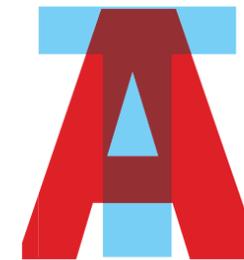


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CONSIDERED ONE OF THE MOST ENIGMATIC LEARNING DISABILITIES, A RECENT PUSH FOR PUBLIC AWARENESS HAS BROUGHT DYSLEXIA TO THE FORE. BUT MANY MISCONCEPTIONS MUST BE RIGHTED BEFORE DYSLEXIA IS RECOGNIZED FOR WHAT IT OFFERS THE WORLD — THE GIFT OF SEEING THINGS DIFFERENTLY



At first, Rachel didn't think there was a problem. "The kindergarten teacher told me that my youngest son, Sruli, was having trouble recognizing letters, but all my other kids were slow readers, so I figured he was just like them," Rachel remembers. Besides, Sruli was a sociable, bright kid — extremely creative and quick on the uptake.

By the time Sruli entered first grade, however, Rachel's laissez-faire approach morphed into alarm. "I sent him to school every day in tears," she says. "The learning was proving difficult and he was getting angry as a result. He was telling himself: 'I'm stupid. I'm stupid.' I knew he wasn't — and it was killing me."

Rachel didn't realize that Sruli fit the classic profile of a child suffering from dyslexia, a general term for disorders that affect a person's ability to read or interpret letters and symbols. Often referred to as the "hidden disability," the condition has a habit of going frequently undetected, as it chiefly affects people of average, or above average, intelligence.

#### A SYMPHONY OF NEURONS

The seemingly simple act of reading actually involves many different steps and multiple parts of the brain. As you read this article, for instance, your brain first has to capture the visual lines and curves that make up each letter — connecting those letters with sounds, and connecting those sounds to words. Your brain also has to retrieve the information it has stored about each particular word — that, for instance, the letters D-O-G mean a four-legged furry pet. And when reading something as long as this article, your brain has to process the information in every sentence, paragraph, and section, and then connect all of the pieces together, giving you overall comprehension.

Most of us rarely take note of the countless times throughout the day that we stop to read. That's because we don't stop to read. We just read. The neurolinguistic synergy comes naturally — without us ever recognizing the magnitude of the miracle that's just taken place.



“In the brain of a person with dyslexia, the wiring is faulty. Their ability to store the letters they learn flickers—it isn’t permanent”

Not so for someone struggling with dyslexia. “MRI testing — scans that use magnetic fields to take images of a person’s brain — shows structural differences in the brain of a person with dyslexia — or its related disorders — which affects his ability to process and retain symbols and letters like other people do,” explains Dr. Rinat Green, Psy.D., founder and executive director of the Kol Koreh nonprofit for children with learning disabilities in Israel.

Sometimes brain differences may lead to problems with learning basic arithmetic facts, processing numbers, and solving mathematical calculations — a learning disorder officially recognized as developmental dyscalculia. In other instances, they may lead to dysgraphia — an impaired handwriting and spelling disability. These lesser learning disabilities often occur in association with dyslexia, but do not affect all dyslexics.

Dr. Green cites an important long-term study, carried out at Yale, that suggests as much as 20 percent of the population is affected by dyslexia. In an average classroom of 25 kids, that would translate to five children who struggle to some extent. And that’s not all. “Dyslexia can’t be cured,” says Dr. Green. “It’s the way their brain is built. It’s like someone with a predisposition toward heaviness — they’ll always have to watch their weight.”

In her book *Overcoming Dyslexia*, Sally Shaywitz, M.D., points out that it’s now widely believed that sophisticated behaviors, such as reading, originate within widely distributed neural pathways, and

not within narrowly confined sections of the brain, as was once thought. It’s “by a symphony of neurons, rather than by a single section of the orchestra,” Dr. Shaywitz writes.

The more skilled a person becomes at reading, the more his brain will rely on specific sections of the brain, which can combine various functions and make them happen automatically. While remedial intervention might help the dyslexic reader overcome his initial difficulty with phonemic awareness (a technical term referring to one’s ability to distinguish or combine sounds that make up words), he will struggle to achieve the seamless fluency that others have. This is because the areas of his brain that are activated when reading are less suited to automatic functioning. So while other people work their inner switchboards without thinking, a dyslexic person has to learn how to manually switch on certain abilities.

