

Hacking the Nervous System with Frequency Specific Microcurrent: TBI, Concussion & Energy Sensitivity

Presented by

Shannon Goossen, AP, LMT, CMTPT

Hosted by

Darren Starwynn, OMD



All of us are subject to:

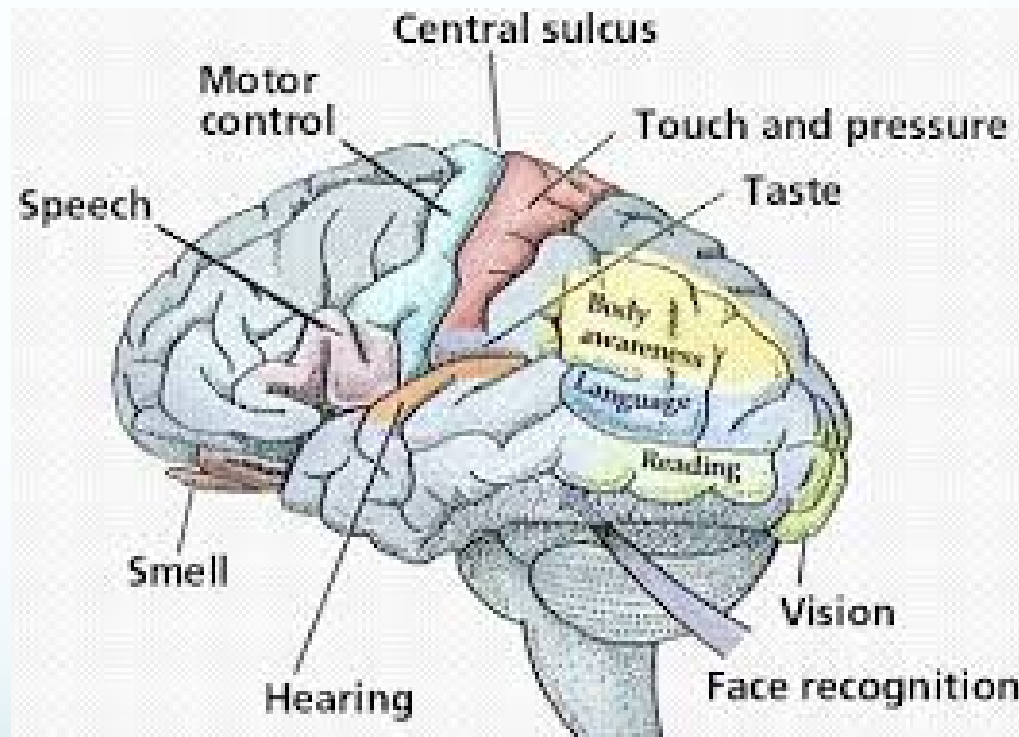
- our preconceived ideas
- notions
- beliefs
- what and how we were taught

Thus,

You NEVER
think about
what you don't
think about

- Charles Aprill, MD

Processing Centers in the Brain



BRAIN ANATOMY 101: Brainstem

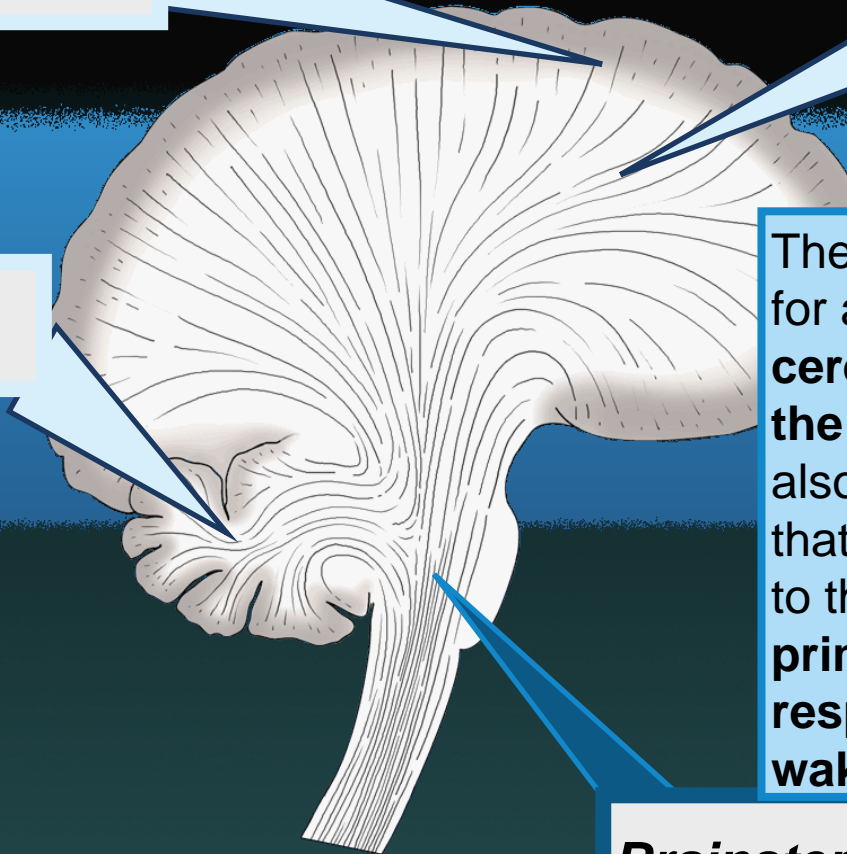
Cerebral Cortex

Cerebral Subcortex

Cerebellum

The **brainstem** acts as a funnel for axons **connecting the cerebrum and cerebellum to the spinal cord**. The brainstem also contains the **cranial nerves** that supply motor and sensation to the face and head as well as **primitive centers** involved in **respiration, sleep, and wakefulness**.

Brainstem



BRAIN ANATOMY 101: Cerebellum

Cerebral Cortex

Cerebral Subcortex

Cerebellum

The **cerebellum** lies posterior and inferior to the cerebral hemispheres. Its primary role is to **coordinate motor movements**.

