Hyperbaric Oxygen Therapy

Utilizing HBOT for the treatment of Traumatic Brain Injury (TBI) and Post Traumatic Stress Disorder (PTSD) in our military Veterans
22 to 30 Veterans are dying daily by suicide

- 8,030 to 10,950 Veteran’s parents are kissing the casket of their children for the first and last time every year
- 65% to 75% of these suicides are Vietnam Era Veterans
- 28.7% of these suicides are female Veterans
- 50% Higher suicide rate for the surviving Veteran family members and Caregivers
- Veteran suicide rates continue to increase because the current treatment protocol of psychotropic drugs for TBI and PTSD are failing
- Veterans deserve to have proven medical therapy alternatives available
The current VA protocol for treatment of Traumatic Brain Injury (TBI) and Post Traumatic Stress (PTS) is psychotropics.

- These drugs have a high potential to damage the liver, kidneys, thyroid and the heart
- Many of these drugs have “Black Box” warnings of suicide ideation
- 22-30 Veterans daily are dying by suicide
- Quality of life and longevity is compromised for the Veterans
- TBI is a physical injury of the brain. Why would they use psychotropics for the treatment of that injury?
- Treating a TBI with psychotropics makes as much sense as treating a broken leg with the same drugs. Both are physical injuries and there is no efficacy for either injury
- There are NO double-blind studies to prove the efficacy of these drugs for TBI or PTSD treatment
IDF and VA Part Ways on Efficacy of HBOT in Treating PTSD *

Treating Veterans and Active Duty personnel suffering from TBI or PTSD with Hyperbaric Oxygen Therapy (“HBOT”) has always been regarded as “black magic” by both the VA and the DoD. In fact, earlier this year, the VA concluded their trial “study” with the following observations:

“To date, there have been nine peer-reviewed publications describing this research,” Dr. David Cifu, VA’s national director for physical medicine and rehabilitation recently told the Oklahoman. “All the research consistently supports that there is no evidence that hyperbaric oxygen has any therapeutic benefit for symptoms resulting from either mild TBI or PTSD.”

Conversely, the Israel Defense Forces (“IDF”) uses HBOT as a matter of course in treating personnel for traumatic shock. Roughly 120 patients a day are treated at The Sagol Center for Hyperbaric Medicine and Research in Israel. In fact, many U.S. military Veterans are now seeking treatment at the Sagol Center since they cannot receive treatment from the VA.

Daniel Rona, who has served with both the IDF and US military states that in Israel:

“In essence, our mental attitude is that we must take care of ourselves and through that process little Israel has become a blessing for the rest of the world…we treasure our soldiers, young and old. They are our only defenders…no one else will fight our battles. You can imagine that every concussive event will be treated with HBOT!”. . . “the policy of the IDF is that life has the highest value and they are committed to use any treatment, in any case, to save a life”.

It is hard to imagine that the VA and DoD don’t have the same commitment to the life and well-being of military Veterans as the IDF, but the facts suggest otherwise.

Why does the DoD and the VA refuse to acknowledge over 40 years of HBOT research and success from Israel and the successful treatments of their IDF troops? Why is PTSD virtually unheard of within the IDF? Heal the brain **First** then deal with the emotional issues **After** the brain has been repaired.

https://www.youtube.com/watch?v=sIhiYyk9VGo&feature=youtu.be

Multiplace HBOT chamber located at the Sagol Center for Hyperbaric Medicine and Research in Israel.
Veteran Traumatic Brain Injury (TBI)

- DoD, Defense and Veterans Brain Injury Center (DVBIC) = 347,962 TBIs (from 2000-2016) ¹

- RAND = 320,000 ²

- Maron et al. state 28,000 per year = 308,000 ³

- Terrio et al. found confirmed rates from a returning brigade from a 1-year deployment to be 22.8%. ⁴
  Applied to the 2.3 million troops deployed = 653,512 Mild TBI (mTBI) ¹⁰
BEHAVIORAL PROBLEMS OF TBI

Behavioral problems of people with traumatic brain injury (TBI) complicate recovery. The list of behavioral dysfunction ranges from emotionally labile (mood swings), depression, and hyperactivity to aggression, sexual inappropriateness, and elopement (running away). Even lack of activity, or lack of initiation, can be a behavioral problem. In addition, psychological reactions to traumatic brain injury as well as predisposition to psychiatric abnormalities can be factors in behavioral complications. The locus of the traumatic brain injury is the key predictor of behavioral problems, as shown in the following diagram.

FRONTAL LOBE
(behind the forehead)
An injury to this part of the brain can cause changes in emotional control, initiation, motivation, and inhibition. Intolerance for frustration and easily provoked aggressive behavior are typical. Promiscuity and lethargy may also result. An injury to the frontal lobe can lead to the inability to plan a sequence of complex movements needed to complete multi-stepped tasks (such as making coffee).

CEREBRAL CORTEX
(gray matter)
The cerebral cortex is the layer of cells on the outer surface of the cerebral lobes. A diffuse impact injury, such as with a motor vehicle accident, where the head is subjected to rapid and forceful movements, can impair the brain's ability to process emotions and behavior.

PARietal LOBE
(near the back and top of the head)
The parietal lobe is specialized for processing body information. Damage to the parietal lobe impairs the ability to identify objects by touch, increases clumsiness and neglect on the side of the body opposite the damage and creates an inability to draw and follow maps and describe how to get somewhere.

TEMPORAL LOBE
(side of head above ears)
Aggression resulting from temporal lobe damage is typically unprovoked and very abrupt. Damage here causes both long-term and short-term memory loss and difficulty in new learning, affecting a person's ability to relearn appropriate behavior. Right lobe damage can cause persistent talking.