What’s especially confounding is that even with remedial help, progress can be erratic. Sometimes a dyslexic child will read something perfectly on Monday, and yet when presented with the same page on Tuesday, he won’t be able to tackle it. The mental image of the word, or the sound certain letters make, simply doesn’t stick.

Rebbetzin Chaya Leah Merling, a resource room specialist who has extensive experience working with dyslexic children in Montreal, likens the condition to a lighting fixture with a faulty wire. “Imagine the fluorescent light under your kitchen counter. Sometimes it begins to flicker,

and if you just wiggle the wire and hold in a certain way, the light stays on, which tells us there’s a glitch in the wire. In the brain of a person with dyslexia, the wiring is faulty. Their ability to store the letters they learn flickers — it isn’t permanent.”

Dyslexia can also vary greatly in its severity, so that not every child will face the same challenges. Some may stumble over their reading more than other children their age, while some will find it impossible to connect syllables into words to begin with. With some kids, the disability will manifest in math and spelling versus reading. Because of the myriad ways dyslexia presents, it’s often hard to pinpoint, which is yet another reason it can go undetected.

#### SNOWBALL EFFECT

Ayala’s mother, Dini, dreaded parent-teacher conferences. Her daughter’s teacher rarely had a kind word to offer. “Your Ayala attends school as if she’s visiting a theme park,” the teacher complained. “She’s never interested in what we’re learning in class.”

While Dini commiserated with the teacher’s frustration, she also felt flummoxed. Ayala was bright, and there seemed to be no apparent reason why she wouldn’t want to apply herself to her studies. When probed, Ayala owned up: “I hate school. The only thing that keeps me going is the fact that I have friends.” Further testing revealed Ayala suffered from dyslexia, which impeded her ability to participate in class.

Dr. Green uses the metaphor of a ladder when talking about linguistic challenges in the classroom setting. “Phonemic awareness is the bottom rung of the ladder — it’s basic. Dyslexia affects that bottom rung. So you can have a really smart kid who has great comprehension and reasoning abilities, but when it comes to participating in class, he’s stuck at the bottom rung. The teacher might call on him to read out a question from the textbook, and he might be as nervous as can be, even though he might well be capable of providing the most imaginative answer of all.”

When dyslexia is left untreated, what

begins as a straightforward learning difficulty can slowly snowball into sliding marks and a deepening lack of general knowledge as the child avoids reading, writing, math problems, and any other language-based activity.

“For a talented child with high intelligence, not managing to keep up with reading, writing, comprehension, and spelling might easily contribute to low self-esteem,” says Dr. Green. “He might also develop anxiety — dyslexia’s common cousin — as he constantly frets over when he might be called upon in class. And these are smart kids with so much potential.”

The problem is amplified when it comes to the *frum* community, with its heavy focus on *limudei kodesh*. “Imagine being a boy who needs to study Chumash with Rashi (a whole subset of letters!), Gemara and Aramaic (a whole new language!), and not managing with the text,” says Dr. Green. “Just getting through one day in school can be intensely frustrating.”

It was largely due to the realization that the needs of children with dyslexia were not being adequately addressed that Dr. Green felt compelled to open Kol Koreh in 2003. Reaching out to both Anglo and Israeli families throughout Israel, Dr. Green was astounded by the tremendous influx of positive responses to her initial advertising campaign.

“When you take a child with dyslexia and compound his struggles with the challenge of aliyah and Hebrew studies, then the issue becomes even more misunderstood than it was before,” she claims.

Sometimes it is a matter of simply misreading the signs. When Valerie made aliyah in 2006, her daughter Leah was only four. An accurate diagnosis of Leah’s problems was somewhat delayed because, for a long while, they were convinced she was just having trouble adjusting to the new language. Luckily, her kindergarten teacher felt there was something else going on and suggested they compare notes on how Leah functions in English. That was when they realized she had a problem with language skills — in *any* language.

