

# Bringing Back Ryan

## An Unprecedented Medical Recovery



Growing up in Austin, Ryan Reitmeyer had lived his life on his own terms. He had an incredible ability to connect with people, had a knack for sales and a love for great friends, good times and life on Lake Travis. His website had hundreds of photos of family, friends and acquaintances displaying the weekends they shared in and around the Austin area.

Right after completing his high school requirements, Ryan started his career in sales at a Red McCombs dealership in Austin. With sales skills well honed, he was recruited to sell at Dell Computer Corp. Nights and weekends Ryan studied the real estate market and became a successful real estate agent.

By May of 2005, Ryan was living in his new home in Cedar Park with his girlfriend Jackie, a local model and real estate administrative assistant. In July 2005 Ryan had purchased an engagement ring and was planning to ask her for her hand in marriage during their planned September vacation to San Francisco.

On August 6, 2005 Ryan, Jackie and other friends spent the day on Lake Travis skiing, wake boarding and enjoying each other's company. Late in the evening, as clouds started covering the sky, a light rain began to fall and they boated over to Café Blue. As there was a long wait for dinner service, some friends wanted Ryan to take them to their car across the lake at Carlos and Charlie's.

Always one to help his friends, Ryan told Jackie that he would be right back, asking her to get a table and order dinner for the two of them. Ryan never returned as that night took a tragic turn.

The clouds had so completely covered the sky that the surface of the lake was invisible. As Ryan was currying the passengers in his friend's 22' Sea Ray, an unseen and unlit black, 35' Carver cabin cruiser was cloaked by the darkness.

The impact of the collision threw twenty-four year old Heather Strother from the boat. To this day her body has not been recovered. The others on board the Sea Ray were knocked unconscious as the watercraft continued streaking across the water without control.

Within a minute, one of the passengers came to and was able to stop the engine. She started screaming when she saw Ryan motionless and covered in blood causing several other boats to rush over, assist and someone called 911. An emergency medical team was dispatched. As Ryan was flown by STAR Flight to Brackenridge Hospital, a Level II trauma center, the others were taken there by ambulance.

The others were treated and released from the hospital within a few days. However, Ryan had severe head trauma, a traumatic brain injury also known as a TBI, from a blow to the left side of

his head. The damage was extensive, as his skull had been shattered. Bone fragments had penetrated the Dura matter, the brain's protective covering, and he was hemorrhaging. Emergency surgery was performed to remove hematomas and Ryan's parents, Doug and Debbie Reitmeyer, were advised that Ryan might not survive.

Ryan seemed to be responding after the initial surgery, but a few days later the most damaged area started hemorrhaging, requiring another emergency operation. Ryan's inner cranial pressure (ICP) had suddenly shot up from a normal range of 12-16 to over 70 and a CAT scan showed that part of his frontal lobes and the Broca's area were beyond repair.

The surgeon told Doug that he might be able to save Ryan's life, but that the most damaged part of Ryan's brain would have to be removed. Doug was warned that Ryan would probably never speak again and would require life-long living assistance. Doug responded, "You go ahead and save his life, because if anyone can prove you wrong it will be Ryan."

Surviving the second surgery, Ryan was in a coma for two weeks and in the intensive care unit for 35 days. The medical staff offered little hope for Ryan's future quality of life and told Doug and Debbie that Ryan may never be able to even feed himself again. Even so, Debbie later said that she knew by Ryan's touch that, "Our Ryan was in there somewhere."

Ryan's remarkable road to recovery started with Debbie's touch and soothing words of encouragement to Ryan every day that he was in the hospital. Even in the ICU when the family was told that they could not touch or be near Ryan, Debbie would whisper in Ryan's ear that she loved him and that she knew he would get better.

As Ryan got better and Debbie was allowed to touch him, she would ever so carefully stroke his face, arms and legs and kiss him, always telling him that he was doing great and that he would recover.

As a construction project manager, Ryan's father, Doug, was used to making things happen; all you needed was a critical path plan and the means to accomplish it. Doug had taken on many challenges in his life including rebuilding a trans-sonic Freon wind tunnel for NASA and constructing the first Doppler weather RADAR system for measuring wind shear for Chicago's Midway and O'Hare airports. In his 35 year career of constructing complex government industrial projects, he was an expert at bringing together the best teams, materials, tools and technologies that were available for the task requirements.

Inspired by Augusto and Michaela Odone's story of their son depicted in the film *Lorenzo's Oil*, Doug went on a mission to find the research, researchers, treatments, technologies and techniques that would allow Ryan to regain full function as a viable human being and again become a productive member of our society. With over a billion dollars worth of successful construction experience behind him, Doug applied that knowledge to research and development of a special plan to help Ryan recover.

