How Hemp Helps Heal the Endocannabinoid System & the Benefits for CRPS/RSD
Objectives:

1. Introduction to Heather Caudle
2. Intro to Christy Thiel and 101 on Stress, trauma and pain
3. What is the Endocannabinoid System
4. How Hemp Helps with:
   - pain
   - sleep
5. How to supplement with hemp and find a good product
✓ CRPS Warrior

✓ Personal story with pain, healing and hemp

✓ S2S’s National Sales Director
Stress can be defined as: thoughts, traumas, and toxins.

**Thoughts**: become things, growth or decline.

**Traumas**: unresolved leads to suppressed stress, dysfunction of the physiology and PTSD.

**Toxins**: your body’s immune and nervous system is taxed; repair, growth, protection and cellular regeneration is compromised.

The body can not absorb nutrients, repair or regenerate/sleep.

Dr. Bruce Lipton BIOLOGY OF BELIEF
“The majority of experts agree that many IF NOT ALL chronic medical conditions carry an element of stress in their development, and stress is actually considered to be at the epidemic of the 21st century.” Tanja Bagar PhD in Biomedicine

CRPS/RSD

- Brain based condition
- Triggered by trauma
- Cytokine storm or destructive inflammation = chronic pain and very sensitized nerve endings
- Treatment is most effective when started early. In such cases, improvement and even remission are possible.

The endocannabinoid system, with its complex actions in our immune system, nervous system, and all of the body’s organs, is literally a bridge between body and mind. [1]

The Endocannabinoid System is our ‘root system’ it signals, co-regulates and co-facilitates every system, tissue, organ and gland in the body.
Why a Healthy Endocannabinoid System (ECS) Important?

✓ The ECS is the Body’s Harm Reduction Center

✓ It is our SOS mechanism that is activated whenever our bodies are out of balance for whatever reason

✓ The ECS starts at the cellular level, proceeding to the tissues, organs, body and sustains our general well-being

https://thegoodinside.com/the-endocannabinoid-system-explained/
How does the ECS help with Pain?

- The ECS is the largest signaling system in our bodies - we have receptors throughout the ANS and immune system.
- It signals our bodies chemical messengers to respond to inflammation that contributes to pain.
- It brings resilience to the fight and flight response or nervous system.
- It makes it own endo-cannabinoids that signal neurons to balance out, quite down or reduce inflammation.
When the ECS Burns Out It Needs Hemp to Help

Plant Cannabinoids like Cannabidiol or CBD are well researched for their anti-inflammatory compounds and analgesic properties.
How CBD Interacts with Receptors?

**Indirect Interaction**
- THC
- Side effects of THC, e.g., anxiety

**Direct Interaction**
- CBD
- Cannabinoid
  - Side effects of THC, e.g., anxiety
- Opioid
  - Pain
  - Addiction
- Dopamine
  - Addiction
  - Depression
- Serotonin
  - Addiction
  - Anxiety
  - Depression

Leafy.com
The ABC’s of Sleep and How CBD Helps

A. Indicator of our well-being

B. Sleep plays a housekeeping role that removes toxins in the brain that build up while you are awake

C. Sleep is an active process and delivers positive effects to our cognition, memory, immunity, blood pressure, blood sugar and more

References: ROAD TO ANANDA By Carl Germano
Lack of sleep causes dysregulation within all system and contributes to accelerated aging, a sign of increased inflammation.

Hormones like HGH, testosterone, melatonin and cortisol are made and/or repaired while sleeping.

Muscular repair depends on deep sleep.
The Endocannabinoids System & Sleep

- Too little or low-quality sleep can comprise health, healing, metabolism and prevention
- Quality and quantity of sleep can contribute to a healthy ECS
- Sleep is a communication ‘signal’ that your ECS uses as a biological harm reduction system when it’s challenged by stress, infection, injury, or lifestyle
CBD – animal studies show higher doses of CBD ↑ REM sleep

CBD - blocks anxiety induced disruption of REM sleep

CBD – Human studies of patients with insomnia saw ↑ in total sleep time and ↓ distributions during the night

References: ROAD TO ANANDA By Carl Germano
Pain is a signal that your body has excessive inflammation, nervous system dysregulation and that your ECS needs support and supplementation.

**Why People Take Hemp CBD**

- Chronic Pain
- Arthritis/Joint Pain
- Anxiety
- Insomnia or Other Sleep Disorder
- Depression
- PTSD
- Migraine, Cluster, Tension Headaches
- Nausea
- Allergies or Asthma
- Cancer
- Epilepsy or Other Seizure Disorder
- Multiple Sclerosis
- COPD/Other Lung Condition
- Alzheimer’s Disease
- Parkinson’s Disease
- Other

**FIG. 3.**

Number of medical conditions for which respondents report CBD treating “Very Well by Itself” or “Moderately Well by Itself,” by medical condition (n=2557).
FAQ’s

1) From first time users to experienced what is the recommended serving size?
   A) How do I titrate up or down?
2) Will I pass a THC drug test?
3) Are there prescription drug interactions?

First Check is cleared by the FDA and was voted the #1 Pharmacist recommended brand according to 2010-2019 Pharmacy Times Annual Pharmacists Recommended OTC Survey.

Equate products are available across all Wal Mart stores nationwide. Their test also boasts 99% accurate and is cleared by the FDA.
## Narrow Therapeutic Index (NTI) Medications

<table>
<thead>
<tr>
<th>Medication</th>
<th>Enzyme/Metabolism</th>
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<tbody>
<tr>
<td>acenocoumarol (VKA)</td>
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<tr>
<td>alfentanil</td>
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<td>aminophylline</td>
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<td>Protein Binding (PB)</td>
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<td>busulfan</td>
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<td>carbamazepine</td>
<td>CYP1A2, CYP3A4, UGT2B7</td>
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Drug Interactions and CBD

✓ Cytochrome P450, a large family of non-specific enzymes that are involved in breaking down an estimated 60 to 80 percent of all pharmaceuticals.

✓ Cytochrome P450 enzymes may be inhibited or amplified by CBD, THC and other plant cannabinoids, thereby reducing or prolonging the activity of another drug.

✓ “It does not appear that there have been many problems because of cannabinoid-drug interactions.”

✓ To the extent that there have been problematic drug interactions with cannabinoids, these have involved high doses of nearly pure CBD isolates, not cannabis in general.

✓ Adrian Devitt-Lee graduated from Tufts University with a MS in Math and a BS in Chemistry in 2016

✓ https://www.projectcbd.org/how-to/cbd-drug-interactions  
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