Brainstem



BRAIN ANATOMY 101: Cerebral Subcortex

Cerebral Cortex

Cerebral Subcortex

Cerebellum

Brainstem

The **cerebral subcortex** contains **myelinated axons** that convey information from the gray matter. These myelinated axons are **analogous to “electrical wires”** and make up the **deep white matter** of the brain. Within the deep white matter lie **“balls” of gray matter** known collectively as the **basal ganglia**, which **modify movement**, and the **thalamus** which acts primarily as a **relay for sensory impulses**.



BRAIN ANATOMY 101: Cerebral Cortex

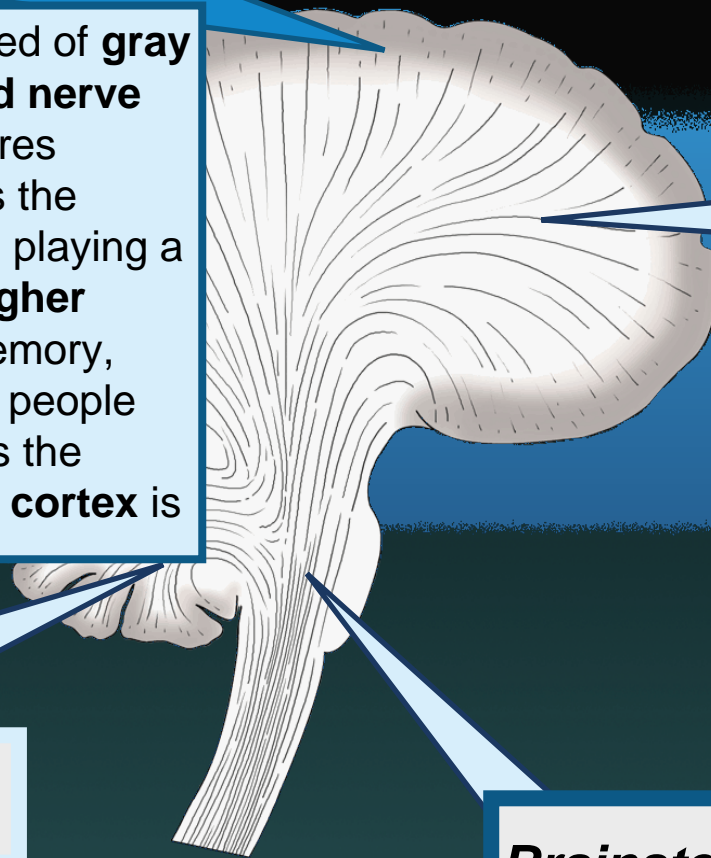
Cerebral Cortex

The **cerebral cortex** is composed of **gray matter** - primarily **unmyelinated nerve cell bodies**. Gray matter structures **process information** and act as the “**computer center**” of the brain, playing a central role in many **complex higher cognitive functions** such as memory, attention, and language. In most people the **left cerebral cortex** contains the **language centers** and the **right cortex** is involved in **attention**.

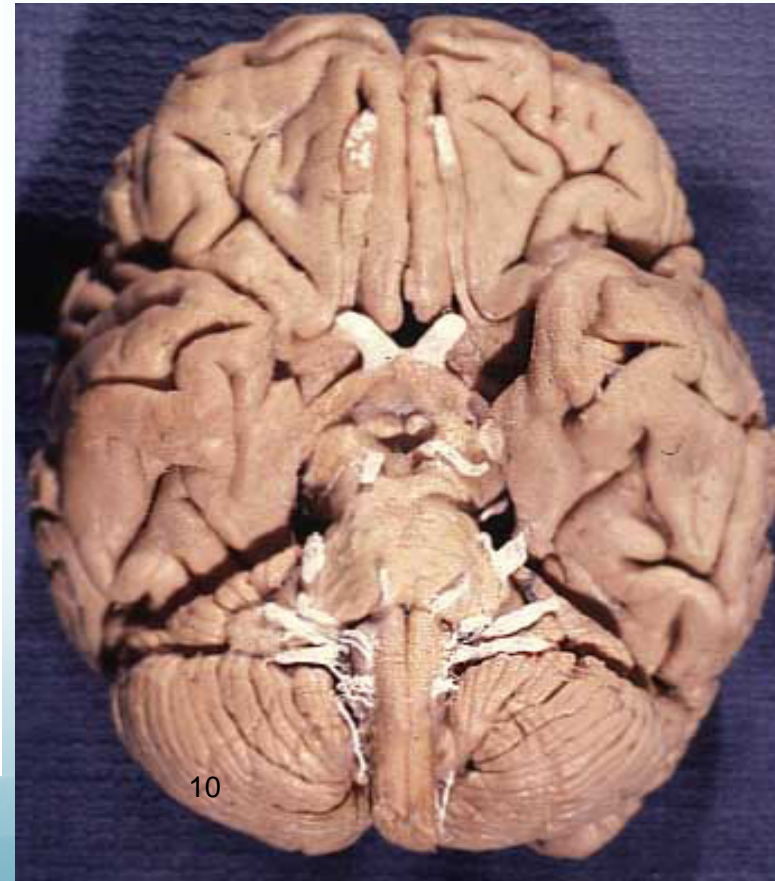
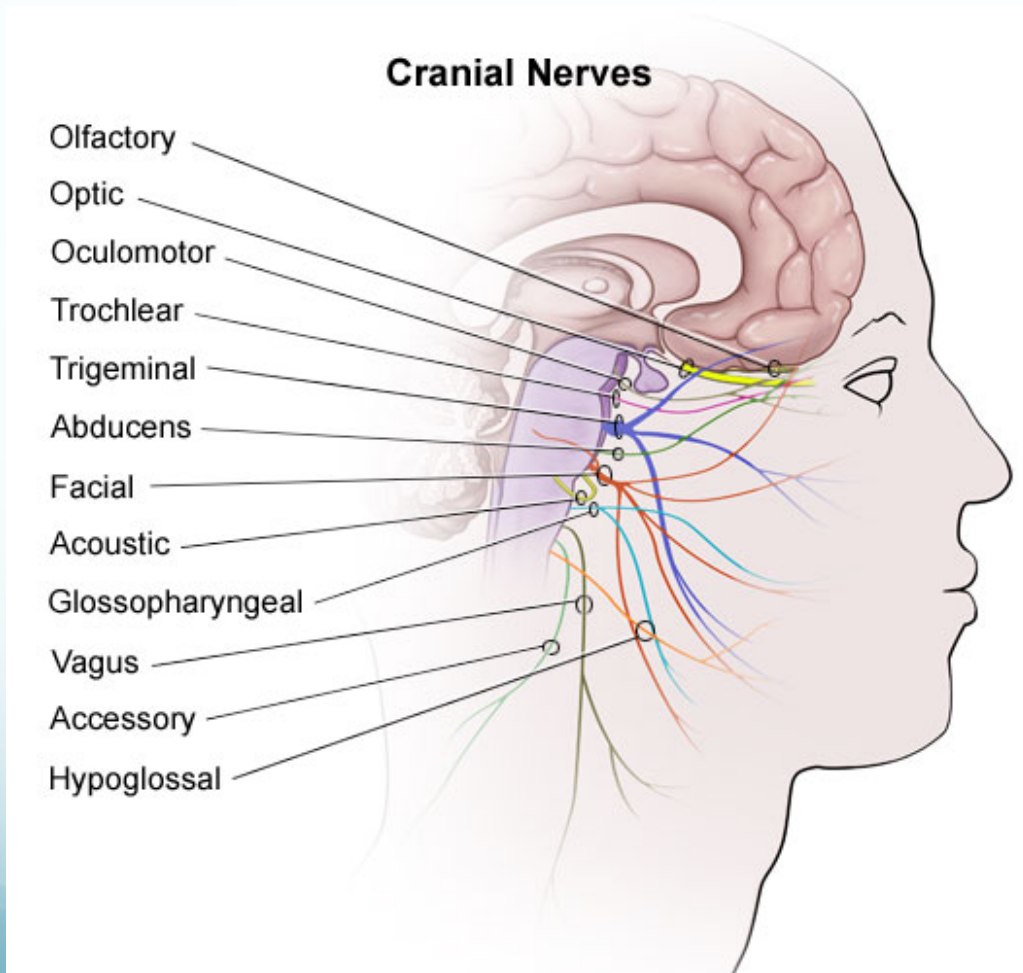
Cerebral Subcortex

