boys who had finally come into this world, and I was so happy for our three older children, who were desperate to have me back home and functioning,” she recalls. While the babies did stay in the hospital for a few weeks, their issues were not of particular concern to the medical team. “All we were told,” says Ruchama, “was that in the brain scans of Baby B, who would later be called Pinchas, the doctors saw some minor bleeding, but that they weren’t concerned about it. Neither were we.”

When Ruchama finally brought the babies home, she already had daily sessions with a physical therapist set up for them. As the months passed, however, especially because she had his twin brother to compare him to, Ruchama started picking up on the signs in Pinchas.



## At three years old, Pinchas was already learning the *Alef Beis* and speaking fluently, but he still couldn't sit.

“Within a few months,” she says, “the voice I wished to ignore in my head was becoming louder. Pinchas was clearly exhibiting low muscle tone. He couldn't lift his head, and every part of his development was just slower.” So Ruchama had his hours of physical therapy increased.

At six months old—the age the doctors recommended Pinchas be screened due to the bleeding originally seen in his brain—Ruchama and her husband received the diagnosis: Pinchas had CP. As a result of a loss of oxygen at birth, his muscle control, muscle tone, posture, and balance had been affected. Since CP ranges from mild to severe, impacting some children only physically and others also cognitively, Ruchama and her husband anxiously anticipated their child's development, desperate to know how the condition would affect him. “Before long,” she says, “we realized that Pinchas was a child like any other. He was smiling, saying his first words just when he had to, and picking up on all the cues like his twin brother. Physically, however, he wasn't making it.”

Despite their busy schedules, the Hirschbaums spent


hours at therapists' sessions, eager to watch their child show even a tiny step of improvement. “At three years old,” Ruchama recalls, “Pinchas was already learning the *Alef Beis* and speaking fluently, but he still couldn't sit. Because he couldn't even rotate on his own, he slept in my bed every night, waking me up every time he needed to turn. ‘Mommy,’ he would whisper, ‘roll me onto my side please.’ Five minutes later, ‘Mommy, I want to turn this way now.’ Taking care of him was a round-the-clock job.”

When one of the therapists said to Ruchama, “Why are you investing so much in your child? He'll never be able to sit,” she knew it was time to find a new one. “One year later, baruch Hashem, after working with another therapist in the same clinic, Pinchas started sitting on his own. When his former therapist passed by one day, she could not hide her surprise.”


For years, Pinchas's condition took up center stage in the Hirschbaum home. Several years ago, they had moved out of their three-story villa and into a 4-bedroom apartment so they could be in closer proximity to the many treatment centers he visited on a steady basis. Last winter, when Pinchas was eleven years old and still incapable of walking or even standing up on his own—which necessitated Ruchama's intervention in basic everyday activities like getting dressed—the Hirschbaums spent several months with Pinchas in Florida, where he underwent a revolutionary surgery that required months of subsequent rehabilitation and intensive, full-day therapy. Before they left on their lengthy trip, Ruchama confided, “I hope we'll be coming back with a walking Pinchas.”

While Pinchas exhibited some improvement as a result of his surgery—he was able to stand for longer periods of time and take a few steps with his canes—Ruchama was hoping for more.

In May last year, thanks to the generosity of activist Mark Laden of Activix, who recruits international speakers to teach physical therapists different advanced practices, Chicago-based Dr. Mary Massery spent two weeks in Israel. Mary's revolutionary work in the field of psychical



“He just needed  
a little bit more,  
to give that good  
deep breath  
that he didn’t  
know how to do.”



therapy (as detailed in the Q&A below) is her focus on the cardio-pulmonary-musculoskeletal connection. When she treats children with CP or other physical disabilities, she first assesses how they breathe. The breathing exercises she does with them facilitate good posture and movement.

During the two days Mary presented seminars in Jerusalem, she would model her methods on patients of the physical therapists she was teaching. Pinchas was one of those children.

“As soon as I took a look at him,” Mary recalls, “I said to myself, ‘He should be walking.’ I saw he has all the tools he needs—all the physical abilities that came with years of rigorous intervention, great support from his parents, and he was really motivated. He just needed a little bit more, to give that good deep breath that he didn’t know how to do.”