LIMBIC SYSTEM
(deep inside the brain)
Damage to this area, distorts emotions and physical desires and leads to difficulty with organization/perception of the environment and problems with balance and movement. Damage can also cause decreased vital capacity in breathing, important for speech.

OCCIPITAL LOBE
(located at the posterior end of the cortex)
The occipital lobe's main function is vision. Damage to this area causes degrees of blindness, difficulty with locating objects in environment, identifying colors, produces hallucinations, inability to recognize words or to recognize the movement of an object and difficulties with reading and writing.

CEREBELlUM
(base of skull)
Injury to the cerebellum can result in the loss of ability to coordinate fine movement, loss of ability to walk, and the inability to reach out and grab objects.
Civilian Traumatic Brain Injury (TBI)

- 1.7 million brain injuries per year
- 75% in form of concussions or m(TBI)
- 1.3-2 million ER visits
- 230,000-500,000 hospitalizations
- 52,000 deaths
- Every year 80,000 new individuals live with a significant/permanent disability due to TBI
- Economic toll of TBI exceeds $60 Billion per year
- TBI is the LEADING cause of Morbidity and Mortality in individuals under 45 years of age in the world
PTSD Facts

The symptoms of PTSD usually develop during the first month after a person experiences a traumatic event (RCP 2014). However, with some people, there may be a delay of months or even years.

Of those who experience a traumatic event, it is thought that 30% of them go on to develop the symptoms of PTSD.

The main four types of symptoms are:

**Re-experiencing** – this is where a person re-lives the event in the form of a nightmare, flashback or a sensation – such as a smell or a sensation on the skin.

**Avoidance** – Avoiding certain people, places or circumstances that remind you of the traumatic event.

**Hyperarousal** – Feeling that you are constantly aware of threats and feel quite jumpy/easily startled. This leads to angry outbursts and periods of irritability.

**Emotional numbness** – Some manage their feelings by trying to feel nothing at all – by becoming emotionally numb. When becoming emotionally numb, you will interact less with family and friends: who then find it hard to live or work with you.
We believe The First Cost of Freedom is Supporting Our Veterans™
Hyperbaric Oxygen Therapy (HBOT)

Hyperbaric oxygen therapy (HBOT) is breathing 100% medical grade (MG) oxygen under increased atmospheric pressure while in either a single user (monoplace) or a multiple person (multiplace) chamber.

These chambers are used in the SCUBA diving industry for decompressing after a deep dive or when a diver has decompression sickness (bends). Atmospheres Absolute (ATA in HBOT) refers to a gauge pressure that is true regardless of location.

• 1.5 ATA equals 16 feet below the surface
• 2  ATA equals 33 feet below the surface
• 2.2 ATA equals 40 feet below the surface

The above pressures are those that are used to treat Veterans with TBI depending on each Veteran's needs. The HBOT treatment is known as a “Dive” and will last 60 minutes. The protocol for the treatment of TBI is 40 treatments in succession (up to 80 may be needed). Depending on the health of the Veteran they could complete 2 “dives” per day as long as there is a 4 hour gap between each dive.

• HBOT greatly increases oxygen concentration in all body tissues, including blood plasma even with reduced or blocked blood flow including cerebrospinal fluids surrounding the brain and spinal cord;

(cont)
Hyperbaric Oxygen Therapy (HBOT)

- HBOT stimulates the growth of new blood vessels to locations with reduced circulation, improving blood flow to areas with arterial blockage providing a greater opportunity for healing;

- HBOT causes a rebound arterial dilation, resulting in an increased blood vessel diameter greater than when therapy began, improving blood flow to compromised organs;

- HBOT stimulates an adaptive increase in superoxide dismutase (SOD), one of the body's principal, internally produced antioxidants and free radical scavengers; and aids the treatment of infection by enhancing white blood cell action;

- HBOT Mobilizes and stimulates an (800%) increase of stem cells within damaged tissue and in the bone marrow;

- HBOT treatment costs for hard chamber HBOT w/100% MG oxygen are between $150 to $400 per dive (varies by region and center), currently HBOT treatment for a TBI is a non-insurable condition;

- HBOT heals and reduces inflammation in the brain, heal the brain first, then the emotional issues can be treated;

- Only free-standing (non hospital) programs will be able to treat TBI patients unless on a study protocol;
We believe
The First Cost of Freedom is Supporting Our Veterans!™

Multiplace Chambers

A multiplace chamber is designed to treat multiple patients at the same time using face masks or hoods to receive the 100% medical grade oxygen during the “dive”. The air in the actual chamber is normal ambient air.

HBOT multiplace chambers

HBOT multiplace chamber
Monoplace Chamber

A monoplace chamber is designed to treat a single patient and the entire chamber is filled with 100% medical grade oxygen, eliminating the need for a mask or hood during the “dive”.

HBOT monoplace chambers

HBOT monoplace chamber
What are some of the causes of a Traumatic Brain Injuries (TBI)?

- Concussive blasts and shock wave injuries
- Physical blows to the head
- Artillery and use of large weapon systems
- IED blasts
- Penetration injuries
We believe The First Cost of Freedom is Supporting Our Veterans™

References


Team Veteran Foundation, Inc.

https://tvfaz.org

Gordon Brown, President/CEO
gordon@tvfaz.org
602-561-7805

Team Veteran Foundation, Inc. (TVF) is a nonprofit, tax-exempt organization, Federal Identification Number 46-1017104, under Section 501(c)(3) of the Internal Revenue Code. Registration fees for events are not tax deductible unless otherwise indicated. Donations are fully tax deductible to the extent allowable by law. Donations can be given in the name of an individual, couple or family, or made anonymously to the fullest extent allowable by law.