Cerebellum

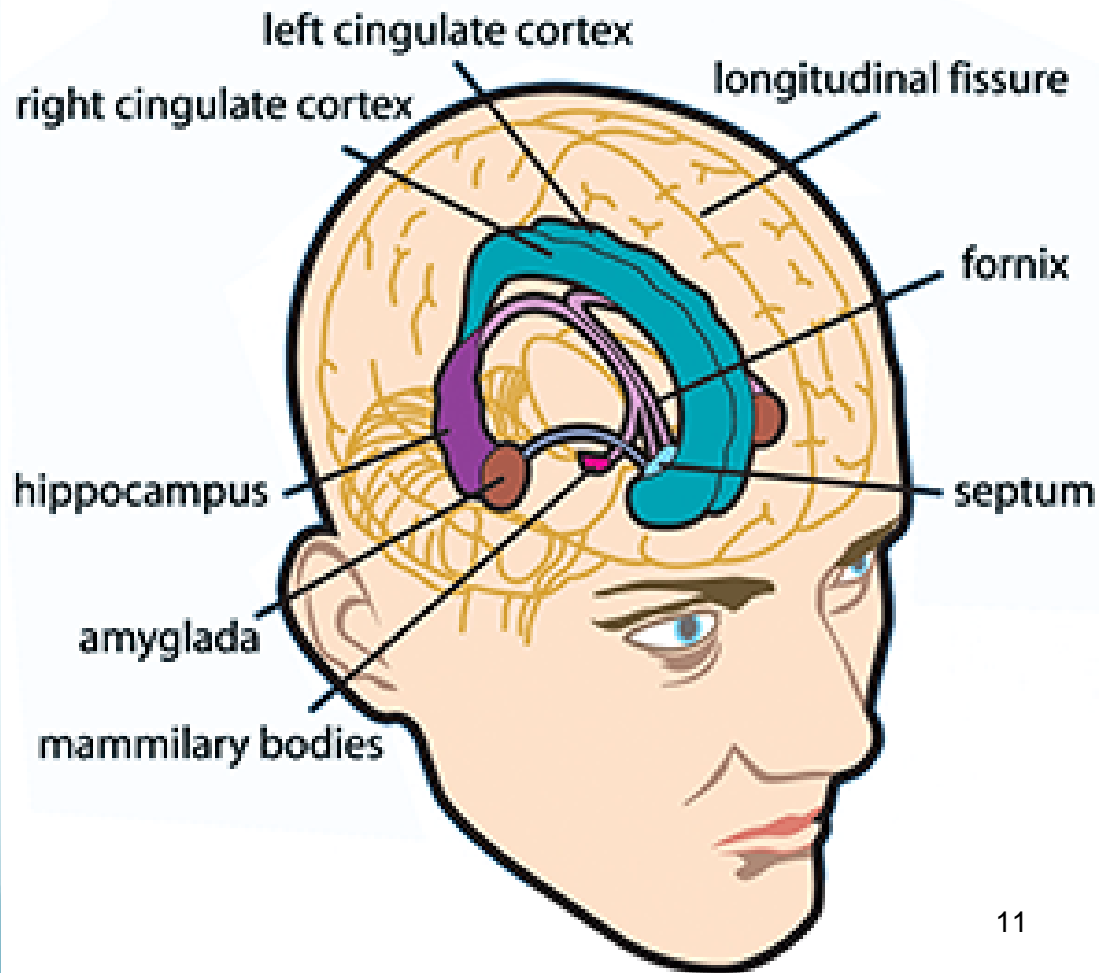
Brainstem



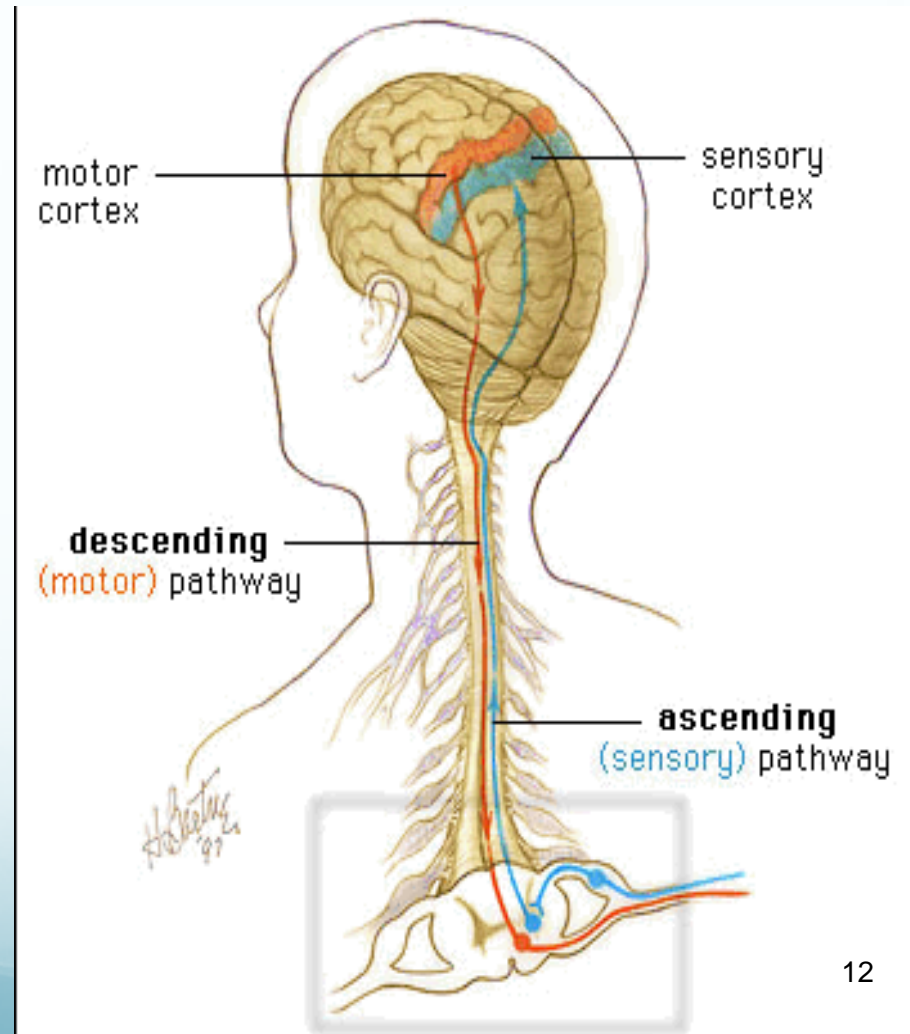
The Brain 201: Cranial Nerves



The Brain Structures: Limbic



Ascending and descending Pathways



Neurological Screening Review

Reflexes:

- ◆ C5- Bicep
- ◆ C6- Brachioradialis
- ◆ C7- Triceps

Sensation:

- ◆ C5- Lateral arm (deltoid)
- ◆ C6- Lateral forearm, thumb
- ◆ C7- Middle finger
- ◆ C8- Medial forearm, little finger
- ◆ T1- Medial Arm
- ◆ T2- Axilla

Motor/Muscle Strength:

- ◆ C5- Shoulder Abduction
- ◆ C6- Wrist extension
- ◆ C7- Wrist flexion/ Finger Ext.
- ◆ C8- Finger Flexion
- ◆ T1- Finger Abduction, Adduction

Reflexes:

- ◆ L4-Patellar
- ◆ S1-Achilles Tendon
- ◆ Babinski

Sensation

- ◆ L1 L2 L3 Upper Mid Lower thigh
- ◆ L4-Medial leg & foot
- ◆ L5-Lateral leg/ dorsum of foot
- ◆ S1-Lateral side of foot
- ◆ S2-Longitudinal strip post. Thigh

Motor/ Muscle Strength:

- ◆ T12 L1 L2 L3 - Iliopsoas
- ◆ L2 L3 L4 - Quadriceps
- ◆ L4-Tibialis Anterior
- ◆ L5-Toe Extensors
- ◆ L5- Gluteus Medius
- ◆ S1- Peronei
- ◆ S1- Gastrocnemius/ Soleus



