

# Bodywork for Sensory Integration: Use of Craniosacral, Visceral, & Lymphatic Therapies to Promote Parasympathetic Function and Sensory Wellness

Susan Vaughan Kratz, OTR, CST-D Special Therapies, Inc. Waukesha, Wisconsin



#### Abstract

The need for effective interventions for sensory wellness is firmly established. Generalized to different populations guided the clinical reasoning to apply manual therapies with SPD. Clinical evidence supports the use of these methods as safe and easy to administer. Methods dictate approaching body tissues, organs, and vasculature to promote the state of parasympathetics, in turn influencing sensory reactions and inter-relationship behaviors.

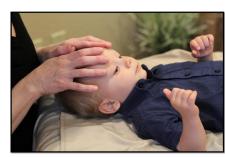
In one private Midwest occupational therapy practice, bodywork methods have become the primary treatment of choice based on success in ~10,000 treatment encounters.

### Introduction

This presentation offers a revolutionary concept of analyzing & treating sensory-driven behaviors from a osteopathic and biological frame of reference. From massage to more forceful manipulations, manual therapies offer differing levels of invasiveness into tissues.

#### Contemporary methods evolved from science of fascia:

- Craniosacral therapy (CST): Upledger's CST is a perfect matched non-invasive approach to dysregulated, inflamed, or injured nervous systems.
- Visceral manipulation (VM): Connective tissues around organs which are suspended in the body's fascia tensegrity; can effect posture and balance; treats ANS directly.
- Lymphatic drainage (LD): Detoxification of cellular terrain, reducing systemic stress through evacuation of inflammation.
- Other soft tissue approaches: Mobilizes interstitium, vascular walls, & the retractive nature of fascia matrix. Best applied combining all three of these methods.



Bodywork for Sensory Integration assesses and treats the ANS continuum of tension through whole-body palpation of anatomical structures, organs, and vasculature masses. Best methods use non-invasive techniques that align with SPD principles: child-directed ANS responses (in the tissues).

Methods help bodyworkers define regions to treat:

- ✓ Skull and spine (craniosacral system); fluid pathways
- ✓ Cranial nerve pathways, exit foramen, & innervation sites
- ✓ Periphery: C-fibers in skin; neuro-vascular bundles; lymphatic fluid movement around somatosensory nerve pathways
- ✓ Enteric nervous system surrounding the visceral organs
   & mesentery vasculature; effecting state of interoception

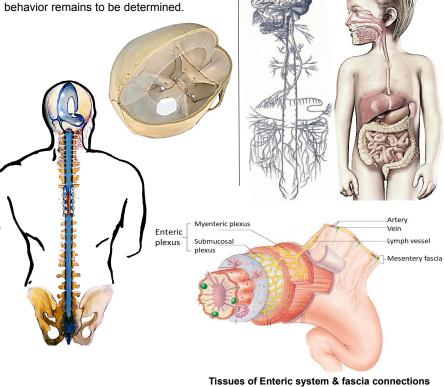
Behavioral homeostasis is a consistent observation in bodywork for sensory wellness

## Methodology –manual therapies treat key regions

#### CRANIOSACRAL SYSTEM

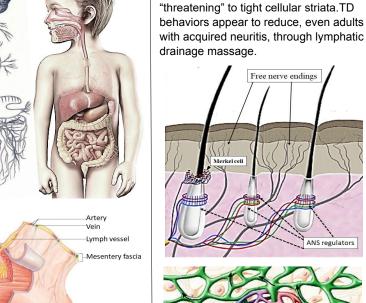
Craniosacral therapy treats the structures of the central nervous system. Meninges (fascia core), surround & suspend spaces containing cerebral spinal fluid, bathing & facilitating electrophysiology of sensory processing through a yet-to-be-defined hydraulic system. Dura mater extends into intracranial membranes with reciprocal tension, suspending brain tissue.

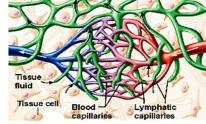
Structural torsions of meninges can create neurological stress. Science supports existence of the CS system, though physiological impact on human behavior remains to be determined.



