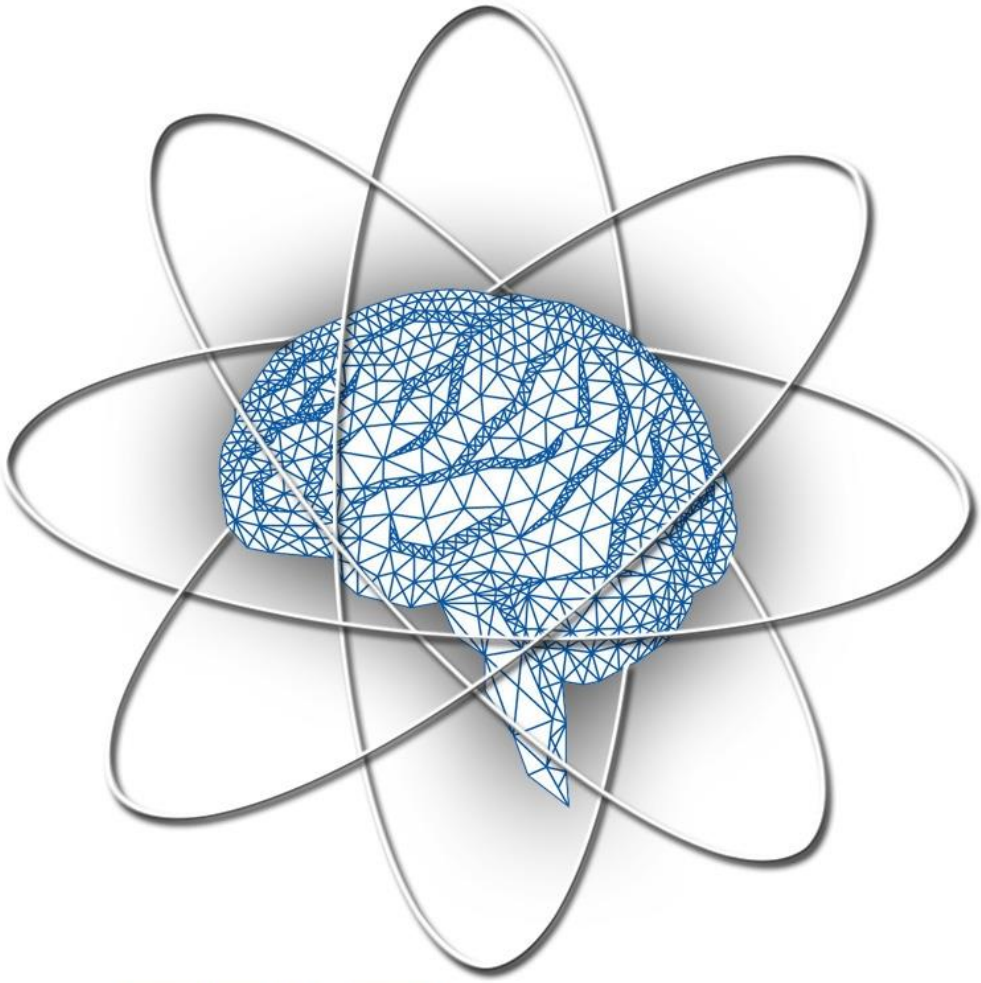


TBI Therapy

Regenerative Therapy for Brain Injury

- Intranasal Adult Stem Cells
- Intranasal Platelet Rich Plasma
- Hyperbaric Oxygen Therapy
- Intravenous Nutrition
- Cranial Osteopathy
- Ketogenic Diet

Dr. John C. Hughes D. O.

TBI Therapy
Regenerative Therapy for Brain Injury

TESTIMONIAL

“Chaz was in a coma for 64 days and suffered multiple compound fractures of his left arm and leg as well as multiple dislocations and fractures to his right hand. Chaz had to relearn how to walk, talk, eat, speak, care for himself. Chaz suffered from memory issues and balance issues. The emotional control issues were very hard.

Chaz went to TBI Therapy for a 10-day treatment. After Chaz's first treatment with Dr. Hughes and 3 hyperbaric chamber treatments I noticed a change in my son. **Chaz had that light in his eyes again**. His balance improved - I videotaped him walking up the stairs without holding on to the rail. Chaz even had immediate improvement of his short-term memory.