It took a few more years of hit-and-miss targeting until they discovered the underlying problem. “Had we known it was dyslexia earlier on,” says Valerie, “we would have homed in on that particular issue. But because it was all such a generalized approach, we didn’t.”

Leah’s salvation came, quite unexpectedly, through Dr. Green’s activism. In a random event staged by the Kol Koreh organization to raise awareness for the condition, Valerie sat through a powerful simulation of what it feels like to be dyslexic. “I sat there, and a lightbulb went off. *This is it!*” she recalls. “It was my sudden understanding of the pain of studying for eight hours a day without succeeding... I realized Leah must be suffering from something. I started saying things to the teaching staff and the principal. They blew me off — they couldn’t believe what I was saying.” Eventually, Valerie went to talk to Dr. Green, who helped Leah get professionally evaluated and — after years of struggle — finally diagnosed.

#### GETTING HELP

The importance of early intervention in treating learning disabilities cannot be overemphasized. “By the age of four or five, one can already tease out the children with reading issues,” says Dr. Green. “You look for their phonemic awareness as well as their ability to quickly identify objects, letters, and numbers. You also assess their verbal fluency. In a dyslexic child, the connection between syllables will come more slowly, they might sound more mechanical when they talk. Longer words don’t flow as naturally, and their recall of objects and symbols will be slower.”

Rebbitzin Merling stresses that it’s a mistake for parents to dismiss early red flags. “It’s important for parents to be ready to admit that their child has a learning issue. In our community, people are reluctant, and frequently assume their child will outgrow the problem or that it will disappear on its own. It won’t. The earlier the problem is addressed, the better.”

## SPOTTING DYS LEX CYA RED FLAGS

Because children with dyslexia are often highly intelligent, they figure out tricks to help them compensate for their condition, fooling people into thinking they’re reading when they’re actually not. If you’re concerned, watch for these signs:

- **Lack of attention**
- **Clowning around**
- **Not liking to read**
- **Difficulty with rhyming**
- **Refusing to read out loud**
- **Bright child; poor grades**
- **A proliferation of spelling mistakes**
- **Testing well on oral exams, yet failing in written ones**
- **Pursuing extracurricular activities that minimize study or reading time**
- **Difficulty recognizing letters when first learning them**
- **Disruptive behavior — this can indicate a learning disability**
- **A family history of dyslexia — the condition runs in families and tends to skip generations**

It is commonly recognized today that the more senses that are engaged when a child learns his letters, the more likely he is to retain the knowledge. Nothing can be more pertinent when teaching a child with dyslexia. Because the dyslexic’s brain doesn’t process flat, two-dimensional imagery in the same way as other brains do, other routes must be found to a child’s memory — which explains the many unconventional methods that have been developed to teach dyslexic children to read.

Interestingly, most remedial programs focus less on the act of reading and more on the process that will eventually allow the child to string together letters and sounds. To achieve this, they use visual images, sounds, and even textures in facilitating the reading experience.

“The common thread running through all the programs that work well with dyslexia,” says Rebbitzin Merling, “is the multisensory approach. Personally I employ an arsenal of different methods and use each of them when applicable. You can’t use too many stimuli at one go — so you must make a choice about what your path is going to be, based on the child’s individual strengths.”

A trailblazer of the multisensory concept, and probably the most well known of all reading programs, is the Orton Gillingham approach. With its trademark technique of using hand motions to write letters in the air, its underlying methodology has been incorporated in countless spin-off programs over the years.

“For a musical child, the Letterland program works well, as it comes with songs and

a lot of music,” says Rebbitzin Merling. “As the child learns to sing the songs, reading skills slink in through the brain’s back door.”

Rivky Katz, director of the Monsey-based multisensory Kria Kesiva program, practices a combination of Orton Gillingham-based techniques and Lindamood-Bell, which teaches a child to identify the physical changes that his mouth, tongue, lips, and vocal chords undergo when emitting a sound. “There are sounds like B and P that sound very similar,” she explains. “If you place your hand on your throat and make a gentle B or P sound, you can feel the difference — when sounding out the letter B, your vocal chords move.”