As often happens with physically delayed children, because they don’t learn how to breathe and move simultaneously, they must learn how to use breathing to facilitate movement. What comes naturally to appropriately developing infants during the crawling stage must be taught to them. Mary spent about twenty minutes with Pinchas on her basic breathing exercises. Then she stood him up and said, “Go!” And Pinchas, at age 12, took his first steps, all on his own—to the sound of applause from all the therapists in the room. “What a moment it was,” says Ruchama. “We just couldn’t stop smiling.”

When I tell Mary about the progress Pinchas is making, she doesn’t take any credit for herself. “I was just the right person at the right time,” she says. “So many of our functions are dependent on breathing. It’s this simple knowledge that makes the difference. When I first discovered this 40 years ago, I was in awe of the concept. To us it seems so simple, but breathing impacts us in ways we can’t imagine.”

Although Pinchas is no longer wheelchair-bound—an incredible breakthrough—he is still dependent on his walker for long-distance walking. Under the care of the physical therapists Mary trained, he’s gradually continuing to make progress. And every time I see him, I marvel at the power Hashem placed in our breath.

# Q&A<sup>with</sup> Dr. Mary Massery

**In her Chicago-based physical therapy practice, Dr. Massery uses her multi-system approach to analyze motor dysfunction. She lectures internationally and has received numerous clinical awards for her contribution to the field.**

## **When did you first learn of the connection between breathing and movement?**

When I started out in physical therapy 40 years ago, I planned on going into pediatric neurology. At the end of my schooling, we were given a course on the cardio-pulmonary connection to the musculoskeletal system, which I'd never heard discussed before in physical therapy.

While I never would have elected to take this course, it was part of my required classes, so I had no choice but to attend. It was actually a very interactive, fun course delivered by Dana Frownfelter, a terrific instructor who's been teaching for 50 years now.

As soon as I heard what she was saying, I was hooked. "Of course this makes sense," I said to myself. "You have start with physiology—the heart has to be good, the lungs, and the vascular system—before you work on walking and talking. If you haven't worked on breathing, how can you expect the rest of it to happen?"

Right from the beginning, it made sense to me to combine neurology, cardio-pulmonary, and musculoskeletal in order to solve orthopedic issues. That's when I recognized that breathing is the essence of all motor control. If an

individual can't breathe, he won't move. Thus, learning how to breathe properly becomes the first step in facilitating movement. The nice thing about this intervention is that it's not surgery and not medications, and it works.

## **How is this rule particularly applicable to individuals with physical disabilities?**

The muscles we use for breathing are the ones we use for posture and balance. Through breathing, good posture and balance becomes possible. If a child can't use the muscles for breathing, he won't reach his maximum potential. Through my work, I've noticed that if the patient can't use his breathing mechanics efficiently for breathing and for postural control, he will use them only for breathing. Breathing is a must. Walking is something we may want or not want to do, but we can't not breathe. If the body can accomplish only one task, it'll be breathing. And that's all it'll do.

Once we recognize that, it changes how we approach the patient's motor problems, which is a physical therapist's domain. If we're not looking at the conflict between breathing and postural control, we may be missing the

most important underlying issue.

For many children, using the muscles for breathing and posture simultaneously is the big issue. People think the stomach muscles in their trunk are what give them core strength, but we also need them for breathing.

### **How does an appropriately developing child learn how to coordinate their breathing with movement?**

It starts right from birth. All a brand new baby does is breathe. You probably noticed that a newborn baby's arms and legs move randomly, almost as if he's in a punching match. When he's doing those little movements, he's exercising his muscles, but his real focus is on being alive.

By the time a baby starts sitting up, he's been working his muscles and breathing together. It never occurs to him to separate the two usages of his muscles. So naturally, healthy children know how to breathe properly in order to facilitate movement.

Most parents will notice that their baby first starts to babble on the changing table, where he has lots of support and no postural demands, because he's lying on his back. Since a baby in that position has no requirement for balance, he can focus on using his breath for talking.

Later, when the baby is around nine months of age and about to crawl, if he's on his hands and knees and you say to him, "Ho ho ho," he will probably imitate your sounds and start moving. The exhale when making these sounds gives him the ability to engage in movement. He may even get up and start walking.