There was no way to minimize the severity of Ryan's injury. Even when he was released from the hospital, Ryan had a large hole in his head and had to wear a protective helmet. Doug and Debbie

moved in with their son so they could be by his side 24/7 and hired caretakers when they could not be with him.

Dr. James Misko, who is an expert at brain rehabilitation, became Ryan's neuropsychologist. He first suggested that the Reitmeyer's contact a nutritionist, Dr. Glen Luepnitz, Ph.D. at the Lone Star Oncology center. Dr. Luepnitz, whose brother had also suffered a TBI, was an expert at using nutrition to treat the brain and body. Ryan began a regimen of Dr. Luepnitz' recommended supplements to help Ryan's brain recover from his injuries.

After suffering his first of many grand mal seizures, Ryan started taking anti-seizure medications along with the recommended supplements four times a day. Ryan's new diet included protein, anti-oxidants, fish oils and additional pharmaceutical grade vitamins and minerals.

At the time of Ryan's accident, Doug was working at Cornell University in New York, renovating a USDA laboratory for the government and had several other US Government projects that required completion. Doug called his business partner, all his employees and subcontractors and told them that they would have to finish the current projects because Ryan was going to become a full-time commitment.

Doug started by using his research skills to obtain all the information he could on TBI. He read books, medical and scientific journals and sought out experts in the field of brain retraining, rewiring and recovery while consulting with Ph.D. researchers from around the world. As he was doing the research he began to assemble a special team to assist Ryan with his recovery efforts.

Those efforts and consults enabled Doug to develop a tailor-made program that would allow Ryan to regain his speech and his physical and cognitive skills, all with the goal of allowing him to eventually get back his independence. Doug and his team attended conferences and seminars on brain injury and rehabilitation, they became certified in the use of several advance technologies both proven and unproven for brain rehabilitation. With the purchase of many types of special brain and body training equipment, Ryan's home became the most advanced neuro-rehabilitation center in the world.

At the time Ryan had no memory and no memory making ability. Doug's resolve lead him to the Posit Science Corporation in San Francisco. Posit's Drs. Michael Merzenich and Henry Mahncke are both experts in what is known as brain plasticity, or the rewiring of the human brain.

Finding out that they had never researched the use of their technologies on TBI, Doug convinced them that they should take on the effort with him. And on April 11, 2006 a deal was made whereby Ryan would become the first TBI research client of Posit Science – Ryan would have access to the Posit Science research, tools and technologies and Posit Science would have the results of Ryan's efforts to get better using them.

On April 20, 2006 Doug took Ryan to San Francisco to be examined by Posit Science Research Neuropsychologist, Dr. Spina. While Dr. Spina cognitively tested Ryan, other specialists at Posit Science loaded a research version of their brain-training software onto Ryan's laptop computer.

Having received training on the software, Doug and Ryan returned to Austin and got to work rebuilding Ryan's mind. Six weeks later, Ryan's short-term memory was nearly normal. Not that long before, in December of 2005, Doug had taken the helmeted-Ryan to Luby's for lunch. At the time, Ryan had no memory ability confirmed by the fact that after Ryan had eaten a large lunch, as they were leaving the restaurant Ryan turned and asked his father when they were going to eat. After training with the Brain Fitness program, remembering a meal was not a problem.

The success that Posit Science had with Ryan has spurred a worldwide interest in using this and other technologies for our brain injured soldiers returning from the current war zones. And in the ABC Television special report that covered some of Ryan's recovery efforts, Dr. Merzenich offered Posit's program to returning veterans through the Easter Seals campaign. That report can be viewed on YouTube.com by putting "Ryan ABC KGO" in the search bar of the website.

The Ryan's home is a hub of brain recovery technologies that Doug and his team of assistants have been certified on including the Interactive Metronome System, the Brainmaster, the Deymed EEG machine, Hershel Toomim's HEG, the pRoshi, Hemi-Sync CDs, the LENS systems of neurofeedback, the brain training materials of PACE Tutoring, LACE from Neurotone, the FastForWord products of Scientific Learning, software including Captain's Log from Brain Train, the MindFit program from Cognitive Solutions, Lexia Learning software and additional brain training programs from Posit Science.

Ryan's unprecedented recovery required cognitive, physical, occupational and speech therapies, along with special physical exercises coordinated and monitored twenty-four hours a day, seven days a week for more than two years. In February 2007 Ryan received cranial reconstruction surgery.

