The Healthy Perspective

With Steven Horne, DHS

1

Cannabis

- ***Cannabis sativa*** **var. *sativa* (hemp)**
  - **Higher in fiber**
  - **Lower in cannabinoids**
  - **Grown commercially for its fiber and seeds**
- ***Cannabis sativa*** **var. *indica* (marijuana, pot, weed, reefer, grass, dope, etc.)**
  - **Lower in fiber**
  - **Higher in cannabinoids**
  - **Grown for medicinal and recreational use**
- **Numerous hybrids or cultivars of these two varieties exist with varying degrees of cannabinoid content**

2

An Interesting and Controversial Plant

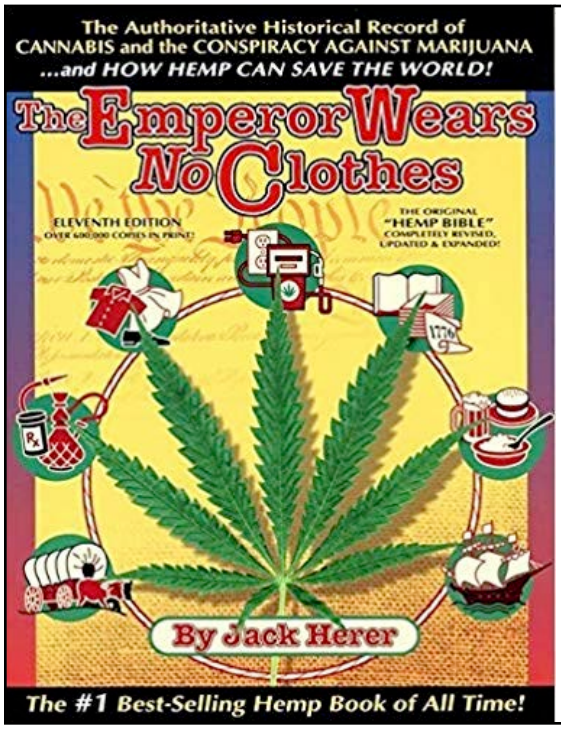
- Belongs to the family Cannabaceae, which only has 11 genera
- Hops is its closest relative
- Has both male and female plants, as well as plants with both male and female flowers
- Has been used since ancient times for fiber for paper, clothing, rope and sails
- Along with flax seed, it's the richest plant source of omega-3 EFAs
- The seeds (pictured right) are used a fiber laxative in TCM (like flax seed)

3

Hemp Fiber

- The word canvas probably derived from the Greek word, *kannabis*, which means two reeds or two sexes, referring to a cloth made from hemp fiber
- Until 1883, 75-90% of all paper was made from hemp fiber, including Bible's, maps, books, newspapers and even paper money
- he first draft of the *Declaration of Independence* was written on hemp paper and later transferred to parchment
- Early American clothing was often made from hemp and old cloth was gathered to be recycled as paper, hence the term rag paper
- A 1916 USDA Bulletin reported that one acre of hemp could produce as much paper as 4.1 acres of trees over a twenty-year period

