

# OPERATION GIVING BACK

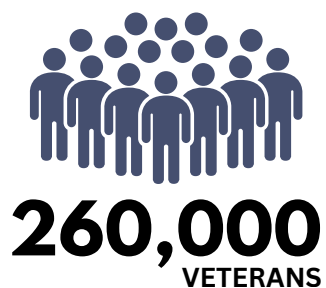
## INTRODUCTION

*Post-Traumatic Stress Disorder (PTSD) is a debilitating condition affecting a significant portion of the veteran population. Traditional treatment modalities, while valuable, can have limitations. This report details the efficacy of NeurOptimal® Neurofeedback training as a complementary therapy for veterans suffering from PTSD and trauma, focusing on the work of the non-profit organization **Operation Giving Back** in San Diego.*



## CONTEXT - SAN DIEGO'S VETERAN POPULATION

*San Diego County is home to a substantial veteran community, estimated at approximately 260,000 individuals. Within this population, an estimated 25,000 veterans struggle with PTSD. The need for effective and accessible treatment options is therefore critical. **Operation Giving Back** addresses this need by providing innovative therapeutic interventions.*



# PROTOCOL & METHODOLOGY

The *NeurOptimal*® Neurofeedback protocol implemented by **Operation Giving Back** involves a series of 20 to 30 training sessions, administered twice weekly. Each session is non-invasive and painless, utilizing sensors placed on the scalp to monitor brain activity.

The *NeurOptimal*® system then provides real-time auditory feedback, giving the brain information about its function. The brain can use that information to move towards greater regulation and balance.

Quantitative assessments using the PTSD Checklist (PCL) and Beck Depression Inventory (BDI) were administered before and after the training period to measure changes in symptom severity.

## PTSD CHECKLIST - PCL

The PTSD Checklist (PCL) is a questionnaire designed to measure how much a traumatic experience may still be affecting a person's daily life. It looks at symptoms commonly linked to PTSD, such as intrusive memories, nightmares, emotional distress, avoidance, feeling disconnected, being constantly alert, sleep problems, or difficulty relaxing. The questions focus on how strongly these symptoms have affected the person over the past month.

Each symptom is rated from "not at all" to "extremely," and the scores are added together to give an overall picture of symptom severity. A higher score suggests the trauma may still be significantly affecting the person emotionally and neurologically. The checklist itself does not diagnose PTSD, but it helps clinicians understand whether further assessment or support may be needed.

What makes the PCL useful is that it recognises PTSD as more than simply remembering something upsetting. Many people with trauma logically know they are safe, but their nervous system still reacts as though danger could return at any moment. The checklist is essentially measuring how strongly the trauma is still influencing the person's emotions, thinking, sleep, concentration, relationships, and overall sense of safety.

## BECK DEPRESSION INVENTORY - BDI

The Beck Depression Inventory (BDI) is a questionnaire designed to measure how much depression may be affecting a person's emotions, thinking, energy, motivation, and daily functioning. It asks about common symptoms of depression such as sadness, hopelessness, fatigue, loss of interest, low self-worth, sleep changes, concentration difficulties, and feelings about the future. The questions focus on how the person has been feeling over the previous two weeks.

Each symptom is rated on a scale that reflects severity, and the scores are added together to provide an overall picture of how significant the depressive symptoms may be. A higher score suggests that depression may be having a stronger impact on the person's life. The inventory itself does not diagnose depression, but it helps clinicians understand the intensity of symptoms and whether further support or assessment may be appropriate.

What makes the BDI useful is that it recognises depression as more than simply "feeling sad." Depression can affect the way a person thinks, experiences pleasure, relates to others, and functions physically and emotionally. The questionnaire is essentially measuring how much a person's mood, motivation, energy, and sense of hope or self-worth may have shifted in a way that is impacting everyday life.



## **STRENGTH OF THE NEUROPTIMAL® APPROACH**

### ***Non-Verbal and Painless:***

*The process is entirely passive and requires no conscious effort or active participation from the client, making it suitable for individuals who may find traditional talk therapy challenging.*

