CranioSacral Therapy, Visceral Manipulation and Neural Manipulation Helping People with Brain Injury and PTSD

Integrative Manual Therapy Treatments from Upledger Institute International and Barral Institute





There is a great need for effective, non-invasive therapies to help military Veterans, first responders, and athletes struggling with mild traumatic brain injuries (MTBI), concussions and lingering neurological problems or co-morbid psychological health conditions, such as posttraumatic stress, depression and anxiety.



**For Veterans,** MTBI may occur from traumatic events that induce physiological disruptions in brain function. Veterans experiencing Post Traumatic Stress Disorder (PTSD) can be in a freeze condition, which lowers the fluid circulation in the brain, and as such, pathologies and dysfunctions may develop.

**For athletes,** repeated sub-concussive hits may both lower the fluid circulation in the brain and cause PTSD due to the changes in the brain. This reduced fluid circulation predisposes a person to neurological disorders later in life, which may damage the blood-brain barrier and eventually lead to neural tissue damage.





#### While the manifestation of injuries sustained in military-related situations are

**different from athletes,** gentle and long-practiced manual treatment options exist for both groups who suffer from MTBI, concussion and post-concussive syndrome. The purpose of this short brief is to illustrate interventions using manual therapy techniques and illuminate how these techniques support better health and quality of life for Veterans, military service members, athletes, first responders, their families, and society.



# Manual Therapy for People with MTBI and Post-Concussive Syndrome

Therapists who treat Veterans and athletes with brain injuries are trained by the **Upledger Institute International** and **Barral Institute** in three primary manual therapies: Upledger CranioSacral Therapy (CST), Barral Visceral Manipulation (VM) and Barral Neural Manipulation (NM). Therapists work with those experiencing MTBI, PTSD, anxiety and depression, chronic pain, memory and sleeping disorders. Developed by John E. Upledger, DO, OMM and Jean-Pierre Barral, DO, MRO(F), PT, these therapies are based in manual osteopathic principles that unite the body through fascia. The fascia is an interconnected biological fabric that joins the smallest part of a cell out to the skin itself. Through treatment of the many types and layers of fascia, the therapist facilitates a person's inherent ability to self-correct.



#### Five Concepts of CST, VM & NM

- 1. In order for tissues to survive and maintain equilibrium, the connection between each tissue must be free to move in its environment.
- 2. The tissue must have substantial mobility, extensibility and elasticity.
- 3. When a tissue loses equilibrium, physiology is compromised.
- 4. Symptoms can be local or distant from their origin.
- 5. Symptoms are not exclusive to physical structures.



**Upledger CranioSacral Therapy** is a gentle manual therapy that modifies and corrects restrictions in the craniosacral system (CSS), which encompasses the meninges, bones attached to the meninges, cerebrospinal fluid (CSF) and the CSS glial. Therapists identify restrictions within the CSS that adversely affect brain and spinal cord physiology, such as motor and sensory signaling and autonomic nervous system (ANS) interactions.

**Barral Visceral Manipulation** is a hands-on treatment using intentionally placed manual touch to support mobility, vascular function, tone, motion and pressure in connective tissues and organs, and their relationship to other parts of the body. Visceral Manipulation identifies where physiologic motion is impaired, which can negatively affect the brain

**Barral Neural Manipulation** examines how the release of local nerve fixations resolve the more comprehensive (global) dysfunctional patterns. Mechanical properties of nerves require mobility, elasticity, and a compliant intrinsic and extrinsic intraneural pressure system. Performing a mobilization on nerve fixations help free the nerve and restore the proper signaling to the compromised structures it innervates. and other organs. Neural Manipulation corrects these tensions to restore movement in the neuromuscular, vascular, digestive, eliminatory, respiratory, reproductive, lymphatic and autonomic systems.



# About

Upledger Institute International and Barral Institute



John E. Upledger, DO, OMM



Jean-Pierre Barral, DO, MRO(F), PT

**Upledger Institute International (UII)** has been training manual therapists in evidence-informed and evidence-based CranioSacral Therapy (CST) disciplines for more than 37 years. Founded by Dr. John E. Upledger, his dedication to the science and practice of CST earned him an international reputation and established him as a leader in integrative, whole-person, manual therapy education, clinical services, and on-going research. Today, that work has evolved to 132,000 therapists trained in 83 countries and recent published research on the body's Third Rhythm, the low frequency oscillation that is central to cerebrospinal fluid for optimum health in the brain and throughout the body.