Since returning to California, Chaz has shown remarkable progress. We have continued his hyperbaric treatments and followed all of the post treatment procedures laid out by Dr. Hughes. Chaz continues to improve. I believe with all my heart that the treatment from Dr. Hughes has changed my son’s life, to allow him to be the best Chaz he can be. I believe Chaz will continue to improve following the protocols set forth by Dr. Hughes.”

TBI Therapy
Regenerative Therapy for Brain Injury

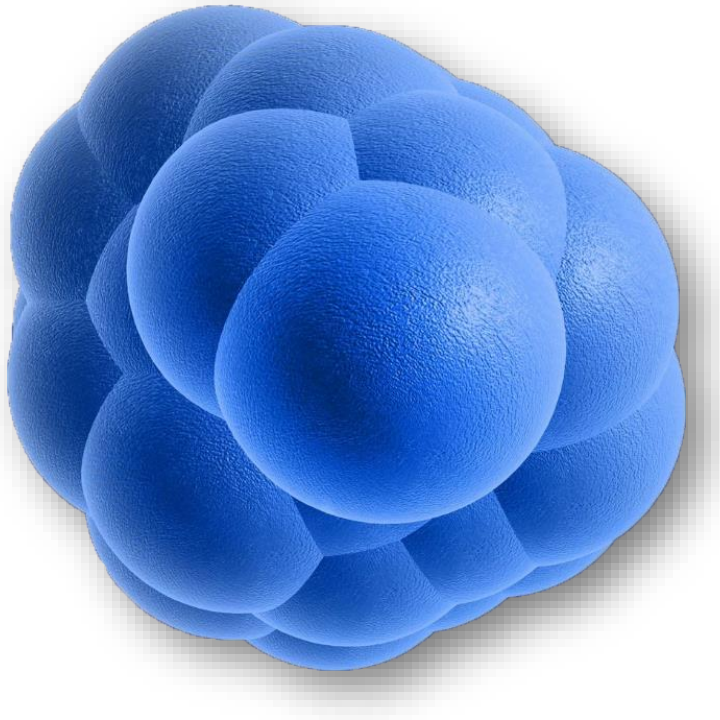
Intranasal Adult Stem Cells

Benefits

- Increases neuroplasticity
- Stimulates tissue regrowth
- Promotes formation of new blood vessels
- Down regulates neuroinflammatory cytokines

Procedure

Stem cells are harvested from the patient's blood by a simple blood draw typically 6-12 hours before they are infused. During infusion, the patient will lay back on the exam table with their head tilted perpendicular to the ground. After local anesthetic is sprayed into the nose, the cells are dripped up the nose with a special device. The patient will lay there for another 15 minutes while the cells fuse into the brain. After this, the patient is free to get up and continue their daily activities.



To promote optimal regeneration, stem cell infusions are usually paired with several hyperbaric oxygen therapy (HBOT) sessions before and after.

Research

Known as pluripotent adult stem cells, these cells have a unique technology behind their harvesting only available at a few select clinics in America. Pluripotent stem cells work like epiblast cells, meaning they can turn into any cell of the germ layer. Studies show these types of cells can pass through the nose and the blood brain barrier and flow right into the cerebral spinal fluid to nourish the brain tissue.

TREATMENT

TBI Therapy

Regenerative Therapy for Brain Injury

TESTIMONIAL

"In July 2015, I fell two feet while hiking at Red Rocks and hit my head. In December 2016, I hit my head again in the same place. I was mostly homebound and unable to work for 4 more months. My short-term memory was quite challenged, I struggled to sleep deeply and never woke up feeling rested. I experienced mood swings, depression, constant head pressure and light/sound sensitivity.

Three months after my first stem cell procedure at TBI Therapy, I felt well enough to travel for the first time since going down with my symptoms. My light and sound sensitivity had reduced, and my mood was improving.

In June 2017, I went in for my second intranasal stem cell procedure and by August I felt well enough that I started saying yes again to facilitating events and speaking gigs. I also experienced relief from anxiety. With the stem cell procedures, the results were never immediate but 8-12 weeks post procedure I experienced a noticeable jump in my healing. Even though, I'm still not 100% back to what I was, **TBI Therapy has turned me into a TBI THRIVER, not just a survivor**. I'm happy. I enjoy life again, can travel and am doing work in the world that's more aligned with myself than ever."

