



— LEARNINGRX REPORT —

The Impact of One-on-One Brain Training on TBI

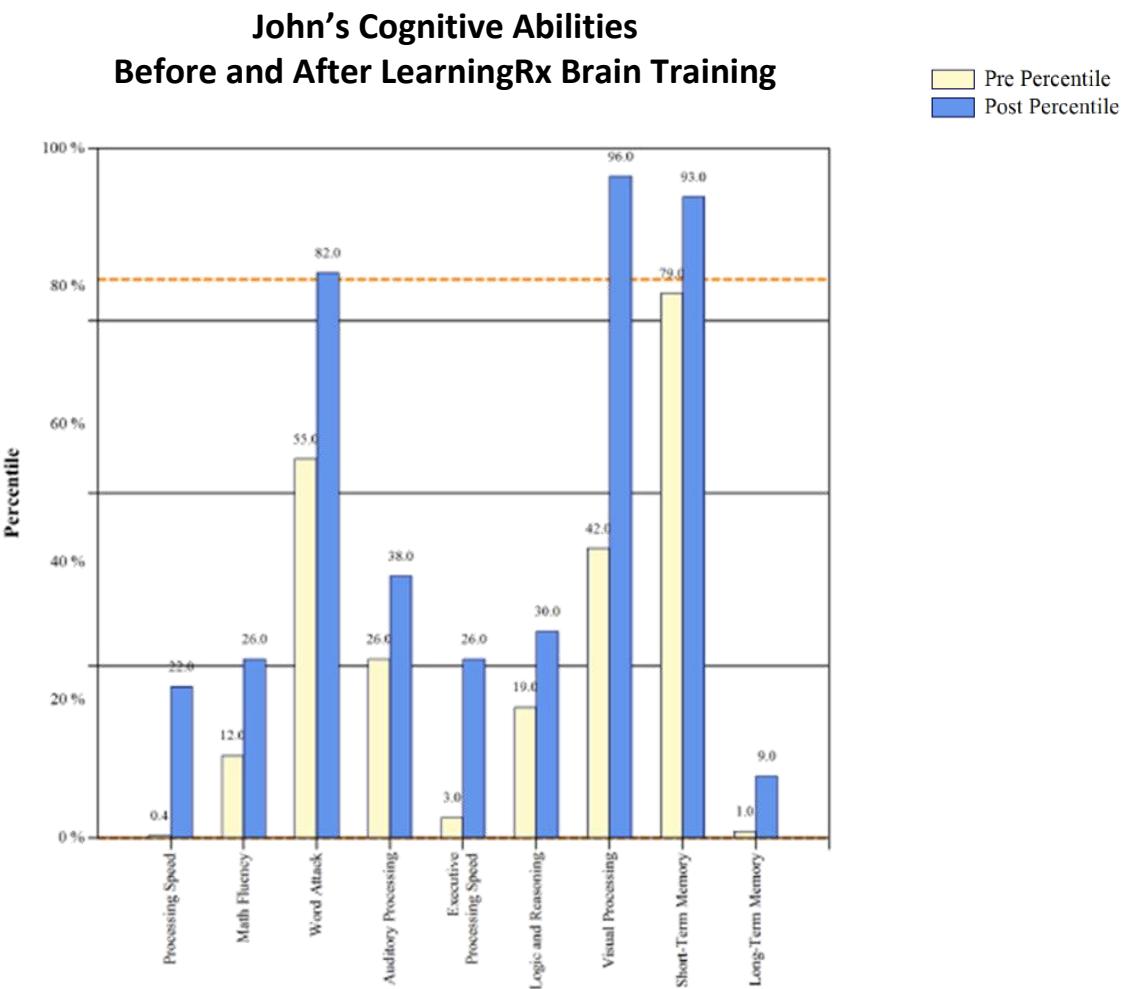
Table of Contents

- 1 Case Study: John K.
- 2 Results compiled from a TBI internal study
- 3 Results compiled from 60 soldiers with TBI who went through our program
- 4 Results compiled from a LearningRx TBI pilot program with the WA State Veteran Affairs
- 5 Additional case studies (including before and after scores) of a few of our clients with TBI

www.learningrx.com/TBIvideos

- See the difference in TBI patient John Keller before and after brain training.
- Tina G. describes doctor's reaction after viewing brain scans before and after brain training.