**Barral Institute** was founded by Jean-Pierre Barral to address functional and structural imbalances in the musculoskeletal, vascular, nervous, urogenital, respiratory, digestive, and lymphatic systems. Over the past 35 years, more than 75,000 therapists in 83 countries are trained as skilled practitioners to manually "listen" and feel where tissues are pulling toward areas of restriction and unresponsive movement to gently manipulate the body's internal mechanisms toward better health.

"When structures can no longer be mobilized, when fibrous tissues replace elastic tissues, when arteries, nerves or lymphatic systems are trapped in a stranglehold, then illness appears."

Jean-Pierre Barral, DO, MRO(F), PT



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# Helping Veterans with Manual Therapies

Through the Dr. John E. Upledger Foundation, Veterans participate in a five-day multi-disciplinary treatment program including pre- and post-testing. Participants benefit from 20 hours of hands-on multiple-therapist sessions, four-hours per day for five days, as well as supportive group sessions daily to facilitate each client's healing process. The following are testimonials from the therapists, observers and participating Veterans.



Vietnam Veterans Study. A two-week intensive therapy program using CST addressed post-war issues, including PTSD. Outcomes from the study showed Veterans' obsessive-compulsive scores dropped from the 86th percentile to the 46th; depression scores fell from 69 to 27, and anxiety scores declined from 79 to 42.

"It's not uncommon that people feel you've not only touched their body, but you've also touched their soul or spirit," said Chas Perry, PhD, a 20-year CST instructor who assisted Dr. Upledger in this and other research projects. "CST has a palpation and sensitivity that allows for something deeper to happen for people."

2004-2005 Lemoore Naval Air Station Study. Captain Sandy DeGroot, a 30-year Navy nurse and commanding officer of the base hospital, was familiar with CST from her earlier work as a nurse midwife. She opened the CST program to any returning corpsman and pilot who had been deployed in a combat region and was assigned to Lemoore.

"One of the things we clearly identified, as people returned from theater, is they are still connected very much with their buddies back in the field. It's very hard for them to come back fully and be in the present moment. The CST work allowed them to release trauma held in the body." Sandy DeGroot, MSN





#### Testimonials from Veterans

April Griffin, Marine Corps. After two tours and serving in Desert Storm, she was injured, suffered from PTSD, stress-related illnesses and adverse reactions to required inoculations. During her CST sessions, she learned to release and process pre-military events and service related trauma. "I am able to talk [to you] about this for the first time in my entire life without feeling shame or guilt, or... like I don't want to live. Ask for help, it's called CranioSacral Therapy."

Major Bernard Loeffke, US Army. He served for 36 years, including three combat tours in Vietnam. He experienced head trauma (hydrocephalous) from multiple aircraft accidents. "My post (CST) tests showed a marked improvement in my ability to extend my head and neck. I've seen improvement. Plus, when the hydrocephalus kicks in, I have excruciating pain. ... It's a 9 or a 10. Since I've been here, I don't have that pain."

#### Participants of the Veterans Therapy Program Reported:

- Reduced physical pain and discomfort
- Significant improvement in insomnia and return to normal sleep patterns
- Alleviation of hyper vigilance and appropriate responses to the environment
- Discontinuance of intrusive thoughts and flashbacks
- Memories recalled without the negative charge
- Willingness to participate in healthy activities
- Depression and suicidal thoughts reduced and even eliminated
- Reduction in need of psychotropic medications, and some able to discontinue
- Return to clear mental functioning
- Relationships with family and friends becoming meaningful again
- End of social isolation and reconnection with community







### Manual Therapies for Athletes

In 2017, the Upledger Institute International published the findings of a pilot study conducted in partnership with the Ricky Williams Foundation of Austin, Texas (founded by Ricky Williams, former NFL running back). The study answered the question presented in a 2013 study in the journal *Neurology*:

"What interventions enhance recovery, reduce risk or recurrent concussion or diminish long-term sequelae?"



This Concussion Pilot Program (CPP) multidisciplinary study included medical doctors (MD), osteopathic doctors (DO) and the manual therapists (PT, OT, DC, MT). The study medical director confirmed post-concussive syndrome in each of the 11 retired professional football players, who reported postconcussion symptoms, but did not have any clinical contraindications to receiving manual therapy (intercranial fractures, aneurysms, hemorrhages, etc.).