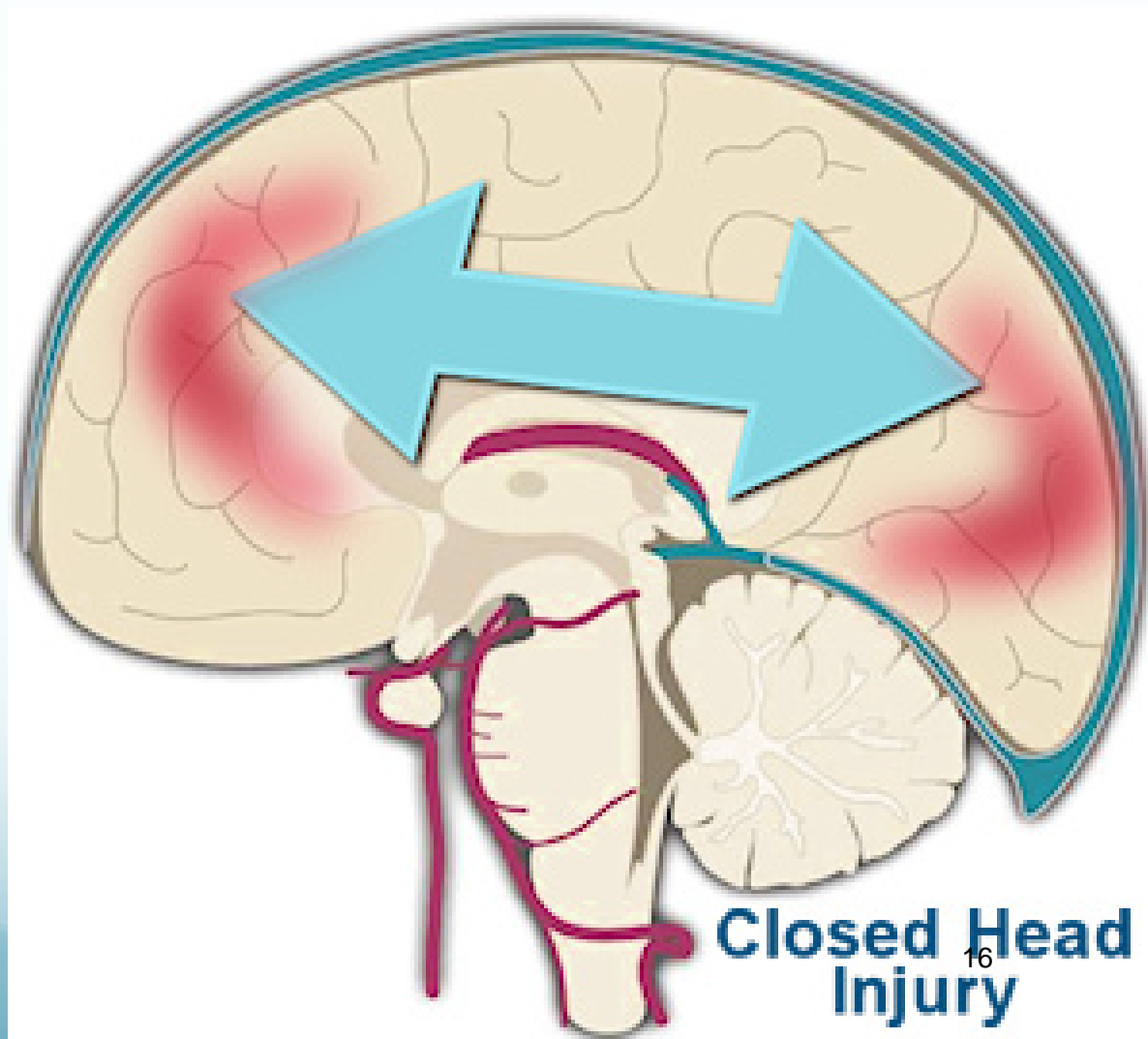
The Molecules of our Behavior

- Hormones and Endocrine Function
 - Chemistry delayed and at a distance
- Neuropeptides
 - Cofactors, but can function alone
- Neurotransmitters
 - Rapid communication at a synapse
 - Synaptic plasticity