Rebbitzin Merling also favors the Lindamood-Bell system. “The children learn the sounds by looking at picture cards of the lip motions that cause them. It’s done in a fun way, with each motion called a funny name.” This program has been converted for teaching Hebrew as well.

How you can select a reliable program? Mrs. Katz recommends any method that has been backed by research-based imaging. She explains that the back left side of the brain is activated when a child reads fluently, but in dyslexic kids, the functionality of these areas is impaired. “Brain imaging will show that after letting children practice certain remedial approaches, the weak area of their brain will get stronger. That’s why you have to make sure your program is research-based. You don’t have time to waste on programs that won’t bear results,” she stresses.

Mrs. Katz would also trust any program approved by the International Dyslexia Association, such as Wilson, Slingerland, and PAF. She has also expended extensive effort in adapting the Orton approach for teaching Hebrew and has trained hundreds of specialists to apply its concepts.

No matter what the program, teamwork among the teacher, parent, resource room specialist, and sometimes even the principal, is crucial in helping the child make progress. “Comparing notes and strategies and setting common goals makes a huge difference,” says Mrs. Katz.

#### THE GIFT OF DYSLEXIA

For parents having a hard time acknowledging their child’s condition, it might help to consider the following: current research indicates that a dyslexic brain captures images in a more vivid, three-dimensional way than the rest of the population — which indicates that there’s a gift bundled in with the challenge of dyslexia.

When seen in this light, it’s easy to understand that dyslexics don’t truly suffer from a learning disability — they are simply equipped with different processing abilities than the kind our school system requires. In other words, the “disability” is a construct of educational methods that don’t work with a dyslexic brain. In fact, people with dyslexia usually possess remarkable creativity and ingenuity, and are blessed with the innate skill of being able to perceive the world around them in their own unique way.

Famed scientists and artists such as Leonardo da Vinci, Ludwig van Beethoven, and Alexander Graham Bell are all thought to

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have struggled with dyslexia, and yet a lot of contemporary research contends these notables achieved their success precisely because of their condition — not despite it.

Many politicians and entrepreneurs were also part of the club, among them some as high profile as George Washington, Winston Churchill, and modern day founder of Virgin Enterprises, Richard Branson. Albert Einstein, also presumed to have been dyslexic, is credited with the saying: “Imagination is more important than knowledge,” and many believe his scientific insights were a by-product of his creative, multidimensional thinking.

“Statistically, there is an interesting curve,” corroborates Dr. Green. “Thirty-five percent of dyslexics will end up at the top of their fields — even in language-based fields — because their creativity pushes them to succeed, and the resilience they develop is an added asset. They often can’t be bothered with details, but are out-of-the-box thinkers — think Thomas Edison and Steven Spielberg. When their self-esteem is solid and they aren’t afraid to fail, they are most likely to surpass others with their novel, unconventional approach.”

Dr. Green is quick to point out, though, that although many dyslexics have a special gift with various creative domains, not *all* dyslexics are exceptionally gifted. “Some are left struggling with their learning disability without having any particular talent to fall back on.” She’s also concerned

that calling dyslexia a gift — however politically correct — “might negate the struggles this population faces daily.” Indeed, compared to the rest of the population, people with dyslexia will always struggle to some extent.

But with the right help, an all-encompassing problem can become a manageable one. Take Sruli. After working with a specialist trained in the Orton-Gillingham method, he learned to read within four months.

“Getting Sruli to the stage where he could read like a novice was just the beginning,” says Rachel. The next step was practice. A lot of it. “Having to force oneself to do something that doesn’t come naturally is hard for anyone — let alone a child!” she points out. “But Sruli was determined to get it. He struggled through his first book for months. Almost a year, actually. And he persevered until he got through that book.”

When asked whether he had enjoyed reading it, he answered: “Reading isn’t fun — it’s work. But I wanted to know what happened in the end....”

These days, with Sruli just after bar mitzvah, Rachel credits her son’s remarkable progress to the Wilson Reading Program, but credits her son even more — “because his hard work paid off.”

A short while ago, Rachel asked her son again if he enjoyed reading, and he gave her a perplexed look, not understanding what she was referring to. “He’s basically forgotten his reading had ever been such a challenge.” ☺