Case Study: John K.



Results from TBI Internal Study

TBI Internal Study Results

Because we administer professional cognitive testing before and after our training programs, we are able to measure and document the improvements in brain function experienced by our students.

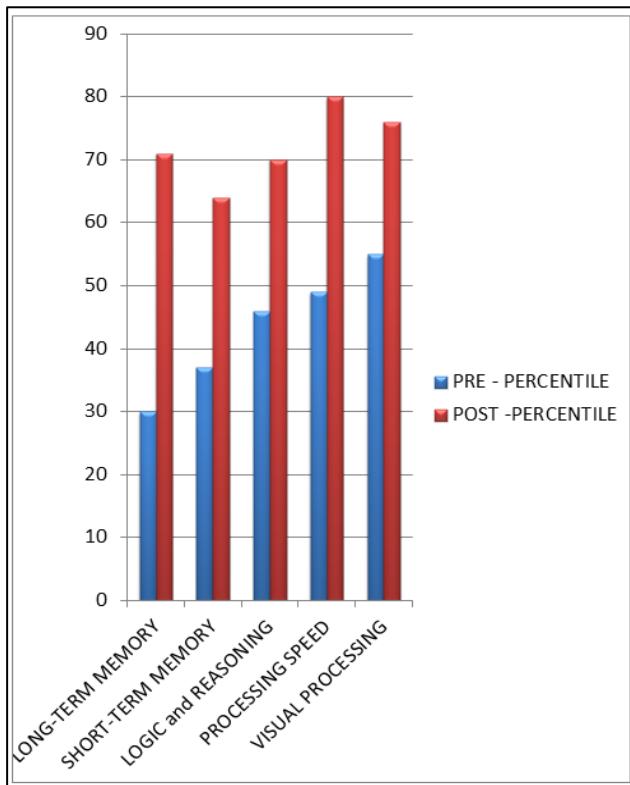
The following statistics were compiled in June of 2010. They show the average gains in key cognitive areas as well as overall IQ experienced by TBI students who completed between 72 and 120 hours of brain training:

Post Test Name	Post Skill	Gain in Percentile	Gain in S Score	No. in Study
Auditory Working Memory WJCOG	Working Memory	23.3	12.1	29
Numbers Reversed WJCOG	Working Memory	22.2	12.5	43
Working Memory (composite-WJCOG)	Working Memory	28.4	15.4	25
Visual Matching WJCOG	Processing Speed	17.7	11.7	25
	Processing Speed			
Pair Cancellation WJCOG	(Executive)	24.7	15.2	41
Spatial Relations WJCOG	Visual Processing	20.9	11.5	43
Sound Awareness WJACH	Auditory Processing	26.2	12.2	43
Sound Blending WJCOG	Auditory Processing	15.3	9.6	34
Visual-Auditory Learning WJCOG	Long-Term Memory	23.6	14.1	43
Concept Formation WJCOG	Logic and Reasoning	13.8	8.5	43
Verbal Comprehension WJCOG		19.2	9.4	31
GIA (Std) WJCOG	IQ	27.6	14.4	16

Results from Soldiers and Accident Victims with TBI

Improvements after LearningRx Brain Training for Soldiers and Accident Victims with TBI

Compiled Results for 60 Soldiers Before and After Brain Training at LearningRx



Compiled Results for Accident Victims and Soldiers Before and After Brain Training at LearningRx



(Program length was between 12 and 32 weeks and was determined by severity of cognitive deficits)

Results from Pilot Program with the WA State Department of Veteran Affairs

LEARNINGRX PILOT TBI PROGRAM WITH THE WASHINGTON STATE DEPARTMENT OF VETERANS AFFAIRS

In January 2010, LearningRx, in partnership with the Washington State Department of Veterans Affairs and the Warrior Transition Battalion (WTB), Joint Base Lewis-McChord (JBLM) in Washington State, conducted a pilot program to train and improve the cognitive functioning of 15 volunteer WTB active duty service men and women who were suffering from TBI. The training concluded in August 2010.

