Chiropractic Physician:
Emphasis in neurology, sports medicine and muscle rehabilitation

Practice locations:
NeuroBalance Center - Barrington Il
Physical Medicine Associates - Naperville Il

Alternative Approaches to Modulate Pain

- Manipulation/Mobilization
- Deep tissue release
- Modalities: acupuncture/Infra-red light therapy
- Brian based therapy: nutrition and rehab for the brain
- Systemic inflammation: food sensitivities/leaky gut (Alternative blood work- Cyrex labs)
- Alternative causes: autoimmune conditions, mycotoxin

Review of Pain Pathway

1. Site of injury occurs

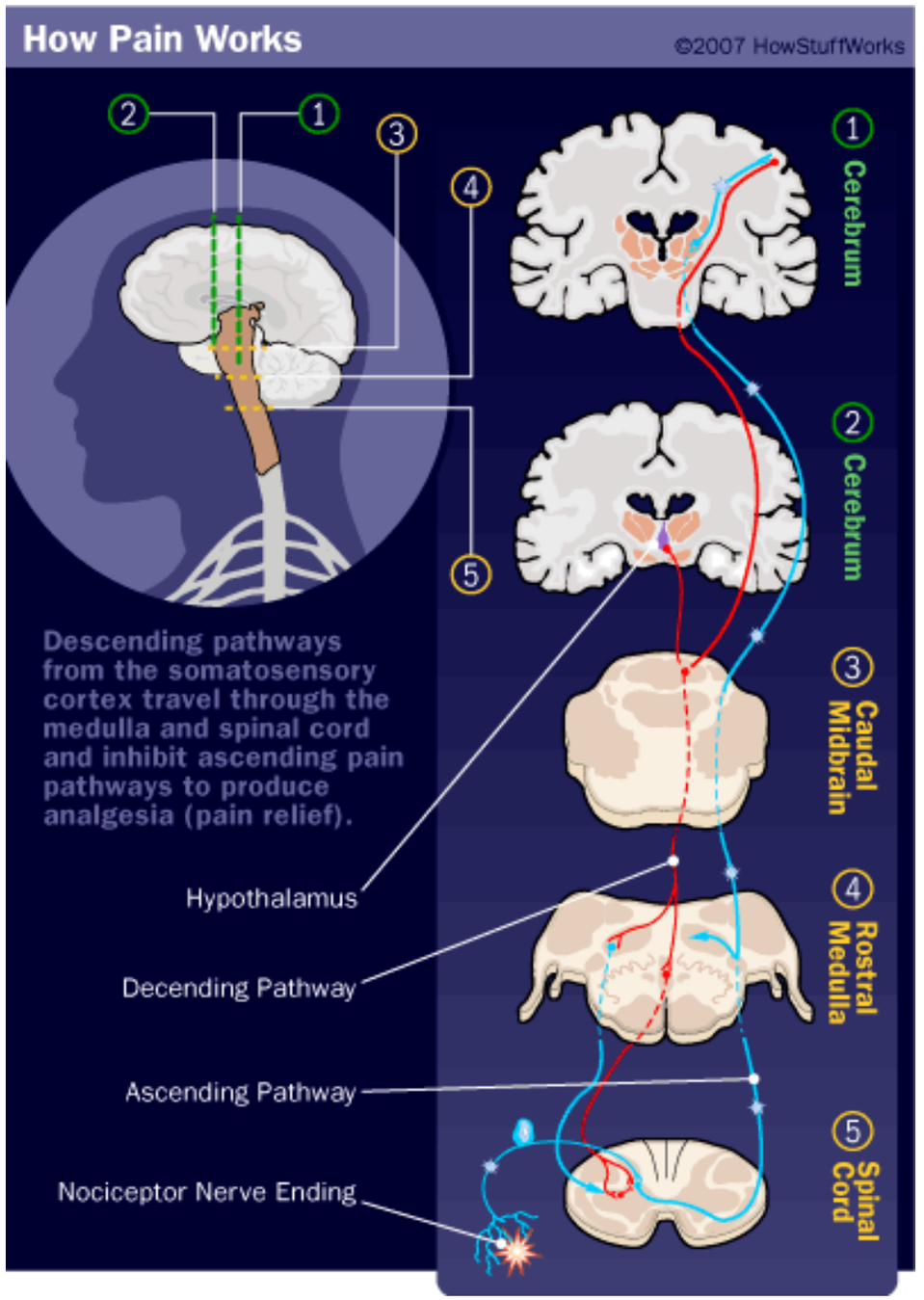
2. Afferent pathway to the DRG at the spinal cord traveling up the spinothalamic tract

3. Brainstem-mid pons reticular formation

4. Cerebrum-thalamus, limbic system and somatosensoty cortex

Controlling Pain with Inhibition Descending Pathway

It has been found that manipulation/mobilization sensory alters the signaling properties of mechanically or sensory neurons in the mm. surrounding the joints. These changes in sensory input are thought to modify neural integration either by directly affecting reflex activity or by affecting central integration within motor, nociceptive and possible autonomic neuronal pools.