4



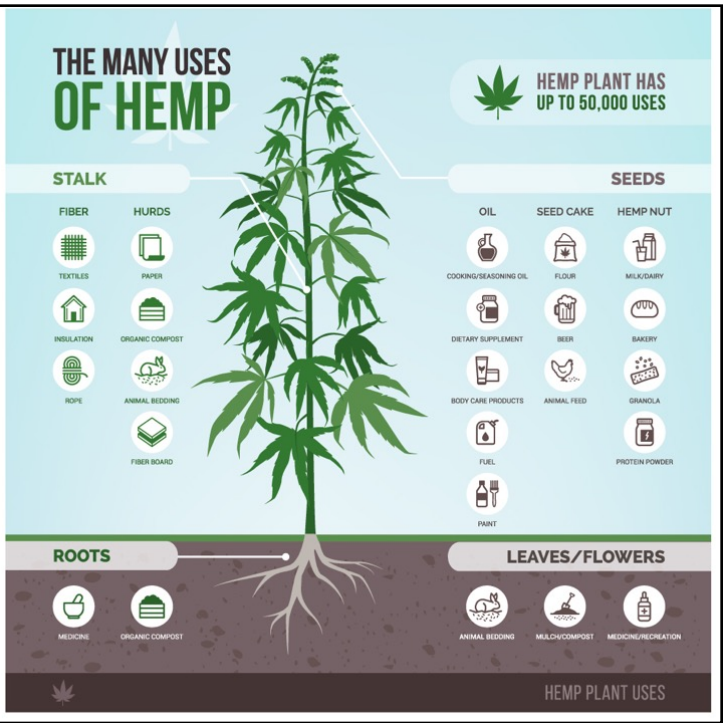
The Emperor Wears No Clothes

- Hemp was widely grown grown in the United States until the 1930s
- The newspaper man, William Randolf Hurst, was heavily invested in wood pulp paper and petroleum
- He saw hemp as a threat to his investments and began a smear campaign against it using an obscure Mexican term, marijuana
- He was able to get the plant outlawed in 1937, but it was brought back into cultivation for World War II

5

Hemp is Now Legal

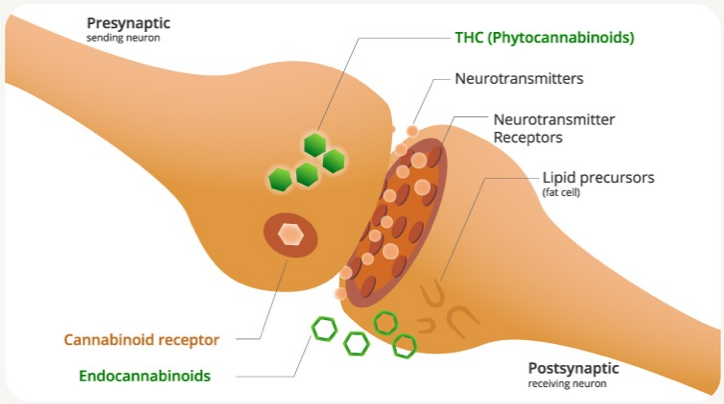
- In December of 2018, a new farm bill was passed and signed into law that permitted the cultivation of hemp in the United States under certain legal restrictions
- The biggest one is that the THC content has to be less than 0.3 percent
- This opens a new window for industrial use of this powerful plan

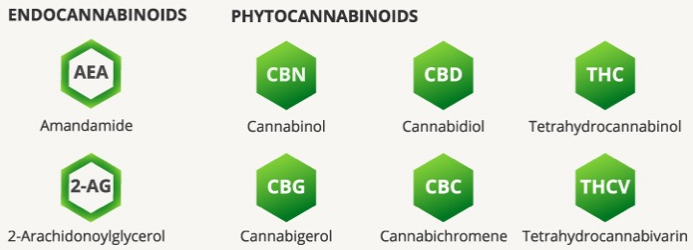


6

Cannabinoids

- Endocannabinoids (5 known)
  - Amandamide (AEA)
  - 2-Arachidonoglycerol (2-AG)
- Phytocannaboids (over 100 know)
  - Cannabinol (CBN)
  - Cannabidiol (CBD)
  - Tetrahydrocannabinol (THC)
  - Cannabigerol (CBG)
  - Cannabicromene (CBC)
  - Tetrahydrocannabivarin (THCV)