The retired football players, age range of mid-20s to mid-70s, reported the number of hits to their head varied from 7-10, 25-30 and as many as 100.

Throughout the study, the participants were informed of their patterns of dysfunction, the individual types of manual therapy each would receive and their effects on the central nervous system. Each therapy session averaged 90-to-120 minutes and many included more than one therapist.

#### The primary complaints among the study participants for sportsrelated post-concussion syndrome:

- 1. Head/cervical pain (80%)
- 2. Depression (80%)
- 3. Trouble with memory, learning, reading, decision making (80%)
- 4. Sleep problems (80%)
- 5. Fatigue (60%)
- 6. Anxiety (40%)
- 7. Dizziness/imbalance (20%)
- 8. Digestive/elimination problems (10%)

#### **Testimonials from Athletes**

George Visger, New York Jets, San Francisco 49ers 1980 - 1981. "CranioSacral Therapy is literally a game-changer for many of us TBI survivors."

Eric Williams, Detroit Lions, Washington Redskins 1984 - 1993. "My mood, my emotions and body had such a drastic change. My chronic pain was drastically reduced and my range of motion on 99% of my body parts increased significantly."

**Clarence Vaughn, Washington Redskins** 1987 - 1992. "I had been suffering from depression and body pain, and to deal with that I had been turning to alcohol. (After the Intensive), I'm still pain free. The urge to drink alcohol is gone. I feel younger and more energetic."





# Since the pilot program we have had additional successful concussion programs.

Each football player received CST, VM and NM techniques, twice-per-day, for 5 days, and were evaluated on day 1, day 5, and 3-months post therapy. Participants reported a significant reduction in intensity of pain; improved memory; less difficulty learning, reading and making decisions; and overall improved quality of life scores, particularly less depression. Visual reaction time and gait measurements did not show improvement.

It is important to note that the therapists observed that post-concussion syndrome was not limited to the brain. Fascial tests revealed that the dura membrane restrictions affected the cervical, thoracic and lumbar/ sacral regions, as well as related secondary organ dysfunction. Previously reported joint and muscle pain, which was elevated since concussive events, was minimized post treatment. Participants reported the therapy made them feel like they were part of a team and gave them purpose to improve their willingness and ability to share, care and give.

Post concussive treatments are challenging, and a multidisciplinary approach provides viable options for noticeable improvements. Manual therapies such as those described here support an approach that addresses whole-body traumas.

"The ease with which each participant could move, the softening of volatility and the often-dramatic decrease in pain is a testimony to the gentle, yet profound, effect that the concussion treatment utilized in this study had on the restoration of balance in each man's body."



## Working with Upledger Institute International and Barral Institute

Manual therapists trained in CranioSacral Therapy, Visceral Manipulation, and Neural Manipulation are passionate about helping people with mild traumatic brain injury, the long-term effects of concussions and PTSD. As such, our organizations are continuously seeking partnerships with others who share the same mission.

We have made major strides over the past 35-plus years to educate the healthcare community and general public on the important role of manual therapies in whole-person health. We have moved past a narrow focus on the dysfunction or single system approach, to evaluating the person from a global perspective. Each person is unique and the many events in each individual's life show up in their tissues and can impact health. This holistic view helps to address the actual causes of a person's dysfunction, thereby increasing the effectiveness of the treatment, so that the person becomes better able to function and moves closer to optimal health.

One of the challenges with location-specific intensive therapy programs is finding qualified practitioners for people to work with when they return home. Participants often express a desire to want further education and physical guidance to help them continue to progress. We have highly trained PTs, MTs, OTs, DCs, NDs, RNs, ATs, and other healthcare professionals at centers in the United States and internationally who are members of our network of forward-thinking practitioners, and who are a valuable resource for people to keep moving forward on their healing journey.

# How Can We Help You Help Others?

We strive to advance training, educational, and research activities in support of our manual therapy model, while partnering with like-minded organizations to provide an optimal integrative approach. Together we can continue to transform health care through client-centered, non-invasive, cost-effective manual therapies that optimize health and well-being.



# Please contact us to join together in helping those in need.

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# In Conclusion,

manual therapies such as those described here offer a multidisciplinary, effective approach to help people struggling with MTBI, concussions and lingering neurological problems or co-morbid psychological health conditions, such as post-traumatic stress, depression and anxiety.

#### Providing World-Class Manual Therapy Education

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For general books about these disciplines, please refer to our websites.





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