Manipulation/Mobilization

- What occurs with manipulation/mobilization: locally the joint is gapped and air that is within the joint is released making a noise. A message is sent up to the brain from the mechanoreceptor being stimulated and relaxation of the mm. occurs post adjustment. This provides both pain modulation and improvement in motion surrounding the joint.

- When to refer out for joint/muscle pain: decreased ROM, inactivity which would indicate less mobility in the joints leading us to believe there may be a mechanical pain mechanism that is attributing to the patient’s pain.

- Why adjusting helps with pain: impacts small diameter afferents at the level of the cord and large diameter afferents from the joint and muscle spindles

Manipulation/Mobilization

- Low Back pain case study
- Male 28 yoa presents with chronic back pain 4 year duration. Patient had MRI, xray and a bone scan ordered from PCP, all imaging was negative.
- Patient was recommended to follow up in 3 months if pain continued. Patient did not go back to PCP for follow up.
- Evaluation of patient revealed hypertonic mm. surrounding the pelvis and SIJ dysfunction attributing to his LBP. Manipulation of the SIJ and core stabilization surrounding the pelvis resolved the chronic pain.

- Case study: Male 64 yoa presents with right hand pain/atrophy and decreased ROM, fatigue, LE complaints. Patient has history of surgery bil hands.

Is the patient's pain central or distal?

- Treated for suspect Rheumatoid Arthritis that was associated with hand and wrist pain. All testing was negative for RA. Patient was on heavy pain medications to modulate current hand pain and other regions of his body. Patient's care was managed by several hospitals in the city prior to his referral from his PCP for therapy on his wrist and hand to my office.

- Concern or c/s involvement plan to carry out imaging on hand diagnostic US and c/s imaging.

- Follow up visits with patient led to more discussion of lifestyle past history traveling etc...Suspected lyme disease

- Confirmed lyme disease and referred patient out to lyme specialist. After treatment patient no longer needed pain medications because nervous system was healing.

Treating the Cause of Referred Pain

- Female 52 yoa with chronic right proximal hip pain long history of chiropractic, physical therapy, massage therapy, acupuncture treatment for hip pain. Minimal changes with previous treatment. Previous MRI negative right hip.

- Examination revealed classic ITB syndrome and gluteal mm. weakness surrounding her right hip. Treatment plan established to treat ITB syndrome with fascial release assisted with a tool and strengthen her weak hip mm.

- 2-3 weeks of treatment changes are minimal, thus change treatment plan and MRI carried out on l/s which was negative for referred pain.

- Discussion of alternative testing including food sensitivities was carried out - 90 days from diet change hip pain resolved and has since been gone for 5 years.

Deep tissue release

- Scar tissue influence on biomechanics: There is a huge significance to addressing old traumas/surgeries which cause changes in ROM.

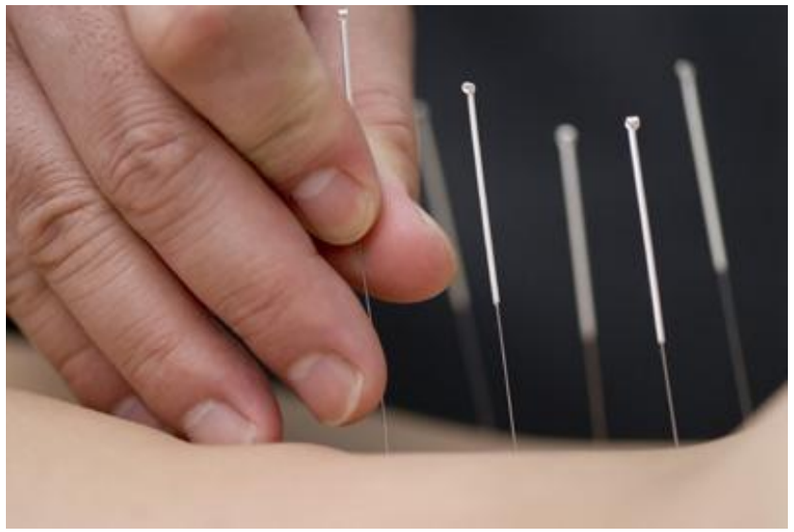
- Case study: Female 39 yoa presents with pain and decreased ROM R>L hip post surgical b/l hip replacement. Patient had PT post surgery with regression after one year. Evaluation revealed moderate adhesions around the hips post surgical region and decreased ROM.