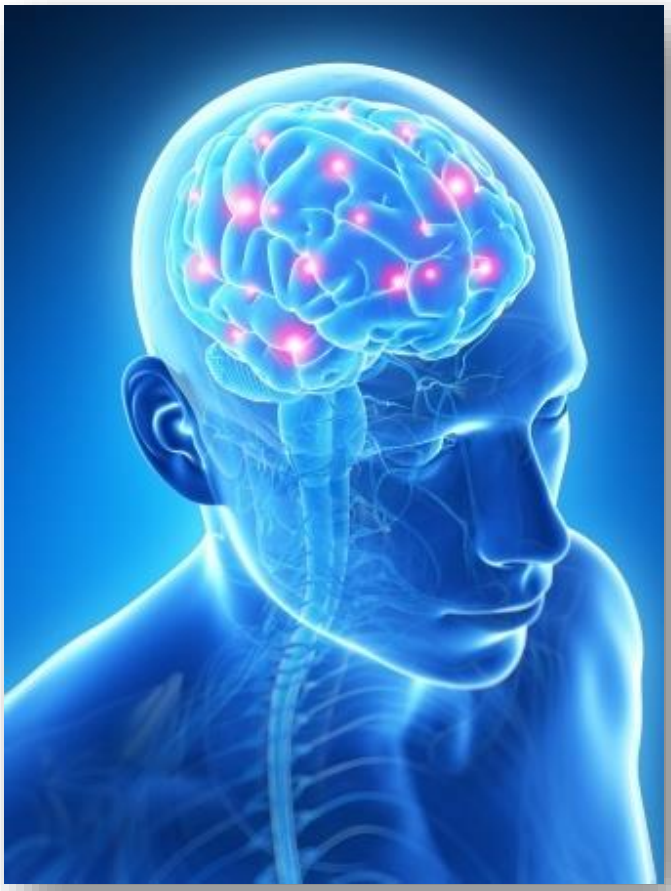
TBI Therapy
Regenerative Therapy for Brain Injury

Intranasal Platelet Rich Plasma (PRP) and Insulin

TREATMENT

Benefits

- Improves brain energy production
- Decreases brain cortisol
- Improves memory
- Increases the expression of anti-inflammatory microglia



Procedure

PRP is harvested from the patient's blood by a simple blood draw. During infusion, the patient will lay back on the exam table with their head tilted perpendicular to the ground. After local anesthetic is sprayed into the nose, the PRP combined with insulin and other nutrients is dripped up the nose with a special device. The patient will lay there for another 15 minutes while the PRP fuses into the brain. After this, the patient is free to get up and continue their daily activities.

To promote optimal regeneration, PRP is usually paired with several hyperbaric oxygen therapy (HBOT) sessions before and after. The PRP is infused the day before the intranasal stem cell procedure.

Research

PRP has been used for years in the treatment of musculoskeletal injuries due to its pro-inflammatory and anti-inflammatory properties from the involved growth factors. Studies have tested intranasal insulin for the treatment of Alzheimer's Disease and epilepsy resulting with the reversal of neurodegeneration, stimulation of neurogenesis, and the restoration of memory.

TBI Therapy

Regenerative Therapy for Brain Injury

TESTIMONIALS

"I am *super happy* to report that three and a half months after visiting TBI Therapy for treatment, my life has radically changed. It really proved to be everything I'd hoped it would be."

"Dr. Hughes and his associates and staff are the best. We were able to coordinate over the phone our son's treatment plan. Our son had the PRP procedure as well as the stem cell procedure. He had a week of HBOT and a several cranial massages. We have noticed our son's speech is clearer and he is relaxed more than usual. Cutting edge technology and treatment. Kudos to these doctors who believe medicine is not always the answer. Thank you so much for your help and understanding. We seem to have to seek out treatments ourselves and I am very glad God lead us to Dr. Hughes and TBI Therapy."

TBI Therapy
Regenerative Therapy for Brain Injury

Hyperbaric Oxygen Therapy

Benefits

- Induces neuroplasticity
- Increases tissue oxygenation
- Generates new capillary networks
- Restores blood supply
- Increases stem cells in the blood

Procedure

The patient lies down in a chamber that can be hard sided (as shown in the image) or soft sided (most commonly home chambers). The chamber then fills with pressure while the patient breathes 100% oxygen. Typically, after 75 minutes in the chamber, the pressure will be lowered and then the patient will exit. In total, the procedure is 90 minutes long.