Because we learn how to breathe as children, we don't need to learn how to breathe as adults.

### **So why is it adults often discover that they're not breathing properly—that their breath is too**

### **short or shallow?**

For most humans, breathing develops so naturally, we never even think about it. But as adults, we think too much. We separate breathing from posture. We think we'll work on breathing in yoga, and on our muscles separately, whereas breathing is part of every movement we make.

### **Tell us about a memorable client you worked with.**

There was a 12-year-old boy who had been born prematurely. He had many medical problems as a baby, but when he came to me he was healthy. However, his voice was always very hoarse and raspy.

When this patient was a baby, one of his two vocal folds (muscles) became paralyzed due to complications from prematurity, so it was always in an open position. These folds are supposed to work like a valve, opening and closing to hold our breath. Because one of his folds was stuck, the air would leak out. He could never hold his breath.

I asked his mother about his balance. "Is he a clumsy kid? Does he trip often?" And her answer was, "Yes. Why did you even think of that?"

And I explained my Soda Pop Can theory to her: that our entire trunk area is like a soda can, where the pressure from the top—diaphragm—to the bottom—pelvic floor—enables us to maintain good posture. If air leaks out, there's no pressure in the trunk, which negatively affects our balance. Every muscle in the trunk is used for a major or minor respiratory and postural task.

Right then and there, I did a little balance challenge with this patient. We both stood with our arms straight out in front of us, and I instructed him to try stay standing, with his feet together, while I would push him gently. Because his balance was so poor, I needed only to push him with my index finger for him to have to take a step back.

## Dr. Chayala England

### My tip for good breathing

Breathing is the foundation of the body on many levels. On a cellular level, breathing is the transportation system for oxygen. On inhale, oxygen is brought to the lungs and on exhale, from the lungs to the muscles. Breathing is also the basis of the body's pressure system. On inhale, the core relaxes and on exhale, it contracts. Breathing helps quiet the chatter in your brain and the tension in your muscles.

Good posture promotes better breathing mechanics and better breathing mechanics promote better posture. Whether you're a teen sitting in class, a pregnant woman, athlete, or bubbly, it's important to learn to connect your breath to pelvic floor movement and strength. The pelvis and its surrounding tissue is the physical foundation for which the body is supported and breathing helps keep that structure stable.

**Here's my favorite technique to practice good breathing:** Lie on your back, knees bent and place a tissue box on your belly. Inhale through the nose and exhale through pursed lips to slow down the breath. Ideally, you should breathe with double ratio exhale to inhale. For example, inhale for 3-4 seconds and exhale for 6-8 seconds. On inhale, the tissue box should rise up (through the breath, not by forcing your abdominals up) and on exhale it should lower back down.

*Dr. Chayala England holds a doctorate in physical therapy. In addition to training in orthopedics, post-surgical rehab and vestibular therapy, she has taken specialty courses in the field of pelvic health. With women's health a priority, Dr. England actively promotes awareness of prenatal and postpartum physical well-being in the community.*

When he tried to push me, however, he couldn't move me. Baffled, he asked me why he, a strong 12-year-old, was moved so easily and I, a 60-year-old woman, was able to stay in place. I explained to him that while his muscles are strong, his core is weak, because one very small muscle—half of his vocal fold—was paralyzed and thus the pressure escaped from his “soda can.”

In order to improve his balance, I recommended he undergo an airwave reconstruction to reposition the paralyzed vocal cord. That immediately improved his balance.

Many other therapists would say that this boy doesn't have good balance, and they would work on that. While that would have helped somewhat, it never would have fixed the problem—the constant leak of pressure out of his system.

I look at problems from a multi-system perspective. Just because a child comes in with a balance problem doesn't mean the issue originates there. I look at the “why.” Why does he have poor balance? If the problem is that he's simply a clumsy kid, we'll work on coordination. But if that's not the real problem, it won't make a dramatic shift in his movement.

### What would you like parents to know about their child's development?

Make sure to trust your gut. When your parental intuition tells you something isn't right, keep seeking out another solution. So often, our instincts are right on target.