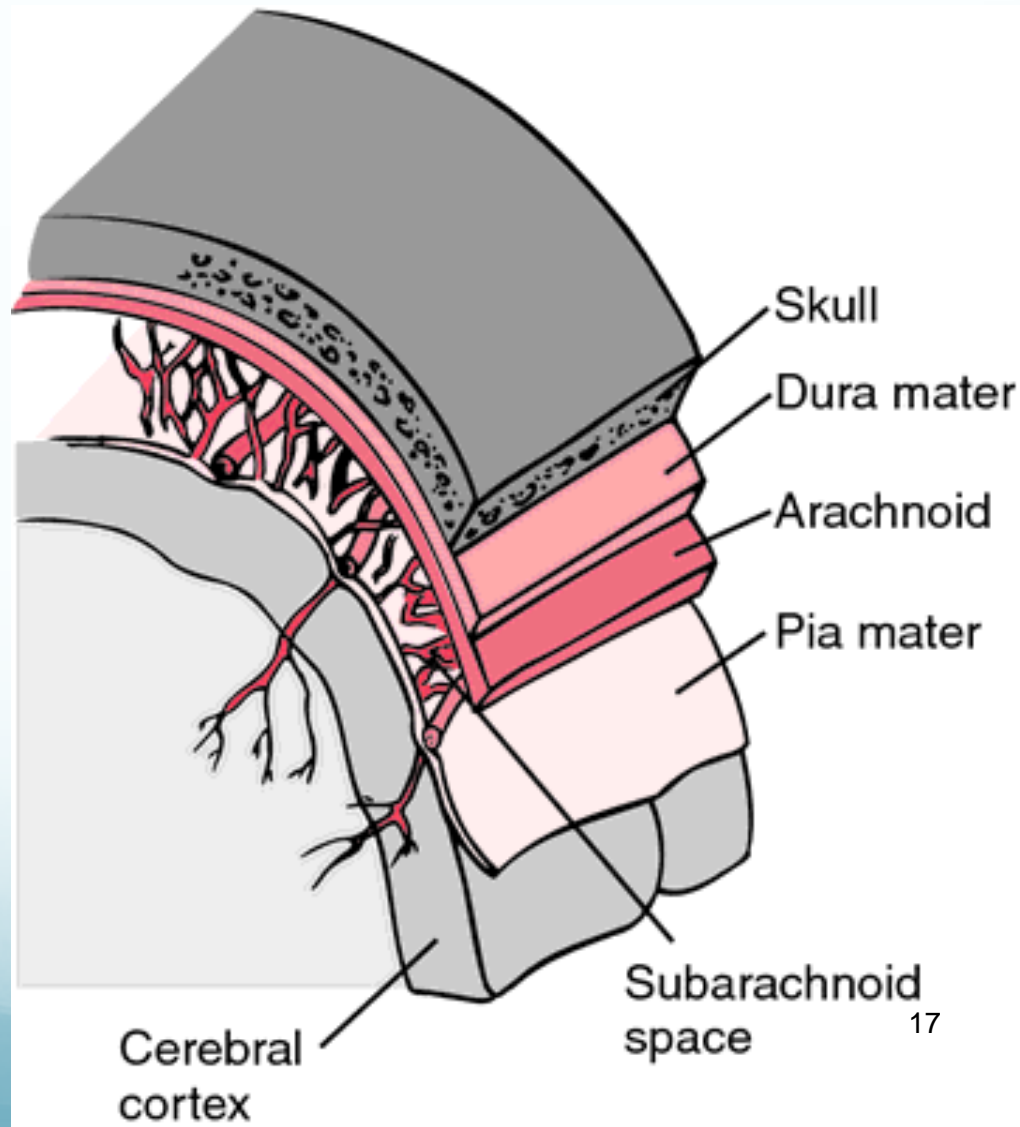
Neurotransmitters and Behavior

- Dopamine
 - Response initiation and reward (motivation)
- Norepinephrine
 - Vigilance
- Acetylcholine
 - Learning, memory, association
- GABA (and glycine, inhibitory AA)
 - Calming, stabilizing
- Serotonin
 - Mood, sleep, motor output, neuroendocrine secretion, nociception, analgesia, aggression, sexual behavior, anxiety, nutrition intake, thermoregulation, cardiovascular and respiratory activity.....

Concussion: When things go wrong...



How the Brain is Protected



The Brain and Head Injuries

- Classification:
 - Determined by the injury, what kind of trauma and which tissues
- TBI
 - Concussion
 - Scalp lacerations
 - Fractures to the skull
 - Penetration
 - Contusions or Hemorrhage

Concussion Symptoms

Primary complaints:

- Physical
 - Headaches
 - Vertigo
 - Vision Changes
 - Fatigue
 - Nausea and Vomiting
- Cognitive
 - Poor concentration
 - Slowed thinking
 - Memory

Concussion Symptoms

Primary complaints:

Emotional / mood

- Easily upset or angered
- Sad
- Nervous or anxious
- More emotional

Sleep

- Sleeping more than usual
- Sleeping less than usual
- Having a hard time falling asleep

The Extent of the Problem

- Depression is a leading cause of disability
- Anxiety 40 million affected
- Loss of focus, attention, concentration
- Memory issues
- Loss of vitality
- Loss of stress resilience
- Sleep disturbance

Different Types of Concussions

- Concussions are graded as mild (grade 1), moderate (grade 2), or severe (grade 3), depending on such factors as loss of consciousness, amnesia, and loss of equilibrium.
- Grade 1 concussion:
 - Symptoms last for less than 15 minutes.
 - There is no loss of consciousness.
- Grade 2 concussion:
 - There is no loss of consciousness
 - Symptoms last longer than 15 minutes.
- Grade 3 concussion:
 - Loss consciousness, sometimes just for a few seconds.

GET THE HISTORY

- Start at conception, pregnancy and birth
- Probe: People forget (this is a good sign)
- Just about everyone has been concussed
 - How many times, when and where