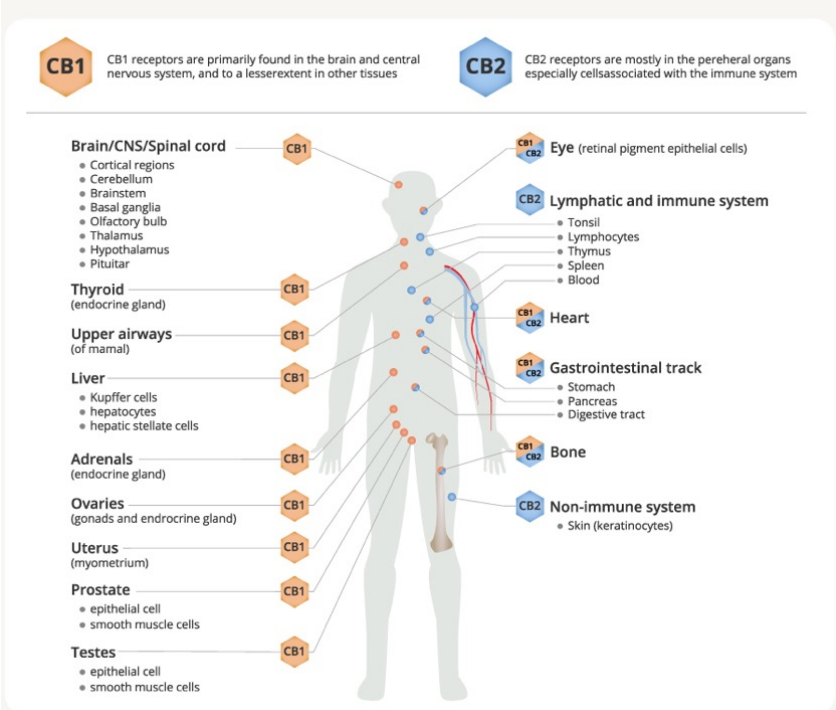




7

Cannabinoid Receptors

- CB1
  - Primarily found in the brain and central nervous tissues
  - Also found in various glands and the liver
- CB2
  - Skin, Lymphatics, Immune system
- Both
  - Eyes, Heart, Bone
  - GI tract



8

Endocannabinoid Receptor Functions

CB1 Receptors

- Involved in pain signaling
- Affect memory and learning
- May increase or decrease anxiety
- Affect motor control and coordination
- Increase appetite
- Can reduce nausea and vomiting
- May create euphoria (specifically THC)

CB2 Receptors

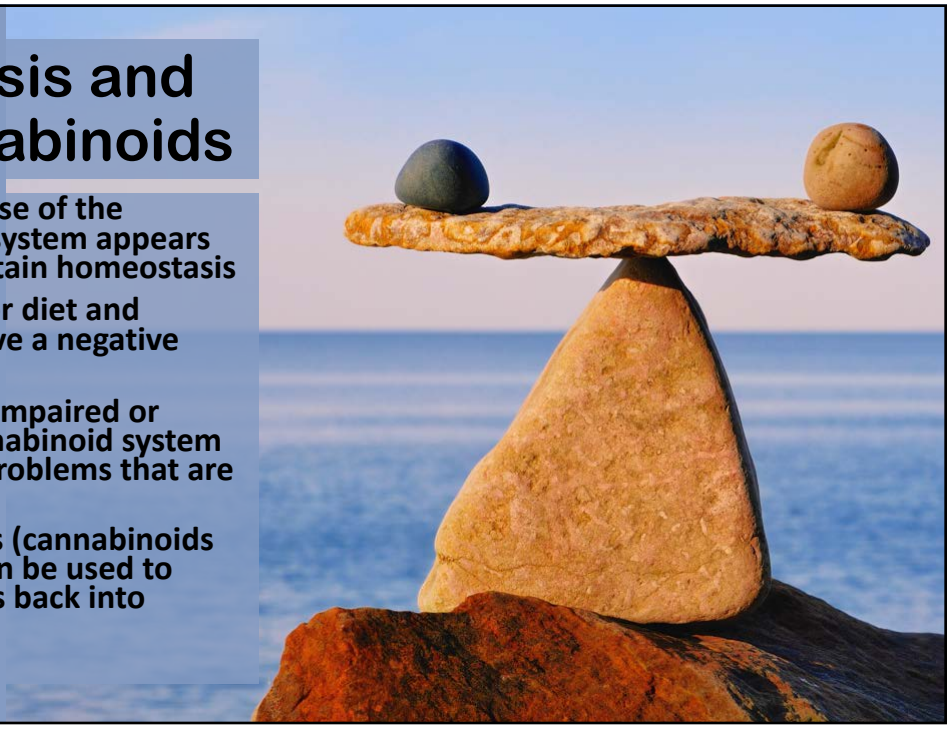
- Help maintain immune homeostasis
- Decrease peripheral nerve pain
- Decrease break down of bone and encourage formation of new bone
- Protect the heart from injury
- Aid liver recovery and inhibit fibrosis