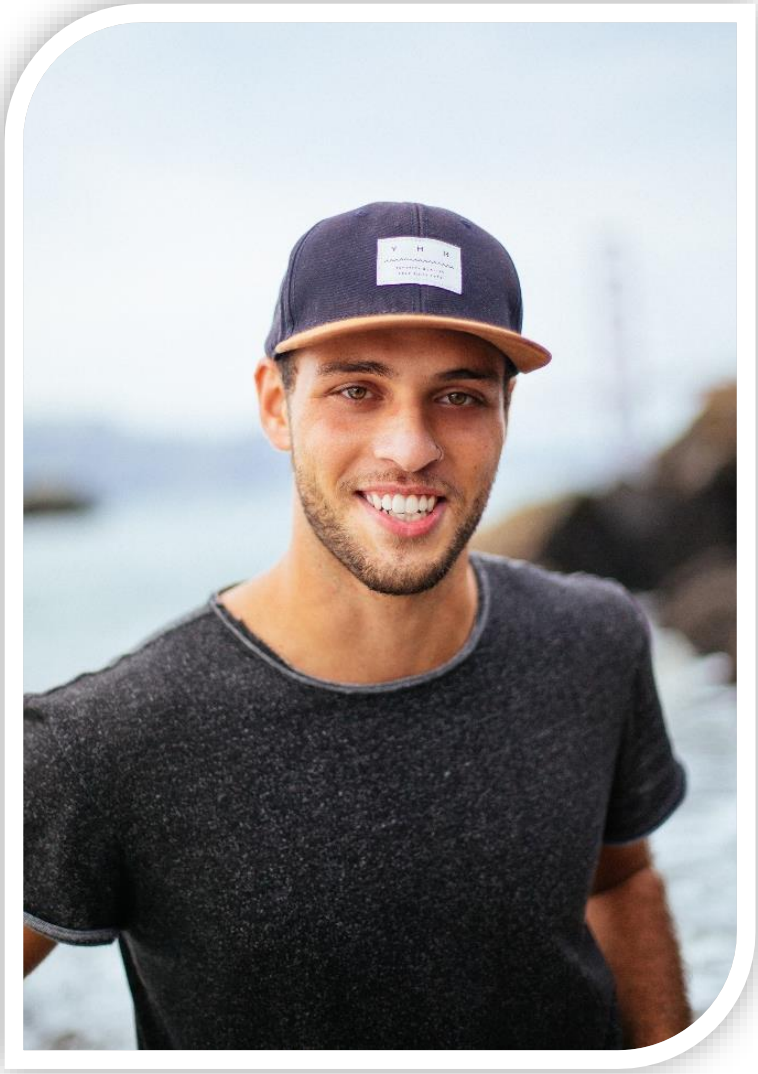
Research

Traditionally, HBOT has been used to treat carbon monoxide poisoning, crush injuries, necrosis of soft tissues, radiation injuries, skin grafts and more. Within the last decade, HBOT has be increasingly used for brain injuries and have shown to induce neuroplasticity leading to the repair of brain function and improved quality of life.

TREATMENT

TBI Therapy
Regenerative Therapy for Brain Injury

TESTIMONIAL



"I was so hypersensitive to light and sound that I had to wear ear plus, headphones, sunglasses, a giant sun hat, and a scarf just to attend the appointment. For a year after the accident I could not drive, I lived in darkness at home, and struggled emotionally. My sensitivity to like and sound would elicit unreasonable emotional responses of fear.

During the intranasal treatments it was like a stream of information had been let loose like a dam that had busted. I saw clips of memories such as faces, numbers, and letters. After 5 minutes the stream of thoughts slowed down. Upon completing the second treatment for the day, I had the same reaction and results except the stream of information slowed down and I could recognize images and conversations I had with people. I started having expanded thought. I felt for the first time in a year that I had some clarity. The initial feeling of bubbly effervescent seemed to give me life. The light was on in the back of a dark warehouse. I was excited I was able to read more that 2-3 sentences without triggering a migraine.

Within the following days it was like an awakening. I could turn on lights for a few minutes and keep the TV on. It seems like a light switch was turned back on inside my head even though it was dim. There was new activity occurring. I experienced music playing in my head. The ability to think and plan returned. Now with a renewed sense of purpose."

TBI Therapy
Regenerative Therapy for Brain Injury

IV Nutrition

Benefits

- Improves metabolic activity
- improves detoxification
- Reduces systemic pain and inflammation

Procedure

IV's are administered during intranasal treatments and outside of the intranasal treatments. During the intranasal PRP procedure, the patient will receive a nutrient cocktail and a PRP cocktail. During the intranasal stem cells procedure, the patient will receive the nutrient cocktail and the stem cell cocktail with NAD+.

