

Support SB1082: Treating Veteran TBI/PTSD Using HBOT

Army Ranger Bronze Star and 2-time Purple Heart recipient seeking relief from headaches, depression, TBI and PTSD. He was in an explosion in 2009 before being shot and paralyzed in 2014. He resides in a wheelchair.

Veteran's Baseline Functioning from Before Hyperbaric Oxygen Therapy* ↓

Patient Profile	Percentile Range				> 74	25 - 74	9 - 24	2 - 8	< 2
	Standard Score Range				> 109	90 - 109	80 - 89	70 - 79	< 70
Domain Scores	Patient Score	Standard Score	Percentile	VI**	Above	Average	Low Average	Low	Very Low
Neurocognition Index (NCI)	NA	57	1	Yes					X
Composite Memory	82	67	1	Yes					X
Verbal Memory	40	61	1	Yes					X
Visual Memory	42	86	18	Yes			X		
Psychomotor Speed	139	74	4	Yes				X	
Reaction Time*	900	49	1	Yes					X
Complex Attention*	20	47	1	Yes					X
Cognitive Flexibility	16	50	1	Yes					X
Processing Speed	44	77	6	Yes				X	
Executive Function	19	53	1	Yes					X
Social Acuity	7	88	21	Yes			X		
Reasoning	3	84	14	Yes			X		
Working Memory	-7	49	1	No					X
Sustained Attention	10	61	1	No					X
Simple Attention	36	44	1	Yes					X
Motor Speed	95	83	13	Yes			X		

Veteran's Progress after Receiving 20 Hyperbaric Oxygen Therapy Treatments ↓

Patient Profile	Percentile Range				> 74	25 - 74	9 - 24	2 - 8	< 2
	Standard Score Range				> 109	90 - 109	80 - 89	70 - 79	< 70
Domain Scores	Patient Score	Standard Score	Percentile	VI**	Above	Average	Low Average	Low	Very Low
Neurocognition Index (NCI)	NA	95	37	Yes		X			
Composite Memory	86	75	5	Yes				X	
Verbal Memory	44	74	4	Yes				X	
Visual Memory	42	86	18	Yes			X		
Psychomotor Speed	172	96	40	Yes		X			
Reaction Time*	628	97	42	Yes		X			
Complex Attention*	5	102	55	Yes		X			
Cognitive Flexibility	53	106	66	Yes		X			
Processing Speed	54	91	27	Yes		X			
Executive Function	56	110	75	Yes	X				
Social Acuity	10	110	75	Yes	X				
Reasoning	5	91	27	Yes		X			
Working Memory	10	103	58	Yes		X			
Sustained Attention	31	106	66	Yes		X			
Simple Attention	39	91	27	Yes		X			
Motor Speed	117	100	50	Yes		X			

He has no words for what happened within his mind. He said it was like his brain turned back on. Everything is so new and exciting in his life.

**Data were collected, calculated, and standardized by FDA-Approved Central Nervous Vital Signs software. Standardized measures such as PHQ, DASS-42, PCL-M, PSQI, EPS, and HIQ are also used to assess veterans' neuropsychological capacity before treatment and progress after treatment.*

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Virginia is home to 670,000 veterans. A recent report discovered approximately 30,985 of those veterans are suffering from unresolved brain wounds.

Hyperbaric Oxygen Therapy Facts:

- Hyperbaric oxygen therapy is common practice for 14 indications that are covered by FDA. Four of these pertain to wound healing and over 10 are covered by CMS and Tricare.
- HBOT chambers are an FDA-approved medical device.
- Receiving hyperbaric oxygen therapy requires a physical examination and script from an MD.
- All practitioners in a hyperbaric oxygen therapy clinics and hospitals (i.e., physicians, nurses, and technicians) receive specialized, intensive training on hyperbaric oxygen therapy protocols.

Economic Impact:

- Medical treatment for a Virginian suffering from traumatic brain injury costs \$67,000 to \$2.6M for an average 40-year post-injury lifespan. The cost to provide a 1-time 2-month hyperbaric oxygen therapy treatment protocol is \$10,000-15,000. With that, we have a 95% successful rehabilitation rate among 6,000+ veterans that have received this life-changing treatment.
- SB1082 will allow Virginia's Veterans to get the effective, high-quality healthcare treatment they deserve by underwriting Hyperbaric Oxygenation and adding to the scientific record of safety and efficacy. It will be that rare return on investment that restores funds to the Commonwealth in avoided costs and increased revenue from newly-restored workers, now taxpayers.

Reducing Gun Violence and Opioid Dependency & Preventing Domestic Abuse

- Providing hyperbaric oxygen therapy *can eliminate suicidal ideation among Virginia veterans and stop veteran suicides*. As the wounds in veterans' brains heal, anger outbursts subside, emotional regulation is restored, and impulsivity is decreased. Depression, stress, and anxiety all have shown to decrease as well. Hyperbaric oxygen therapy (HBOT) is a safe, effective treatment that addresses the root causes of veterans' suffering (instead of band aiding symptoms with opioid prescriptions). By healing veterans from the inside-out, we will reduce potential gun violence and domestic abuse, while mending and strengthening Virginian families and communities and improving the quality of life for all residents at the same time.

Improve Streamlined Access to High Quality Healthcare:

- Currently, there is no clear path for Virginia veterans to receive hyperbaric oxygen therapy for treating traumatic brain injuries and post-traumatic stress. Veterans report to the VA for medical care, but VA physicians do not know about hyperbaric oxygen therapy nor do they know they can refer veterans to local, certified clinics that can help. SB1082 provides a clear pathway to treatment not only for veterans who are needlessly suffering, but also for VA physicians as well.
- Our veteran community has learned about hyperbaric oxygen therapy from other Virginia veterans who have experienced success: <https://bit.ly/fromourveterans> .

Treatment Efficacy:

- To the best of our knowledge, over 9 years of treating veterans suffering from traumatic brain injury and post-traumatic stress with hyperbaric oxygen therapy, *not one Virginia veteran has been lost to suicide*.
- As wounds in the brain heal from hyperbaric oxygen therapy, veterans have safely decreased the pharmaceutical medications they once relied on to band aid the symptoms of TBI. 95% of TBI-veterans safely discontinue 70% of pharmaceutical prescriptions following HBOT.