Both affect enteric (gut) nervous system inhibiting secretions and motility and decreasing inflammation

9

Homeostasis and Endocannabinoids

- The primary purpose of the endocannabinoid system appears to be to help maintain homeostasis
- Chronic stress, poor diet and chronic pain all have a negative impact on it
- It appears that an impaired or deficient endocannabinoid system can cause health problems that are difficult to treat
- Phytocannabinoids (cannabinoids found in plants) can be used to tweak homeostasis back into balance



10

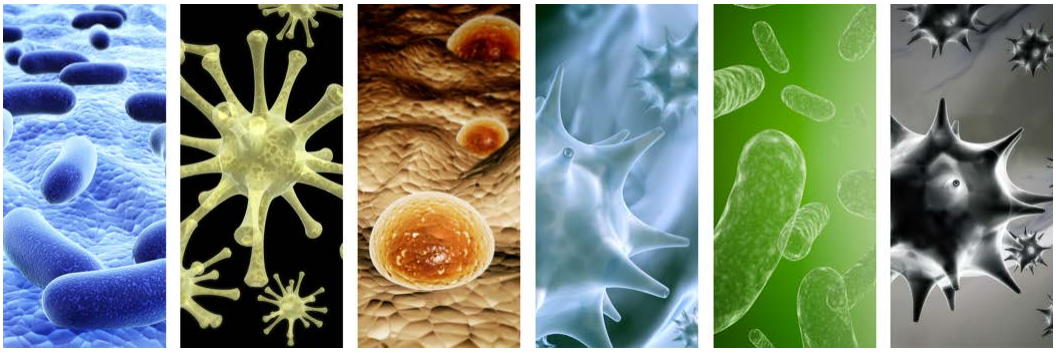
Homeostasis and Health

- Health is the balance between opposing forces in the body that must be dynamically adjusted in order to maintain normal conditions in the human body
- When the body goes out of balance in one direction or the other, homeostasis is disturbed and health decreases
- As the body is able to rebalance itself health is restored
- This balance is ongoing as changing environmental conditions constantly require an adjustment of the internal environment of the body