The program format included 6 hours of intensive 1-on-1 (3 hours) and online (3 hours) cognitive skills training per week.

To measure the effectiveness of the training program, Woodcock Johnson Cognitive Abilities tests, a nationally recognized standard battery of cognitive tests, were used to conduct pre- and post-tests. The results of the pilot program

were consistent with similar studies from other States. WTB soldiers who entered and remained in the program (11 of the original 15 volunteers) gained significant improvement in all 7 areas of cognitive functioning, including elimination of symptoms such as memory loss, poor concentration and difficulty organizing thoughts (please see results table below).

WDVA Fort Lewis TBI Pilot Program Using the LearningRx Brain Training Program

STUDENT TEST RESULTS

Pre-Test Name	Pre-Percentile	Post-Percentile	Gain Percentile	Pre-SS*	Post-SS*	Gain SS*
Processing Speed	27	76	49	90	113	23
Auditory Processing	26	55	29	89	102	13
Short-Term Memory	41	68	27	95	110	14
Long-Term Memory	39	65	26	95	107	12
Logic and Reasoning	55	75	21	102	113	11
Visual Processing	43	57	14	96	104	8
AVERAGE OF ALL SKILLS (11 Students)	38	66	27	95	108	13

Woodcock Johnson Cognitive Abilities Testing tests used:

Pair Cancellation (processing speed), Sound Awareness (auditory processing), Numbers Reversed (short-term memory), Visual –Auditory Learning (long-term memory), Concept Formation (logic and reasoning), and Spatial Relations (visual processing)

* SS = Standard Score

Testimonials

Qualitative data was also collected from this pilot. Some of the data included:

"This impacted all areas of family, work school, and church."

"My hope is to go back to school to improve not only with reading and writing, but with family and God."

"I wanted to improve my short-term memory and processing speed. They had put a big damper on my daily living by making just about everything I had to do more difficult. I have seen great improvement in those two areas. It has definitely helped."

"Thank you for being a bright light in a dark place".

"I am not in a haze. I am able to stay organized and focused"

"I definitely feel more confident in going after what I want and have enrolled in school!"

"It is a great program and well worth the time invested. I would like to see it continue to be used for people with TBI."

Additional Case Studies

LearningRx in the News...

LearningRx is featured on NPR

MAY 2011-- NPR radio *Talk of the Nation* host Neal Conan referenced Rep. Gabrielle Giffords' remarkable recovery in his May 16th program, then went on to explore some of the issues surrounding recovery from traumatic brain injuries.

Three months ago, Rep. Giffords was shot point-blank in the head. This week, the Arizona congresswoman traveled to Cape Canaveral to watch her astronaut husband, Commander Mark Kelly, begin a 16-day mission aboard the space shuttle Endeavour

Conan's first guest on the program was John Keller, who survived a motorcycle accident that left him in a coma for 70 days, semi-conscious for another nine months after that, and in various hospitals for a total of 344 days. Today John says he's pretty much back to "normal" and credits LearningRx, the world's premier one-on-one brain training company, with his turnaround.

John says he tried brain training games from various companies, but that he was "stuck." It wasn't until his sister told him about LearningRx—and he began to work one-on-one with a LearningRx brain trainer—that he was able to get past the "wall" he says he had hit in his recovery process.

LearningRx is recognized for the tremendous gains experienced by traumatic brain injury survivors who have undergone the company's brain training programs. Just as physical therapy retrains the muscles, brain training retrains the brain after severe traumas such as that suffered by Rep. Giffords.

In fact, the company—which also helps children and adults with autism, dyslexia, ADHD and learning struggles—recently partnered with the Washington State Department of Veteran Affairs to provide brain training for 15 soldiers with TBI. The soldiers were suffering from memory loss, poor concentration and disorganized thinking as a result of their injuries. The program resulted in significant improvements in seven areas of cognitive functioning, alleviating many symptoms. After participating in the program, one soldier expressed his heartfelt thanks to LearningRx, "Thank you for being a bright light in a dark place." (See the program results).