Our nutrient cocktail includes the Myer's cocktail with potassium, magnesium, calcium, B-complex, B5, B6, and B12, ascorbate followed by a glutathione push.

Research

The benefits of IV supplementation allow TBI patients to re-establish vitamin levels quickly and efficiently. B vitamins lower homocysteine levels in the blood and have shown to slow brain shrinkage, therefore improving memory, mood, and energy levels.

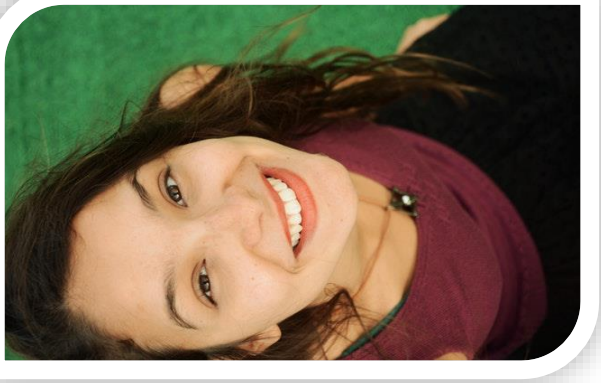
TREATMENT

TBI Therapy

Regenerative Therapy for Brain Injury

TESTIMONIALS

"My mind is more clear than it has been in years… I am much closer to the vitality and clarity that I used to feel in my mind every day before my head injury."



"I have managed two weeks in a row of 4 work days (Major accomplishment), so it looks like the energy thing is kicking in. VERY happy. The increased energy seems to be permanent."

"Corey is doing good. He is still going to the gym three days a week to work out. He is also doing physical therapy and horse therapy three times a week working to strengthen his core. His spasticity seems to be improving and is more noticeable when he gets frustrated. He has not had any major attitude outburst and is starting the new year with a positive attitude determined to keep working hard and stay focused on improving."

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Cranial Osteopathy

Benefits

- Improved cerebral spinal fluid (CSF) flow
- Reduces headache pain
- Increases nourishment of brain tissue

Procedure

With cranial osteopathy, a craniosacral practitioner uses gentle hands to knead the 22 cranial bones, membranes, and CSF. This cranial manipulation addresses areas of restricted movement that compromise function to re-establish normal movement, subsequently reducing pain and improving daily functioning.

Because the craniosacral system encompasses the brain and spinal cord, it influences the entire nervous system, affecting many body functions. Patients often report a sense of deep relaxation during and after the cranial treatment session and may feel light-headed. These effects are popularly associated with increases in endorphins, but research shows they may be brought about by the endocannabinoid system.

Research

The practice of osteopathic medicine has been in use since 1874. Many studies have shown that the manipulation from cranial osteopathy reduces pain, sleep disturbance, anxiety, and all around improved quality of life. After just two weeks of cranial osteopathy, TBI survivors found a decrease in headaches, vertigo, muscle tension, and an improvement in their general well-being.

TREATMENT

TBI Therapy

Regenerative Therapy for Brain Injury

TESTIMONIALS

"We are a medical family from California and only wanted to find the best treatment for our son after suffering a severe brain injury in a motor vehicle accident. The staff is so helpful from arranging the first phone consult with Dr Hughes to helping us coordinate our stay. We feel so blessed to have found this beautiful healing clinic in Colorado. Would highly recommend anybody that has a loved one suffering and wants to seek treatment to put their faith in Dr Hughes. I'm so glad we did."

"After doing the TBI Therapy protocol, I now have the following improvements:

- Better ability to focus
- Improved eyesight
- More mental stamina
- Better mental clarity
- Less emotional stress
- Increased ability to prioritize"

TBI Therapy
Regenerative Therapy for Brain Injury

Ketogenic Diet

Benefits

- Improved protection from oxidative stress
- Increased synthesis of calming neurotransmitters (including GABA)
- Produce cortical sparing and less apoptotic neuro-degeneration

Procedure

Associated with improved brain function, a ketogenic diet is a high-fat, adequate-protein, low-carbohydrate diet. TBI Therapy's recommended ketogenic diet includes Bulletproof's Brain Octane MCT oil because it contains 16x more ketones than found in coconut oil. It is recommended the patient begins this treatment at the start of their treatments with TBI Therapy. Intermittent fasting may also be recommended.