- Use the ACE questionnaire (Adverse Childhood Events)
- Health status
- WHO is the person with the TBI?

Traumatic Brain Injury

- TBI Symptoms vary from Mild, Moderate, Severe
- Concussion is a form of mild TBI
- The symptoms include those typically seen with concussion
 - Headaches, dizziness, vision disturbances, fatigue, lethargy, trouble with memory, concentration, attention, thinking, sleeping disturbances, behavioral and mood changes
 - The symptoms are affected by the persons pre concussion status (Healthy and well vs. stressed and unwell)

Glasgow Coma Scale

- Is used to communicate the severity of the TBI
- 15 point Scale with a score range from 3-15

Glasgow Coma Scale		
BEHAVIOR	RESPONSE	SCORE
Eye opening response	Spontaneously	4
	To speech	3
	To pain	2
	No response	1
Best verbal response	Oriented to time, place, and person	5
	Confused	4
	Inappropriate words	3
	Incomprehensible sounds	2
	No response	1
Best motor response	Obeys commands	6
	Moves to localized pain	5
	Flexion withdrawal from pain	4
	Abnormal flexion (decorticate)	3
	Abnormal extension (decerebrate)	2
	No response	1
Total score:	<i>Best response</i>	15
	<i>Comatose client</i>	8 or less
	<i>Totally unresponsive</i>	3

What the Score Determines

- Mild TBI (13-15) Think Mild Concussion
- Moderate (9-12) Concussion with LOC
 - Loss of Consciousness for greater than 30 min
 - Clear physical or cognitive impairment
 - Likely to benefit for rehabilitation
- Severe (3-8) Unconscious
 - Coma, unconscious state
 - No meaningful response
 - No voluntary activities
- Vegetative State (Less than 3)

Traumatic Brain Injury Complications

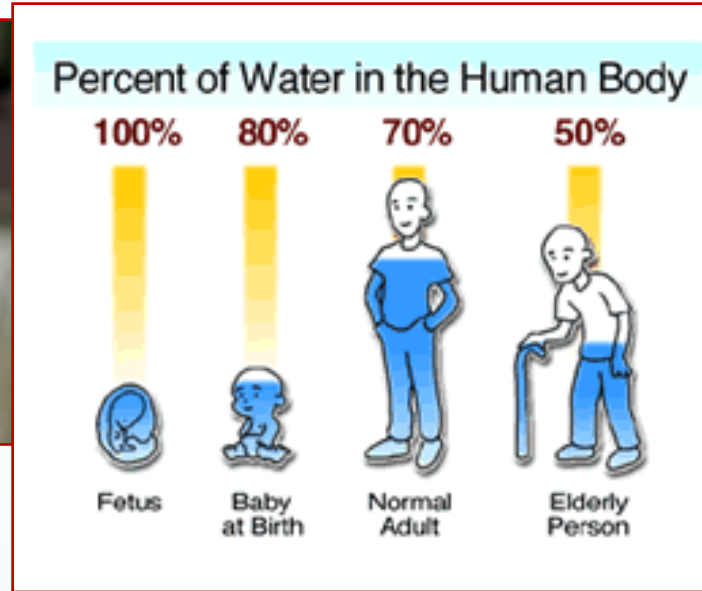
- General health, age, severity and location of the injury determine long term dysfunction of the individual
- Depending on the location of the injury and the Axons injured or disrupted different problems may be more disabling
 - Cognition (forebrain)
 - Sensory processing (think cranial nerves)
 - Communication (Temporal)
 - Behavior/mental health (Limbic system/neurotransmitter)

Where Microcurrent Therapies Excel...