Brain training is based on the scientifically-recognized principle of neuroplasticity, which refers to the brain's lifelong ability to strengthen, reroute and even create neural connections. This ability of the brain to "rewire" itself, so to speak, can be triggered by specific mental exercises and one-on-one coaching by a trainer, making brain training a remarkable—and increasingly recognized—treatment for victims of traumatic brain injuries and even strokes. John Keller says that LearningRx brain training programs were "amazing" and "a lifesaver."

Additional Case Studies

John's story...

Traumatic Brain Injury Miracle: John Keller's Amazing Journey to Recovery



(L) The day John was released from the hospital, 11 months after his accident. (R) John today.

Traumatic brain injury. Crushed pelvis. Seventy (70!) days in a coma. John Keller may have survived the horrific motorcycle accident that derailed his life, but his fight for life had just begun.

After 14 surgeries and 344 days in the hospital, John Keller was released to go home—but life was anything but normal for the 34-year-old.

John says that, more than a year after his accident, his traumatic brain injury left him so impaired that, “I could meet somebody and forget their name in 30 seconds.” His vision, speech and ability to think were also impacted.

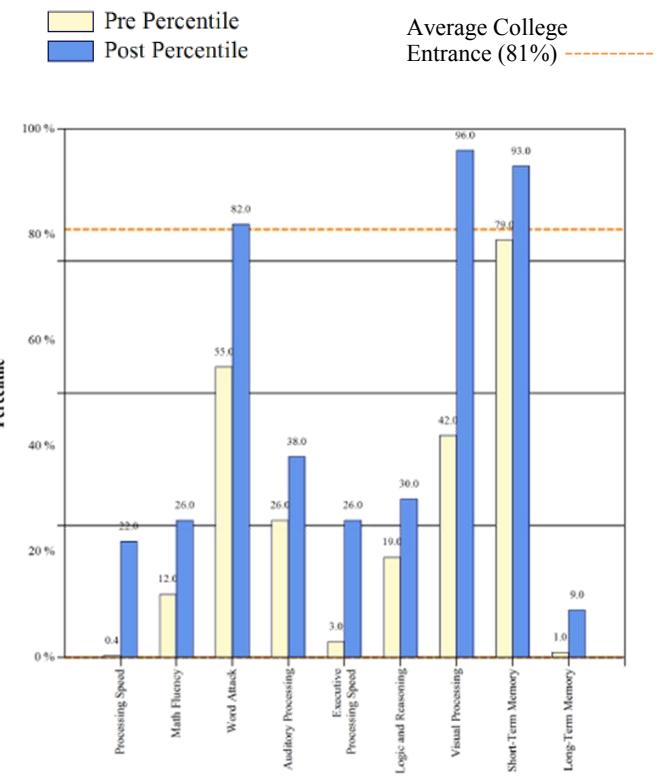
John’s dad describes the mixed blessing of bringing his son home after 344 days in the hospital. He says, “John went into the hospital on a gurney, in a coma, and we’re so thankful that he walked out. But what do you do after they walk out? John had come to a certain level in his understanding, his functions and his speech, but he needed to go further.”

Traumatic brain injury is a leading cause of death for persons under 45 years of age, and someone suffers a TBI every 15 seconds. In fact, in America alone 5 million people suffer some form of TBI disability.

The Kellers found help at LearningRx. More than a year after his debilitating TBI, John experienced a dramatic turnaround through brain training. In fact, John was recently named LearningRx 2011 Student of the Year.

His dad summed up the life-changing improvements John experienced after brain training by saying, “He can see better, he can hear better, he can talk better, he can think better, and he is better,” adding, “The doctors and programs at TIRR saved John’s life and woke up his brain. Now LearningRx is turning him from a child back into a man. We speak all the time to people who have had their children, their husbands come out from a traumatic brain injury and are wondering what to do to get them to the next level. I really believe that the answer is LearningRx.”

John's Cognitive Abilities Before and After LearningRx Brain Training



Additional Case Studies

Tina's story...