## ENTERIC & VAGAL SYSTEMS PERIPHERAL & CUTANEOUS ANS

Modified VM, with CST & LD, offers protocols & guidance to assess & directly treat the ANS. Facilitates vasodilation & peristalsis along central visceral nerve plexus, vagal branches' innervation sites, & the enteric nerve mesh within peritoneum. Common to observe a quick change in mood, modulation, regulation, & emotional stability.





**BONES & FASCIA of E. TUBES** 

New ideas - tactile defensiveness

inflammation & injury to C-fibers

vasoconstriction within (epi)dermis.

etiology from applying fascia mobilization

& lymphatic drainage. Perhaps systemic

(cutaneous ANS cells) perpetuate micro-

Chronic constriction increases lymphatic

stagnation & reduces tissue flexibility.

Habitual protective retraction of skin &

Alternative to therapeutic brushing,

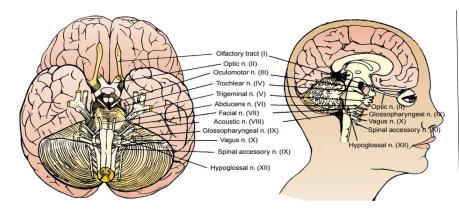
lymphatic drainage is less invasive &

protopathic reactions default as a result.

#### **CRANIAL NERVE PATHWAYS**

**Cranial nerves play major role in efferent information.** Birthing & in utero confinement can compress soft bones of cranium, & be retained through infancy & childhood. E. tube compromise is a common feature. **Perpetuates protopathic reactions** to input, not unlike hyperreactivity in nerve conduction testing. Structural medicine methods, such as CST, releases compromised

input, not unlike hyperreactivity in nerve conduction testing. Structural medicine methods, such fascia-osseous restrictions & nerve pathways, easing sympathetic tone & protective retraction.





## **Results - Observations**

FUNCTION	KEY STRUCTURAL CORRELATES
Eating & digestive performance (sensory-based or behavioral-based intolerances for food)	* Deep fascia restrictions (of organs & vasculature); digestive sphincter flexibility; taut nerve plexuses of vagal system at various midline points; over-reactive sympathetic ganglion (anterior chest cavity)  * Occiput condyle compression @ jugular foramen (hypoglossal & vagal nerves; swallow & peristalsis)  * Compressed mandible & cranial nerve outlets to lips, cheeks & tongue (smooth movements of oral parts)  * Frontal bone compressed @ CN-I & cribriform plate  * Generalized taut GI organs, peritoneum, & mesentery walls & vasculature. GI tract tension seems to correlate to aversions to sensations of foods & odors  * Improved toileting
Attention and concentration	* Compressed cranial base; taut spinal dural tissues * Similar findings in mesentery & peritoneum
Mood: anxiety and depression	* ↑ Tension & tone throughout mesentery & vasculature; taut walls of small & large intestines * Digestive sphincter tension hinders peristalsis * Compressed maxilla superiorly
Touch processing	* Taut skin, often in individualized dermatomes  * Lymphatic tightness & fluid stagnation  * Compressed occiput-cervical region (cranial base)
Head control, core stability, posture	* Compression into dorsal columns of spinal cord with dura mater tensions
Retained primitive reflexes (posture & balance)	* Compression at occiput-cervical base extending inferiorly to spinal column or superiorly to brain stem & cerebellum; various tensions in body fascia bands
Ocular motor movements and coordination	* Frontal & sphenoid bone compression  * Compression of occiput into sphenoid sutures  * Compromising cranial nerve flexibility & balanced tensegrity in fascia web – leading to imbalanced tone of oculomotor muscles
Auditory- Vestibular	* Compression into temporal bones & Eustach. tubes * High cervical compression; vertebral artery strain * Occiput compressed anterior into temporal sutures

### Conclusions

Bodywork methods have demonstrated improved functions considered sensory processing outcomes. Structural medicine can induce parasympathetic state and tone to vasculature and organs, with parallel behavioral changes. Global effects are generalized to central, peripheral, vagal, and enteric systems, resulting in measurable changes in modulation and regulation. Physical effects also include improved postural and balance reactions, coordination & timing, & reflex integration.

#### References

Please see available at poster station or contact me at specialtherapies1720@gmail.com