Floatation Therapy and Traumatic Brain Injury:
A case study evaluating the effects of floatation therapy on traumatic brain injury
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Abstract

"Individual With Traumatic Brain Injury Benefits from Floatation"

Objective

The purpose of this case study is to qualify any positive or negative effects of floatation therapy, also known also as restricted environmental stimulus therapy ("R.E.S.T.") upon specific physical, emotional, neurological, and psychological aspects of an individual with a long-term traumatic brain injury ("TBI"). A secondary objective is to determine how float frequency may impact results or progress.

Method

This case study involves a single subject floating in a 9' x 5' fiberglass tank with a hinged lid, shaped like a large egg. The tank is filled with a 10" deep solution of skin temperature water (94 degrees F +/- .5 degrees) saturated with 1000 pounds of medical grade Epsom salt, or magnesium sulfate. The buoyancy of the solution provides for the subject to float effortlessly in a supine (face up) position. There are button controls for light or darkness and for ambient music or to float in silence.

For this study, the subject floated in darkness and silence for 60 minutes each session, over a 3 months period, for a total of forty-six (46) floats. The study was divided into three phases, each one month in duration:

Phase 1 – float every day (30 floats)
Phase 2 – float 3 times per week (12 floats)
Phase 3 - float 1 time per week for 30 days. (4 floats).

A functional disability outcomes questionnaire with twenty-four (24) categories was established. This tracking form was used for daily subjective recording on a 0-10 numeric continuum, with the premise that 5/10 indicated her "present normal" and baseline for establishing change. The questionnaire was completed daily and returned on a weekly basis. The subject did not have access to previous data after any given week.

Results - Energy Up, Depression Down

Results of this study demonstrate functional gains in all 24 functional categories tested, with an associated 34% average improvement. As an example, the subject's general energy levels and motivation levels increased 37% and 39% over the 3 month period of floating. Similarly, the subject's feeling of depression decreased by 35%. These findings are based on the

subject's daily tracking sheets and the subject's subjective pre-study sense of "normal." In December 2016, the subject's own words addressing Overall Energy Levels was "*feels general malaise, fatigue, sense of body weakness and loss of strength. Low to moderate energy levels. Mental fatigue is common. [R]are to feel jolts of energy where I want to hop on a bike and explore or where doing something physical doesn't feel like it takes a lot of effort.*" The subject's sense of depression echoed the same sentiments - "*Moderate+ depression for past year/ two years. Has caused loss of interest and engagement. Prior was more up, but has been up and down since the accident. Motivation: Low levels of motivation for past year+. Desire to be motivated but am often challenged to get started in both physical and mental activities.*

The results show a moderate improvement of these and many other aspects of the subject's TBI life, which benefited from floatation or REST. The subject's daily tracking forms, subjective journaling, and own personal actions, during and after the study, such as traveling, reflects an increase of general energy and motivation. By the subject's own admission, prior to floating, these feelings were pretty low and depression seemed to dominate.

Conclusions

Floatation therapy, or R.E.S.T. can improve functional, cognitive, emotional, behavioral, and physical qualities of life for people dealing with long term traumatic brain injury. Evidence within this study demonstrates that floatation therapy has a direct and lasting positive effect on multiple categories of emotional, neurological psychological and physical dysfunction related to an individual with a TBI of 10 years duration. The immediate and lasting functional gains in all categories point to the obvious establishment of a "new normal" with an associated 34% average improvement across twenty-four (24) different categories.

As a secondary conclusion, this study demonstrated that a frequent floating pattern, followed by a gradually diminishing frequency over a multi-week period, may significantly improve a myriad of TBI related dysfunctions. It also demonstrates how float frequency modification may be impactful in jump starting or resetting a brain after injury and how floating may be instrumental in subjective awareness of a variety of mental and physical arenas. This study establishes a precedent for considering how float frequency can be used situationally or episodically for those with TBI to best fit the severity and complexity of issues at that point in time. Lastly, this study provides a concrete example for float center owners, patients and their health care providers that floatation can be useful by itself and in tandem with other therapies.