Doctor Says Brain Training Responsible for New Neural Growth

After Tina's car was rear-ended by a negligent driver, she was rushed to the hospital and diagnosed with traumatic brain injury in the emergency room. In the months and years following her accident, Tina coped with the help of a special needs dog and many accommodations. She says every area of cognitive functioning was impacted, including her overall processing speed, her speech, reading and definitely her memory. She says even a simple trip to the grocery store became unpredictable, and that friends often had to rescue her from wandering "lost" in the produce aisles. And she's lost count of how many times the fire department rushed to her house because she was cooking, got distracted, and started a fire.

She didn't hear about LearningRx until seven years after the accident. Nine months into the program, she was driving downtown when her car was rear-ended a second time. She suffered a less severe TBI. As her neurologist compared the brain scans from the two accidents, he was shocked to find new neural growth in all the areas damaged from the accident seven years ago. He asked Tina what she was doing to cause this. When she told him "LearningRx," he said, "It is absolutely documented here that this learning program is creating new neurons."

Tina has requested that her before-and-after test scores remain unpublished. You are invited, however, to see and hear more of her dramatic story by visiting www.learningrx.com/TBIVideos.

Additional Case Studies

Kevin's story...

Soldier with TBI Reinvents His Life and Career—Thanks to Brain Training

Kevin*, a sniper in the military, was subjected to multiple IED explosions and TBIs during his two deployments. Returning home, Kevin found that the injuries had impacted his ability to reason and plan. He also could not think quickly or multitask. He felt distracted and frustrated. Upon his release from the military, he considered his options. He explored the idea of trade school and becoming a welder. His dreams of college, he says, were out of the question.

Kevin enrolled in a 24-week brain training program with LearningRx. Over the course of the program, his long-term memory skills improved, taking him from the 41st to the 90th percentile. In logic & reasoning, Kevin gained 33 percentile points, rising from the 38th to the 70th percentile. In overall processing speed, he started the program in the 52nd percentile and ended in the 82nd.

Kevin enrolled in college. Two years later, we received a letter from him. Below is an excerpt:

November 2010

How was your Thanksgiving?

I was thinking about what I should be thankful for and I thought of LearningRx.

I am almost done with this semester. I decided to attempt three classes to see if I could do it: Geography, Soil Science, and Computer Literacy. The lowest grade I have is an 88% in Geography. In the other two classes I'm getting high A's. I'm in class with my wife who hasn't beaten me yet on a test or assignment!

I am going to change my degree to computer programming and eventually industrial automation.

I am motivated to continue with school to reach my goals and I have you guys to thank for that.

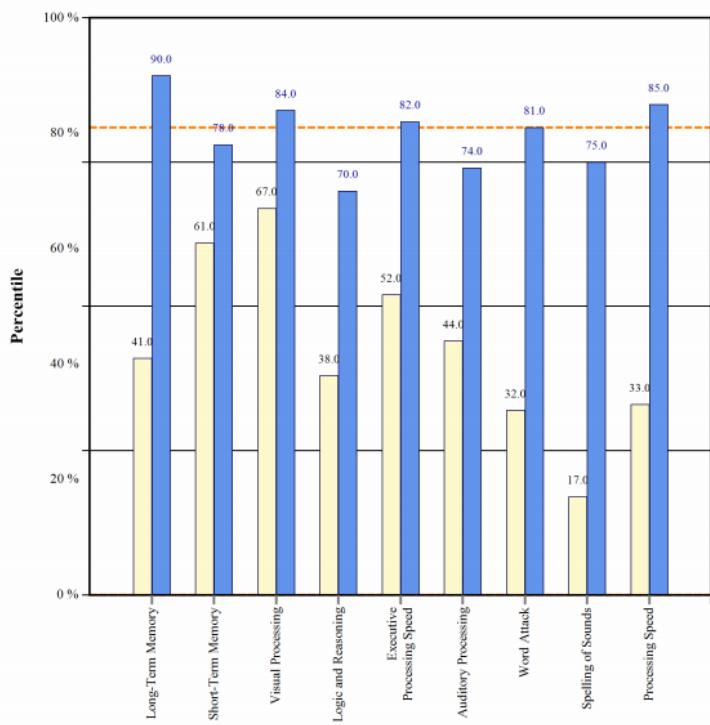
Keep up the good work,

Kevin

*Name has been changed

**Kevin's Cognitive Abilities
Before and After LearningRx Brain Training**

Pre Percentile Post Percentile Average College Entrance (81%)



Additional Case Studies

Andrew's story...