I saw Pinchas for only one hour. I could have been completely wrong with my assessment of his issue, but as parents, you see your child all the time. You know your child best.

Since I practice primarily in Chicago, please let your readers know that I've trained some excellent PT's, including Nechama Karman, who practice in the New York/New Jersey areas. I would love for as many children and adults who need this type of treatment to have access to it.

# Are You Harnessing the Power of Your Breath?

## Try these exercises for more effective breathing

According to Stig Severinsen, a Danish diver who had asthma as a child and ended up breaking the Guinness World record for holding his breath underwater for 22 minutes and 22 seconds, the main challenge is not that people don't breathe *properly*, only that we don't breathe *fully*. As the director of Breathology®, a program that teaches people how to breathe to their capacity, he has found that from the thousands of people he worked with around the world, instead of inhaling enough oxygen to fill 100 percent of our lungs, thus providing the body with more of its life-giving power, most only breathe to fill up 75 percent.

When we breathe fully, we fill up with more energy. And so, our goal is to fill up on the most air as possible. Here are Severinsen's three most effective tips for fuller, deeper breathing:

### 1. Always use your nose.

The nose is for breathing, and the mouth is for eating. The nose filters out dust, and the micro hairs inside it weed out viruses and bacteria from the incoming air, ensuring they don't travel down to the lungs, which are very delicate organs. Another benefit of nose breathing, discovered only a decade ago by modern scientists, is that it generates the production of nitrogen oxide in the sinuses. This gas, which helps the muscles relax, also relaxes the blood vessels, enabling them to absorb more oxygen.

While one should inhale through the nose, it's okay to exhale through the mouth.

### 2. Pause in your breath.

Did you ever pay attention to the way you breathe when you're running? There's no pause in your breath. That's what happens when we experience any type of stress: we inhale repeatedly, without giving our lungs time to fill. Since this leads to quicker blood flow, the brain feels less focused. Slow, deep breathing, on the other hand, helps us relax. The blood flow slows down, entering the brain at a pleasant pace. Thus, the key to relaxation is in the exhale.

Try this: Inhale with your nose, hold your breath for a pause, and release. Repeat several times and notice how this helps you enter a more relaxed state of mind.

### 3. Deep into the lungs.

When you take that breath through your nose, feel the air as it goes down your throat and into your lungs. Feel your belly pumping up as you inhale. Place one hand on your stomach and one on your chest and see that the hand on your stomach rises up first. The diaphragm, your breathing muscle, is one of the most important muscles in the body. When you train it right, by breathing in and out fully, you'll enable yourself to breathe fully even when you're breathing unconsciously.

# Q&A <sup>with</sup> Nechama Karman, PT

**Nechama Karman, PT MS PCS is a board-certified pediatric physical therapist with extensive training and experience in pelvic health, orthopedics, and neurological treatment. She is the chief clinical educator at Mobility Research, a faculty member at Massery Physical Therapy, and has a private consulting practice in New York.**

## **How did you become involved in facilitating Mary's training?**

I took her course in 2001 at a state conference. I immediately integrated the material into my daily practice and began in-servicing hospital staff on various components. I was impressed by the results it yielded.

Many years ago, I persuaded Mary to teach her approach in an official course with a set curriculum. One summer before she was scheduled to give her course in Washington, she required revision of a previous total knee replacement, and I stayed with her as her live-in PT for a couple of weeks while she recovered. The procedure was more involved than anticipated, and she ended up requiring crutches for 6 weeks. She didn't want to cancel the course. So I threw out a challenge: "Teach the course but bring a faculty member with you, and start their apprenticeship. They can teach, while you sit and rest." So began my apprenticeship in 2014.


## **What do you feel this method has given you and your patients?**

It has given me a comprehensive way of looking at a client and determining how various body systems work together and influence each other, impacting my clients' function. In this day and age of sub-specialization in

all aspects of healthcare, too often providers fail to take a step back and look at the big picture. They're looking at individual leaves and not recognizing the trees or the forest. The approach taken in Mary's coursework involves looking at interactions between systems, but using the respiratory system as the connecting link. How does pressure in the torso affect the musculoskeletal system and posture, digestive/GI system, movement/motor control, breathing, or skin and connective tissue? We can't separate these systems from each other, regardless of our "specialty."