- Treatment to remove scar tissue and restore length of mm. combined with PT exercises has resolved her pain. Patient has been pain free for 3 years.

Infra-red light therapy/Acupuncture therapy

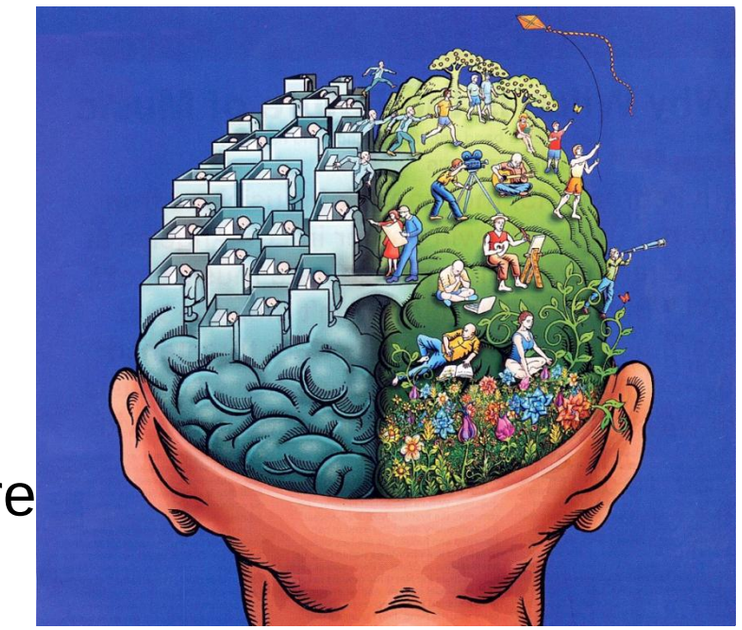
- Therapies that help modulate pain from clinical experience

- Acupuncture: Increases circulation locally and affects the cortical pain center to affect the inhibition pathway much like manipulation. Works along pathway meridians to affect chi (energy. It is carried out to prevent stagnant chi which causes pain.



- Infar-red light therapy - increases circulation locally, interacts with hemoglobin to release NO to modulate pain much like morphine. Has anti-bacterial, anti-viral properties as well as at a cellular level has been found to increase osteoblastic cells improving b. trauma. Originally designed to heal diabetic wounds.

Brain based therapy



- What is it?
  It is a way to affect neuro-plasticity and pathways to re educate changes

- What types of conditions can be treated with it? All no limitations: athlete to chronically ill

- Case study: 37 yof presents with movement disorder c/s 10 year history with chronic pain left c/s-t/s. Evaluation reveals cerebellum and cortical functional regulation. Months of brain therapy patient is functioning walking, biking, skiing without having to do stimulation to face while walking and brain sensory tricks to carry out ADL's. Patient is approx. at 85-90 percent improvement with friends and family barley recognizing movement disorder. Pain levels are minimal to none with conservative treatment.

Gastrointestinal tracts as a site for immune activation

- Food sensitivity/delayed reactivity - What are the differences in testing for food allergies/sensitivities. What are some symptoms that may be associated with food sensitivities.

- Most common symptoms: Neurological symptoms, skin, ENT, digestive symptoms, fatigue, brain fog, m. pain, hormonal changes, mood fluctuation etc..

- What types of tests effective for determining cause- Cyrex (gluten/leaky gut), LRA by ELISA/ACT

- Where can testing be done - physician has to have an account with speciality lab for testing to be carried out.

- Next steps for long term goals - dietary changes

- Case studies - 24 yof presented with chronic digestive pain 2 years and has had upper GI, lower GI, elimination diet and struggling to eat anything without symptoms. Testing carried out for food sensitivities modified diet 95%-100% improvement 3-4 months.

Metabolic assessment

- Determining multi-systems that are involved will help other systems repair the domino affect
- Reviewing blood work and history and carrying out wider spectrum testing (ex: thyroid), glucose mapping - glucometer evaluating blood sugar post carb load to evaluate response.
- Natural support to correct functional issues leading to pain pathways - Apex energetics is a leader in functional nutritional products.

Treating the motor of the body

- Encourage healthy lifestyle- vegetables, fruits low in sugar, clean meat/fish
- Omega 3 for brain health, DHA, Vitamin D
- Avoid: grains, sugar and dairy all cause neuro-inflammation
- Exercise - increases oxygen to the brain and tissues in the body. Water therapy if impact is to much
- Stimulation - brain games, hobbies that changes, trying to use non dominant hands, changing driving routes etc....

Treatment methods/Inhibition of the IML to modulate pain

- fast stretch
- eyelights
- Adjusting
- Chair spins

- Thank you for your attention
- Please feel free to email with questions
  drsteinfeldt@gmail.com