Teenager Says Mountain Biking Accident Left Him Broken, LearningRx Left Him Repaired

Sixteen-year-old Andrew* was airlifted off Pikes Peak after a serious mountain biking accident left him with a TBI. After the accident, Andrew's mom says her son's brain injury impacted every area of his life. He couldn't follow the plot in a movie, he struggled to have a conversation, and was burned out by spending seven hours a night doing homework—and still falling behind.

Brain training provided the key that unlocked a second chance at life for the frustrated teenager.

At the program review signaling the end of Andrew's brain training program, he told his parents and the staff at LearningRx, "I started this program broken, and have finished repaired. LearningRx has provided me with a second chance in life and provided the tools to achieve any cognitive challenge in my way."

Here's what his mom writes:

Before this program, Andrew couldn't even follow the plot in a movie. He once mentioned he wished he could understand the "Back to the Future" trilogy because it looked like so much fun.

Homework took from 4:00 to 11:00 every night. If he was copying a sentence, he would have to look back to almost every word. By 10th grade, he had burned out.

Conversations with him were very difficult; most of the time was spent trying to explain what we were talking about. But, he would still just walk away in frustration.

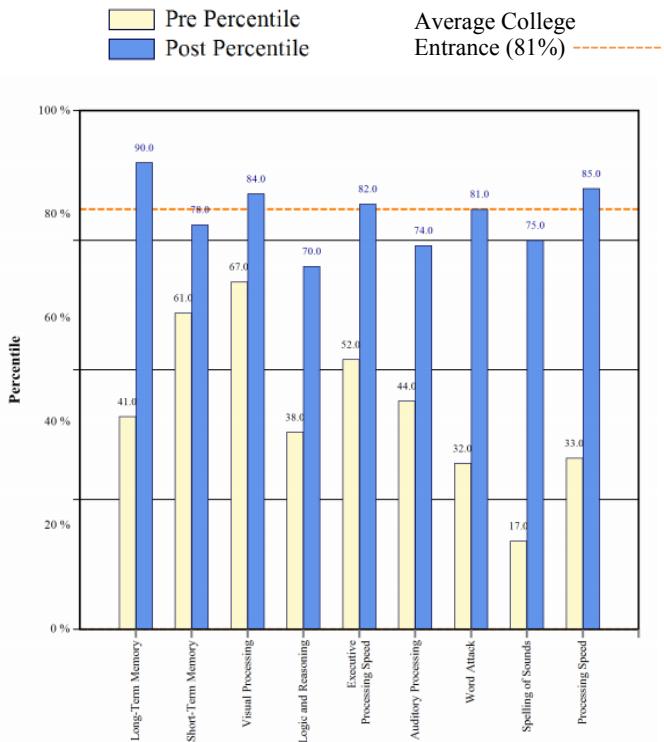
When we went for the initial evaluation, he started to get something he hadn't had before—hope. As he continued training, we noticed that his memory was improving and his comprehension, not just in school, but in everyday life, was getting better on an almost daily basis. His friends noticed the difference enough to actually tease him about "getting smart."

Andrew is looking forward to the next school year for the first time ever. He now surprises his family and friends with what he says, because conversations with him have changed so drastically.

On the final testing, he had improved from three to nine years in cognitive skills, and was so excited about the results, he brought them to school to show his teachers. He told me, "I always knew I had a good brain, I just didn't know how to use it!" A couple of weeks ago, we rented the "Back to the Future" trilogy and watched a movie a night. He loved it!"

*Name has been changed

Andrew's Cognitive Abilities Before and After LearningRx Brain Training



Additional Case Studies

Shelby's story...

Brain Training Changed One Family's Dreams for Brain Injured Daughter

At 23, Shelby* couldn't read, climb stairs or even give herself a bath.

Shelby had graduated from high school with impressive scores that landed her not one but *three* college scholarships. But during Christmas break following her first semester of college, Shelby was in a terrible car accident. She was airlifted to the hospital with extensive injuries, including a broken neck and severe brain injury.