### ***No Medication Required***

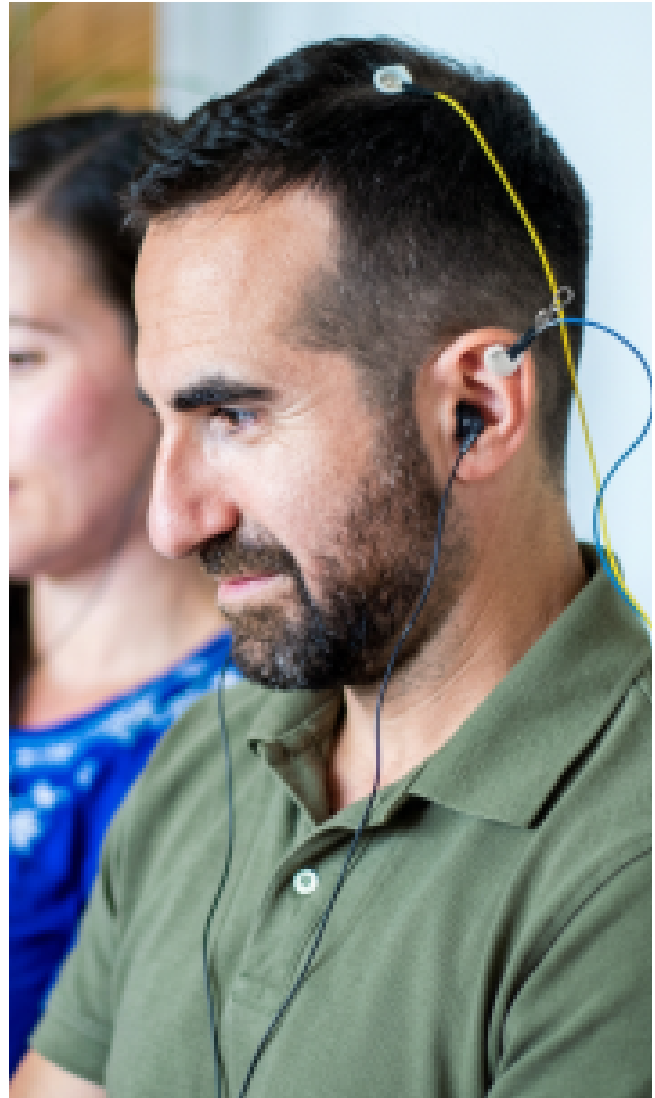
*It is a drug-free intervention, minimizing the risk of side effects associated with psychotropic medications.*

### ***Works Alongside Existing***

*Treatments: NeurOptimal® can be effectively integrated with other therapeutic approaches, including psychotherapy and other medical treatments, enhancing overall care.*

### ***Promotes Brain Regulation***

*By providing feedback on brain function, it helps the brain learn to self-regulate more effectively, allowing it to address the underlying neurological dysregulation associated with PTSD.*



## CASE STUDY - ROBERT



### BACKGROUND / CONTEXT

- Man
- Deployed more than 4 times
- Depression
- Not sleeping
- Wife requested divorce
- 4 children, one handicapped
- Procrastination,
- Extremely low self esteem

### STATS

Total of sessions: 20

Before: PCL 56 = PTSD positive

After: PCL 19 = No PTSD

Before: BDI 25 = moderate depression

After: BDI 4 = Normal

### AFTER EFFECTS

- Calmer
- Able to stand up for himself
- Feeling more settled
- More stable,
- Able to handle more in his life

## CASE STUDY - JOSH



### BACKGROUND / CONTEXT

- Man
- Relationship Issues
- Violent
- Under Restrictions

### STATS

Total of sessions: 30

Before: PCL 41 = No PTSD

After: PCL 9 = No PTSD

Before: BDI 18 = semi- moderate depression

After: BDI 2 = Normal

### AFTER EFFECTS

- Able to sleep deeper
- Waking up with better attitude
- Improvement in memory recall
- Less stressed
- Feeling good
- Stopped drinking
- Aware of anger
- More comfortable talking openly
- Friends find him happier
- Not as reactive or angry

## CASE STUDY - MICHAEL



### BACKGROUND / CONTEXT

- Man - 18 Years old
- Listening to Heavy Metal all the time
- Depression
- Violent
- Fighter
- Suicidal
- Objecting to answering questions

### STATS

Total of sessions: 20

Before: PCL 29 = No PTSD

After: PCL 16 = No PTSD

Before: BDI 25 = moderate depression

After: BDI 0 = Normal

### AFTER EFFECTS

- More at ease getting up in the morning
- More desire to take action
- Happier character
- Feels better
- More interest and energy to do things
- Motivated to go to the gym & workout
- Different outlook on life
- Not as anxious all the time

## CASE STUDY - WAYNE



### BACKGROUND

- Man - 45 Years Old
- Marine Corps then Peace Corps
- Dealing with Leukemia
- General Anxiety
- Poor Grooming
- Not accepting of self
- Very critical of society
- Drinking and doing drugs

### STATS

Total of sessions: 30

Before: PCL 43 = PTSD general population

After: PCL 28 = No PTSD

Before: BDI 13 = mild depression

After: BDI 7 = Normal

### AFTER EFFECTS

- More peaceful
- Acceptance of what is happening
- Felt a shift in himself
- Feeling lighter
- Letting go of self judgement
- Physical body responding to treatment

# QUALITATIVE IMPROVEMENTS

*Beyond the quantitative scores, veterans consistently reported qualitative improvements. These included enhanced emotional regulation, reduced irritability, improved concentration, a greater sense of hope and well-being, and a renewed ability to connect with loved ones. Many expressed feeling "like themselves again" after years of being defined by their trauma.*

## CONCLUSIONS

*The NeurOptimal® Neurofeedback training program facilitated by **Operation Giving Back** demonstrates significant efficacy in reducing PTSD and depressive symptoms among veterans.*

*The comprehensive improvements in psychological well-being, sleep, anger management, and overall quality of life underscore the value of this non-invasive, complementary therapy. The success of this initiative highlights the potential for NeurOptimal® to be a vital component in the ongoing efforts to support veterans' mental health and recovery.*



**Operation Giving Back** A passionate team of volunteers.  
Dedicated professionals Dr. Robert Lloyd, Dr. Danielle Chavalarias,  
Shalom Frazier, Marie-Laure Wagner, and satellite volunteers.