Utilizing pieces of bone from his left hip and two right ribs, along with titanium plates and screws, Dr. Patrick Kelly covered the hole in Ryan's head so he no longer has to wear a protective helmet. By utilizing the technology of neurofeedback therapy and the research provided by M. Barry Stermann, Ph.D. and professor emeritus at UCLA Medical Center, by March 2007 Ryan had become both medication and seizure free. In September 2007 Ryan started driving again.

Those who meet Ryan today are witness to the fact that he can now converse as well as most people. Ryan's voice coach, actor Maurice Ripke, has posted many of their training sessions on YouTube.com. To view them, just put "Ryan Reitmeyer" in the search bar. According to Ryan's neuropsychologist, Ryan has regained more than ninety percent of his cognitive abilities.

Still, he does not remember much of his life before the accident and has suffered with retrograde amnesia. And every day Ryan continues to exhibit progress and he is a quick learner. In 2008 enrolled back into school and plans on getting a college degree.

Ryan continues his comprehensive treatment. Daily he rides a stationary bike four miles, does forty-five minutes of yoga and other exercises and practices bio and neurofeedback. His physical regiment is augmented with karate and other special exercises and he recently passed his black belt exam. His mind is strengthened by Scientific Learning's reading program, Kumon's math, reading and writing exercises and Ryan takes comedy improv classes with Andy Crouch, the

manager of the Hideout Theater. Ryan believes that the comedy improvisation is, and has been, great cognitive therapy.

No one can put a price on life or its quality. However, the Reitmeyer family knows this level of care is expensive and thus a barrier to many suffering Ryan's same fate. While Ryan does receive state and disability insurance, his parents continue to pay out of pocket expenses. As Dr. Misko said, "I've worked with over three thousand families in the past twenty years. Doug is the only one out of the three thousand who has had the diligence, commitment and personal resources to help his son enjoy an amazing recovery that I could have never predicted."

Doug and Debbie's commitment has allowed Ryan to take vital steps closer to full recovery, a recovery that doctors thought impossible but now deemed as unprecedented. As for Ryan, he continues to serve as the poster child and beacon of hope for what should be the standard protocol of rehab for those unfortunate individuals that have suffered a traumatic brain injury.

Experts have accepted that the use of Doug's structured project management plan approach to help Ryan has resulted in Ryan achieving an amazing and unexpected recovery. As a result, and at the urging of both Drs. Merzenich and Misko, Doug is in the process of developing a scientific based system of protocols that can be utilized by anyone that has suffered a TBI. The system is being based on the same research and technologies that were so successful with Ryan.

Doug envisions a new company that will provide such a client based program that everyone will have access to at minimal cost. Considering that many of those that have suffered a TBI require a lifetime of care and/or assistance, the Reitmeyers are hopeful that such a system will be embraced by the medical community, local, state and federal governments, families and rehab centers around the world. A special website has been set up to receive comments, suggestion and donations at [TBIRecoveryMagic.com](http://TBIRecoveryMagic.com).

In the meantime, Ryan knows that education is the best cognitive therapy. In 2007 Ryan was one of the first graduates of the new Austin location of the Connecticut School of Broadcasting and he studies several hours a day so he can blend back into society without the stigma of brain injury.

Remembering back to when Ryan was first admitted to the hospital, Doug said that the shock of not being able to recognize his son was overwhelming both physically and emotionally. After the initial distress Doug said he turned to God, his wife and family for strength, telling them that he would use his "project management skills to help Ryan recover."

Since the accident in August of 2005, father, mother and son have been challenging conventional wisdom, and proving with resiliency and endurance of the brain that medical certainty can be trumped by a relentless spirit and new technologies with life-changing results.

As Ryan has recently tested within normal IQ range in all categories and passed as fully recovered both medically and physically, Doug's success with Ryan is looking more and more like the success he has had on over \$1 billion worth of complex government construction projects – another job well done!

To leave a message for Ryan and to learn more about his recovery and treatments please visit [www.TBIRecoveryMagic.com](http://www.TBIRecoveryMagic.com). Video clips are also available at [www.YouTube.com](http://www.YouTube.com). Just put “Ryan Reitmeyer” in the search bar.