"The trauma doctor told us she wasn't going to make it," remembers her father. "We were told that people don't survive the kind of injuries she had."

But Shelby *did* survive, and began a series of physical therapies, occupational therapy, speech therapy—even time in a hyperbaric oxygen chamber—in an effort to rebuild her life. Some of the therapies helped, some didn't. Nothing seemed to provide the turnaround that she needed.

Three years after the accident, Shelby came to LearningRx. Her cognitive functions were so low that she barely scored on the initial intake assessments. She still couldn't read, climb stairs or take care of her own hygiene. She needed caregivers throughout her day. She refused to be alone for even a few minutes.

Her family told LearningRx they hoped brain training could simply get Shelby to where she no longer needed round-the-clock care.

Boy, were they in for a surprise.

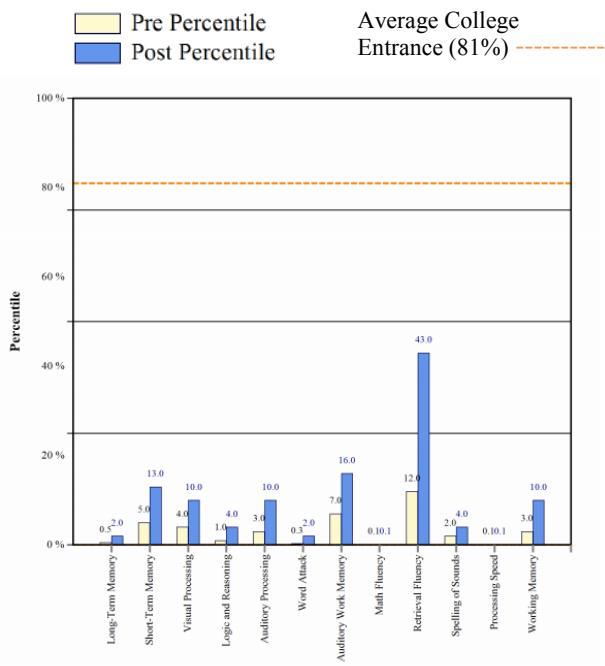
After 12 weeks, Shelby was reading chapter books. Her impulsivity decreased and her self-confidence soared. She began walking upright, taking her own showers, dressing herself and doing her own hair and makeup. At home, she moved back to her own bedroom--upstairs! She became interested in old and new hobbies; she started to cook again.

Friends said that the "old Shelby" was back, just a bit slower.

She even got back on Facebook.

"Our expectations for Shelby weren't very high," said her father. "But after brain training, our goal is to see her get back into the world as an independent person and even go back to college ... even if it's one class at a time. We believe she'll be able to do it, too, after our experiences with LearningRx."

**Shelby's Cognitive Abilities
Before and After LearningRx Brain Training**



*Name has been changed

Additional Case Studies

Doug's story...

LearningRx Helps Brain Injury Patient Feel Like "A New Man"

Doug* was standing outside a sports bar when he witnessed another man being robbed. When Doug stepped in and to help, the robber fled to his truck, started the engine and came after the 41-year-old good Samaritan, running into him twice with his pickup.

"The third time he came around and they said he hit me and threw me 30 to 45 feet," Doug said. "He wasn't happy with that, so he backed up so he could see me and then drove over me."

Doug was in a coma for days and hospitalized for weeks. He didn't lose his life, but he did lose his short-term and parts of his long-term memory. His brain injury made a major impact on his life. "Initially I lost my business," he said. "I had rental properties. I had all kinds of investments. I lost all of that."

Finding LearningRx, he says, has given him his memory back. He says he can once again remember directions, numbers and names.

Doug's memory skills saw the greatest benefits from brain training, jumping from the 24th to the 82nd percentile in long-term memory, from the 26th to the 67th percentile in short-term memory, from the 31st to the 89th percentile in auditory working memory, and from the 28th to the 80th percentile in working memory. His executive processing speed saw huge improvements, too, taking him from the 72nd percentile to the 97th.

He says LearningRx has made him feel like a new man.

Doug's Cognitive Abilities Before and After LearningRx Brain Training