To Be or Not To Be...
Concussed

You & Your Patients



Need to Hydrate for
Microcurrent Tx

Concussion Protocol (SCP)

- **Patients seem to respond and recover more quickly if the SCP is used in conjunction with any type of injury:**
 - Always used when treating closed head injuries (mild to significant traumatic brain injury (MTBI - TBI))
 - **Any trauma** (physical, emotional, psychological, spiritual)
 - SCP is also a very safe way to assess response to this microcurrent therapy
 - Often you and the patient will notice a change in one to three appointments using just the SCP

We run the SCP on everyone at least once

Van Gelder's Concussion Model

- Trauma causes “concussion” in the medulla specifically and in the nervous system.
 - The medulla (*in the brain stem*) coordinates all traffic to and from the brain and *assists in producing / modifying autonomic functions*
 - It regulates the autonomic nervous system through the *cranial and peripheral* nerves
 - It regulates hormonal function by its connection to the pituitary
 - The medulla is especially important in the regulation of allergy reactions according to Van Gelder
- The VAGUS nerve (*is Cranial Nerve X*) and begins in the medulla and innervates *many of the viscera*
- Concussion can be from physical trauma to the brain stem or from overwhelming input from the VAGUS to the medulla by emotional, toxic or immune modulated trauma (*signals*)
- Carol McMakin & George Douglas *as modified by Dr. Willner (the neurologist)*

⋮
“TISSUES” – Channel 2
Standard Concussion Protocol Frequencies

- **Medulla: __/ 94**
- **Anterior Pituitary: __/ 310**
- **Solar Plexus: ___/ 200**
- **Pineal Gland: __/ 102**
- **For those that understand the concepts of Chakra’s and energetic anatomy – Solar Plexus and Pineal Gland are “energy centers”**

“The Concussion Protocol” Primary Frequencies

- 94 / 94: “Concussion” in the Medulla
- 321 / 94: Remove Paralysis & “Re-boot” the medulla
- 9 / 94: Allergy reaction in the medulla
- 49 / 94: Vitality in the medulla
- 94 / 310: Concussion / Anterior Pituitary
- 321 / 310: “Paralysis”/ Anterior Pituitary
- 9 / 310: Allergy Reaction / Anterior Pituitary
- 81 / 310: Support secretions / Pituitary
- 49 / 310: Restore vitality / Pituitary

Included in the MEND Pro and Wellness Essentials PreLoad

“The Concussion Protocol”

Other Frequencies

94 / 200: Nervous Tension

970 / 200 Emotional Tension

- 94, 970 / 200 Nerve Trauma and Emotions in the Solar Plexus
- CTF data showed that serotonin levels increased with the SCP after these frequencies

A/B Pairs

6.8 / 38: Constitutional factors

- Homeopathic concept of genetic factors
 - In line with our current understanding of Epigenetics
- When “constitutional factors” are active you can use these safely. If you are unfamiliar with homeopathy these are still safe to use.
- Use for 1 - 2 minutes depending on symptom severity.
- Added at the end of the SCP frequencies

Concussion Protocol

Final Frequencies

Abram's A/B Frequencies for Vitality

- **49 / 00: Vitality (49) ; General body tissue (00)**
- **35 / 102: Balance the Energy Centers**
- Refers to the energetic “body” once balanced and energetics are connected healing seems to be enhanced. (Peter Fraser)
- Run for 1 minute each

Van Gelder's Concussion Protocol

- 94 / 200 *I have nervous tension and I can't relax*
- 970 / 200 *I'm more emotional and sensitive*
- 94, 321, 9, 49 / 94 *Since my Concussion to my Medulla*
- 94, 321, 9, 81, 49 / 310 *which then effected my hormones*
- 6.8 / 38 *and weird family "genetic" stuff has surfaced*
- 49 / 37 or 49 / 39 or 49 / 00 *I feel like I've lost my vitality*
- 35 / 102 *and I'm just not in my body, I don't feel centered*

The Nervous System Reset program

Shock / Trauma

- 94 / 94 20 min Trauma/ Medulla
 - 321 / 94 5 min Reboot/Medulla
 - 970, 971 / 1 4 min Emotions, Spirit / Being
-
- This short, simple protocol has worked extremely well to help people “snap out of it” when traumatized for any reason.
 - **USE CAUTION** with Central Vestibular issues

About 94/94 & Concussion



BRAIN TISSUES

/Channel 2

/Target Tissue Frequencies

Channel 2: Frequencies for the Brain

- / 90 Forebrain
- / 94 Medulla
- / 89 Midbrain
- / 84 Hindbrain or Cerebellum
- / 92* Sensory Cortex / 255, 415* Motor Cortex
- / 310 Anterior Pituitary
- / 292 Posterior Pituitary
- / 102 Pineal gland
- / 1 Brain, Cranium
- / 45 Nervous System

The Cerebellum - / 84

Myofascial Pain & Dysfunction

The Cerebellum coordinates movement, creating sensory and motor integration; Impacting emotional/physical well-being and security.