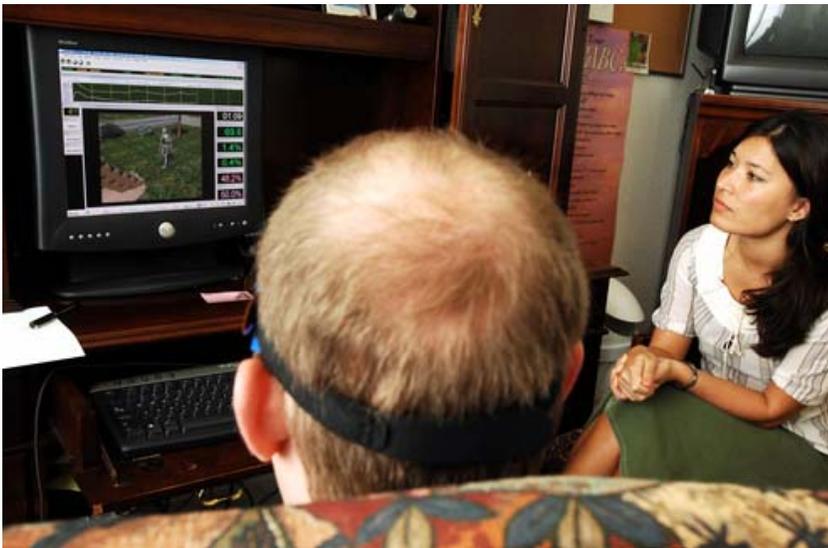


Ryan Reitmeyer sustained a severe brain injury and was in a coma for more than a month after a boating wreck on Lake Travis in 2005. Doctors told his family that he would never function as a normal adult. But two years after extensive rehabilitation, he has regained his speech and his independence. In August 2007, Reitmeyer started driving again. Ryan drives this new sport-utility vehicle.



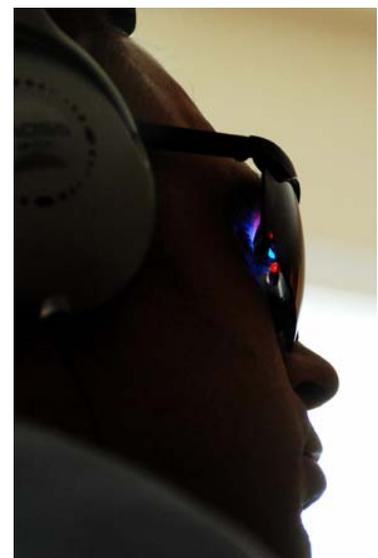
To aid his recovery, Ryan Reitmeyer has a full schedule of activities, including karate with instructor Joseph Culin to keep his brain active so it can heal itself.

Ryan Reitmeyer was in a coma for two weeks and in intensive care at Brackenridge for more than a month after he injured his brain in a boating wreck on Lake Travis in 2005. Among the treatments he uses is one that helps improve his concentration.



As part of his recovery, Ryan Reitmeyer undergoes HEG neuro-feedback treatments to stimulate his brain and increase blood flow into the frontal lobes. With him is his friend, Sabra Embury.

One of Ryan Reitmeyer's treatments is the pRoshi, a headset with earphones and glasses that uses flashing red and blue lights to strengthen the brain's ability to resist seizures. Coupled with Hemi-Sync music from the Monroe Institute, Ryan has enjoyed an unprecedented recovery from a severe brain injury.



Ryan Reitmeyer is hooked up to the BrainMaster neurofeedback machine, which Ryan uses to redirect brain wave activity to increase brain coherence and balance brain activity. This equipment was also used to eliminate Ryan's seizures and enabled him to stop taking anti-seizure medications. Lorra Garey, a University of Texas undergraduate studying psychology and friend of Ryan, runs the program.



Ryan Reitmeyer, foreground, practices self-defense moves with Karate Master Joseph Culin.



Doug Reitmeyer, standing, watches his son, Ryan, concentrate while being strapped to an H.E.G. machine, which Ryan uses to activate the frontal lobes of his brain and helps various areas of the brain to communicate with each other. When the sensors on his forehead sense an increase in blood flow, a robot on the computer screen climbs upstairs and goes down a slide. If there is no activity, it stands still. His thoughts indirectly cause the robot's movement as the blood flow increases in the area of the sensor.



Project manager Matt Mees attaches a LENS sensor to Ryan Reitmeyer's head. The machine measures brain activity and sends back a slightly different signal that stimulates areas of the brain to function better.



Exercise, rebuilding his social skills and maintaining his balance are all key parts of Ryan Reitmeyer's life. He starts his day by doing four miles on a stationary bike. He completed neuromuscular biofeedback training with Dr. Bernard Brucker in Miami and in March 2009 earned his black belt at the Culin Karate Center in Cedar Park.