Research

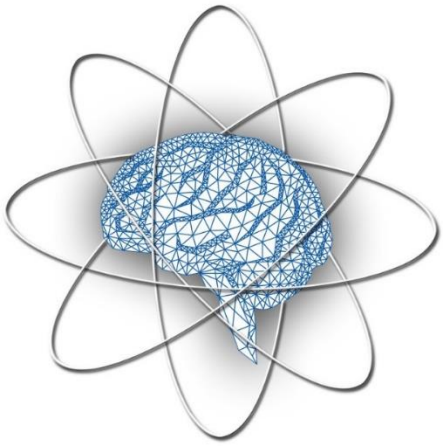
The ketogenic diet has long been used as a treatment for epilepsy since the 1920's. Ketones, the result of breaking down fat, have shown to decrease oxidative stress, increase antioxidants, and scavenge free radicals that flood the brain after a TBI. By interfering with the neurotransmitter glutamate, the brain can increase GABA and stimulate mitochondrial biogenesis.

TREATMENT

TBI Therapy
Regenerative Therapy for Brain Injury

PROTOCOL

TBI Therapy Protocols



Each Protocol Includes:

- 60 Minute Physician Consultation
- Cranial Osteopathy
- Ketogenic Diet
- Hyperbaric Oxygen Therapy (2 sessions)
- Intranasal PRP (Platelet Rich Plasma)
- Intravenous PRP (Platelet Rich Plasma) + Nutrition
- Intranasal PRP-PDSC (Plasma and Platelet Derived Stem Cells)
- Intravenous PRP-PDSC (Plasma and Platelet Derived Stem Cells) + NAD
- Take home supplements: Brain Octane MCT Oil by Bulletproof, Elk Antler by High Wire Ranch, BrainOn by E3 Live, Stem Xcell, and *Fat for Fuel* by Dr. Mercola
- Take home drugs and devices: insulin for personal administration and brainwave training player

Protocols Are Offered as a 2, 3, 10 or 40-day package

2-Day: Includes all the above.

3-Day: Includes one additional hyperbaric oxygen treatment and one additional intranasal stem cells treatment.

10-Day: Includes a total of 10 hyperbaric oxygen treatments, plus one additional cranial osteopathy session, one additional intranasal PRP and IV session, and one additional intranasal stem cells and IV treatment.

40-day packages or more are determined upon consultation.

TBI Therapy
Regenerative Therapy for Brain Injury

Pre-Treatment and Post-Treatment Protocols

PROTOCOL

Pre-Treatment (to begin 3 weeks prior to treatment)

Hyperbaric Oxygen Therapy: 10-40 sessions

Cranial Osteopathy: 1 session per week

EEG Biofeedback / Neurofeedback: 1 session per week

Brainwave Training Player: 30 minutes a day

Supplements: Begin 15 days before PRP or stem cell treatment

Post-Treatment

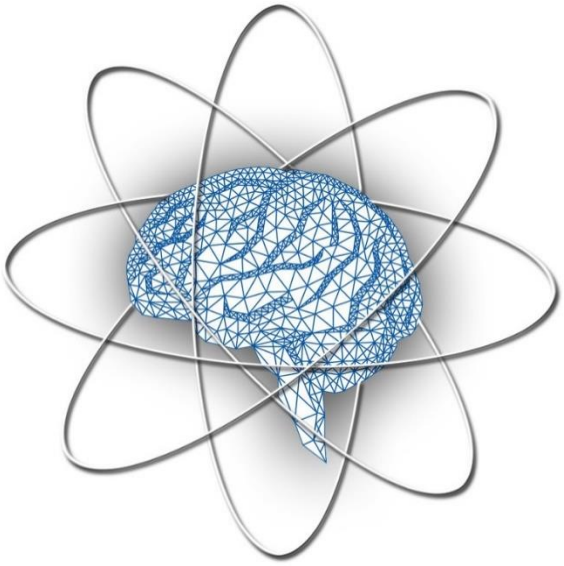
Hyperbaric Oxygen Therapy: 3 months or 25 sessions total

Cranial Osteopathy: 1 session per week for 12 weeks total

Intranasal Insulin: 10-21 days

Brainwave Training Player: 12 weeks

Nutrition / Supplements: 8-12 weeks



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TBI Therapy

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