## **How do you find that breathing affects other body functions?**

The simple answer is pressure. Breathing consists of a coordinated series of increasing and decreasing pressure in the thorax to move air. This requires stability in the thoracic cage and spine so that the ribs don't implode when pressure in the chest drops, creating a vacuum. It also requires spinal extension to maintain thoracic volume at the same time. This alignment supports shoulder position and function, as well as head and neck posture, which is necessary for safe swallowing. As pressure in the thorax changes, it drives a change in pressure in the abdomen, which is a source of stability of the lower torso. Diaphragm contraction provides anti-reflux forces, churns the stomach, and massages the abdominal contents and



intestines, helping to move things through to the “exit.” The postural stability afforded by the pressure in the torso allows the limbs to function off a stable base without collapsing. And all of this depends on adequate mobility of joints and connective tissue to function like a “well-oiled machine.” Additionally, if the work of breathing is too hard, the person will not have “reserves” to work on anything besides simply breathing and staying alive.

Shortly after I took Mary’s course, I came down with pneumonia. I gained a new appreciation of what difficulty breathing does to a person and had much more compassion for my clients. It was a full six months before I could climb a flight of stairs without feeling seriously short of breath. It really made me focus on this aspect of function with my clients. Before that, I would have just expected them to “try harder” or “get over it.”

### **Is learning how to breathe properly something everyone must do, or only children/adults with certain disabilities?**

There is no “proper” way to breathe. We all breathe differently under different circumstances. What is normal is being able to efficiently meet your demands and to have options to switch your pattern based on the demands of the task that you are currently engaged in. We walk differently when crossing the street than when walking through a field, or when window shopping, or going uphill or downhill. We can “switch it up,” but a child with cerebral palsy, or an adult who has had a stroke might not be able to. They don’t have the flexibility or options in their movement patterns, and that makes them inefficient at many tasks.

The same is true for breathing patterns. We need options, and we need reserves. We can’t be working at maximum effort just to meet our physiologic needs. For example, I’m predominantly a chest breather, a very efficient one with a respiratory rate of about 10 breaths per minute. I’m also a swimmer. Swimming requires a very prescribed breathing pattern, and my dominant strategies are well-matched to my activity of choice. I can take a quick “bite” of air as I turn my head, and then swim two strokes before needing another breath, swimming effortlessly for long periods without becoming short of breath. But chest breathing isn’t a good match for playing a wind instrument, which

requires a very deep belly breath in order to hold a note. But I’m still normal. I can switch to belly breathing when I’m practicing yoga, or to lessen my level of alertness to fall asleep. I have options. The only reason to “change” a pattern is if that pattern doesn’t work for you, your activities, or is inefficient.

### **Can you share some important breathing techniques?**

The technique would depend on the activity being performed. For example, when reaching overhead to get something off the top shelf, a quick chest breath would extend your thoracic spine and help you get full range of movement in your shoulder, maximizing your reach. But if you’re bending down to tie your shoes, this would block the movement, whereas performing that task on the exhale would enhance your ability to bend. If you match the task to the phase of respiration (inhalation or exhalation), it becomes much easier.

### **Tell us about an interesting case that you worked on.**

When I was working in a pelvic health practice, a gentleman came in for assessment nine months following a prostatectomy. He was experiencing urinary incontinence with movement, especially going from sit to stand. Traditional approaches include teaching the patient how to use the pelvic floor muscles, and he had been through such a course before he came to me. The muscles were strong, but he was using a poor strategy when coming to stand. We worked on diaphragmatic breathing (something people with stress urinary incontinence avoid since they are afraid of losing urine with belly breathing), and slowly transitioned from lying to sitting to standing, using his diaphragm the entire time. We stood on the inhale rather than on a breath hold, and his issue disappeared. I love observing how a simple alternate strategy can be life-altering.

You don’t need to accept pain or dysfunction as a fact of life. Highly trained therapists can implement effective strategies to help you maximize participation in whatever activities you choose. Don’t treat your “condition” as an unchangeable fact. There is usually a lot you can still do.♥