- Treat concussion in the cerebellum: 94 / 84
 - Whenever there is a history of head trauma or documented head injury
 - For any prolonged motor dysfunction due to orthopedic injury, casts, splints, or nerve trauma
 - When a patient is emotionally “different” after an injury or out of sorts post treatment, add the midbrain: / 89

Example:

- 94, 321, 9, 40, 284, 81, 49 / 84, 89, 90



Cerebellum, Hindbrain /84

- This is a dual frequency for the hindbrain and the diaphragm
- Consider with proprioception, vision and hearing issues
 - EDS/Loose ligament syndrome
 - Lazy eyes



The Midbrain /89

- Consider /89 when a patient has had damage to the thalamus (pain processing center)
 - Stroke or Severe Head Trauma
 - Chronic Neurologic Pain
 - CRPS/RSD



The Forebrain /90

- Consider in concussion when the impact is the back of the head
- Consider in sympathetic up-regulation
- Consider when the flexors of the body are contracted
- Consider with forward head carry
- Consider with complaints of brain fog, poor attention and focus

The Issues of the Brain

Channel 1/
Condition Frequencies/

Channel 1: Frequencies for Conditions

- 970 / ___ Emotional factors
- 94 / ___ Nerve trauma, “Concussion”
- 124 / ___ Torn or Broken
- 321 / ___ Paralysis or “re-boot” (MS)
- 9 / ___ Allergy Reaction
- 49 / ___ Vitality

970, 94, 124, 321, 9, 49 / Brain Tissue Frequencies

- **These are the essential “Go To” frequencies**



Other Useful Frequencies

18 / ___ Stop Bleeding

- In the event you have a device at the time of an injury
- Useful after any injury
- Use in the first 24 hours OR longer if someone is on anti-coagulant therapy



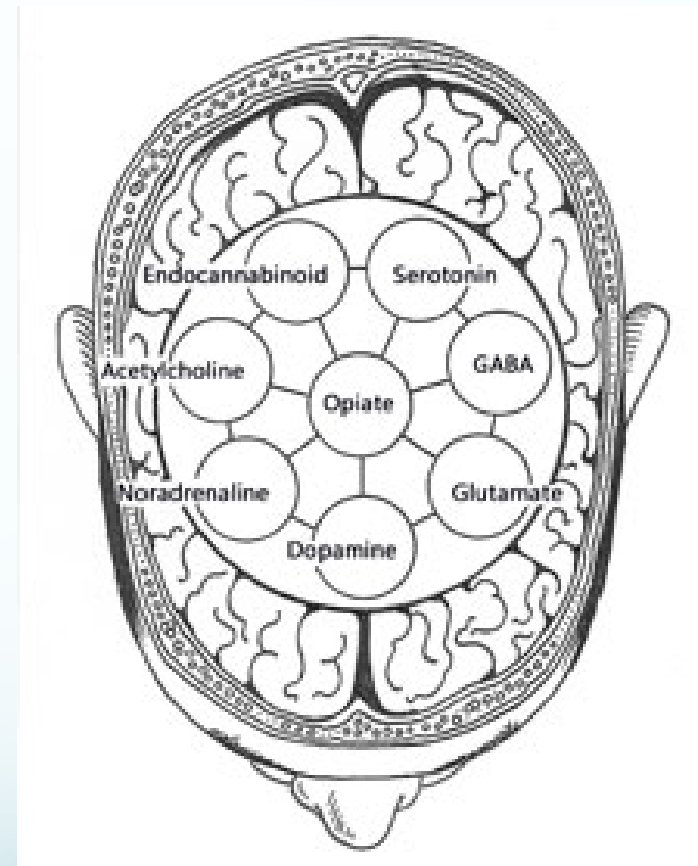
Other Useful Frequencies

19 / ___ Removing anesthetic

- May remove the lingering effects of anesthetic from tissue
- Useful after surgery
- Has reportedly been effective years after a surgery

Secretions 81 / in the brain

- Remember 81 Hz supports or increases secretions
- **Caution!**
 - Know your Secretions if you use this other than in SCP
 - Neurotransmitters
 - Neuromodulators
 - Hormones
 - Co-factors
- IF in doubt.. Don't use this – Please – take the advanced module on this topic – very useful information!



Finish with Vitality 49 / ____

Thus a Basic Brain Protocol could look like

- 40,94,321,9,970,124,40,284, 91, 81,49 / 90 Forebrain
- 40,94,321,9,970,124,40,284, 91, 81,49 / 94 Medulla
- 40,94,321,9,970,124, 40,284,91, 81,49 / 84 Hindbrain

With the new MEND Device the essentials have 40/ first because you can evaluate the frequency for response very quickly

The Frequency Essentials

- Clinical practice has taught us that these seem to be the essential frequencies of any basic program
- A sentence has certain required elements to be a sentence
- The Essentials for the CNS are:

94, 321, 9, 970, 124, 40, 284/ Target tissue

Address Trauma, Reboot, Decrease Inflammation

The Sensitive Patient

Cell phones...

WiFi...

And the Grid

Who's Electrically Sensitive?

- We all are... or you are not alive
- Degrees of sensitivity
- Specialized cells for electromagnetism
- Communication within the CNS can be disrupted
 - Sleep can be effected by cell phones
 - Fatigue from sitting in front of computers
 - Hormone problems
 - Tinnitus
 - Headaches / Pain
 - Chronic Fatigue

Electromagnetic Hypersensitivity (EHS)

is the medical term for a set of health symptoms whose cause is electrically based. It is also called **Electrical Sensitivity** (ES), EMF injured, Microwave or Radiation Sickness, and other names.

More Information

EMFSafetyNetwork.org

Practical Steps

- Reduce Exposure
- Use wired earbuds if you talk on the phone a lot
- Unplug electrical appliances when not in use
- Turn off your WiFi at night
- GO OUTSIDE and ground away from signals and towers
- Nutrition and Exercise
- Meditate/ Mindfulness

Training, Courses, & Devices

www.Frequenciesthatmend.com

www.MENDTechnology.com

Register & Sign up for more information and to be notified
of upcoming live courses and educational webinars

My Contact information:

Shannon Goossen, AP, LMT, CMTPT

Jacksonville FL

904-296-1500

Shannon@myofascial.net