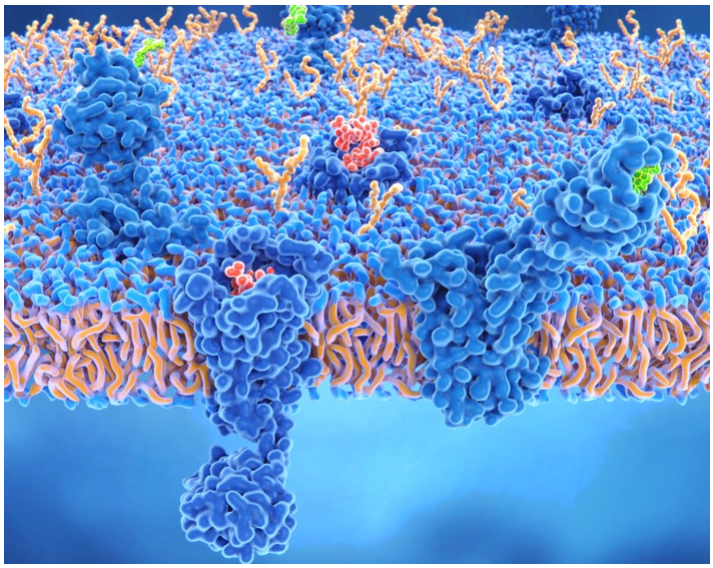
11

Multicellular Systems

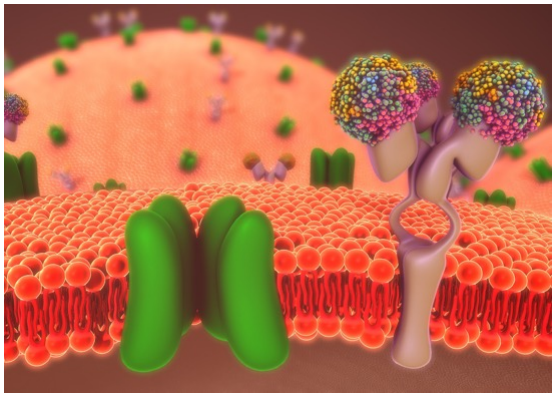
- The body is a community of around 30-40 trillion cells
- These cells are specialized to perform specific tasks for the body as a whole
- Each group of specialized cells (tissue) contributes it's share to homeostasis and receives the benefits of homeostasis in return
- In order to know what to do, cells rely on chemical signals in their environment to adapt to changing conditions



12



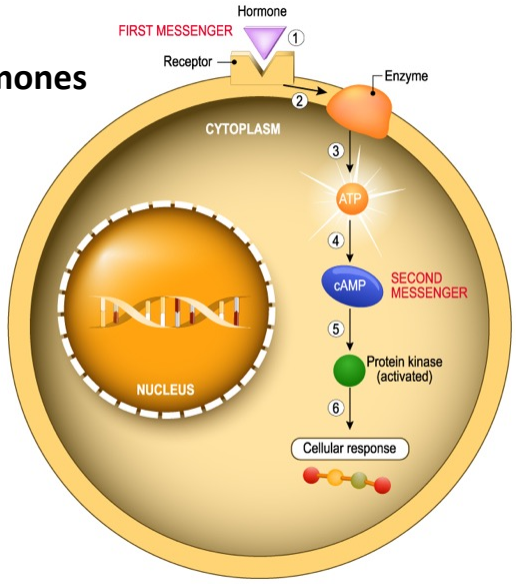
Cellular Senses



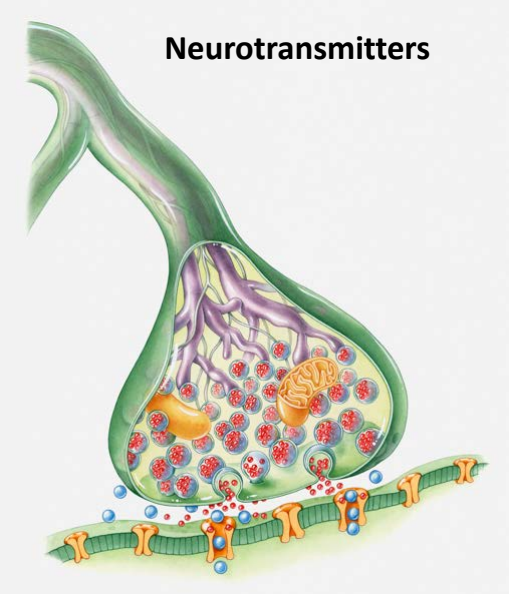
13

Chemical Messaging Systems

Hormones

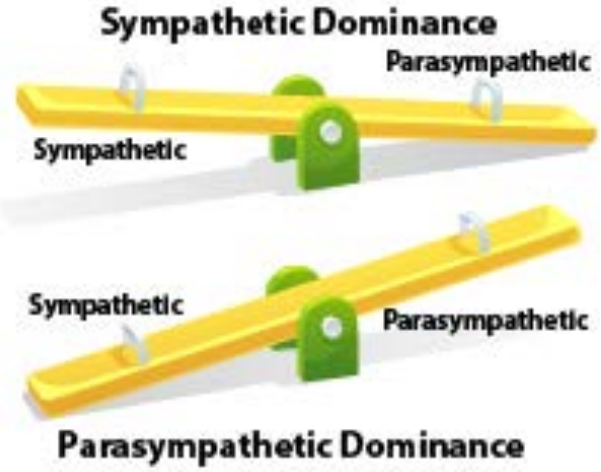


Neurotransmitters

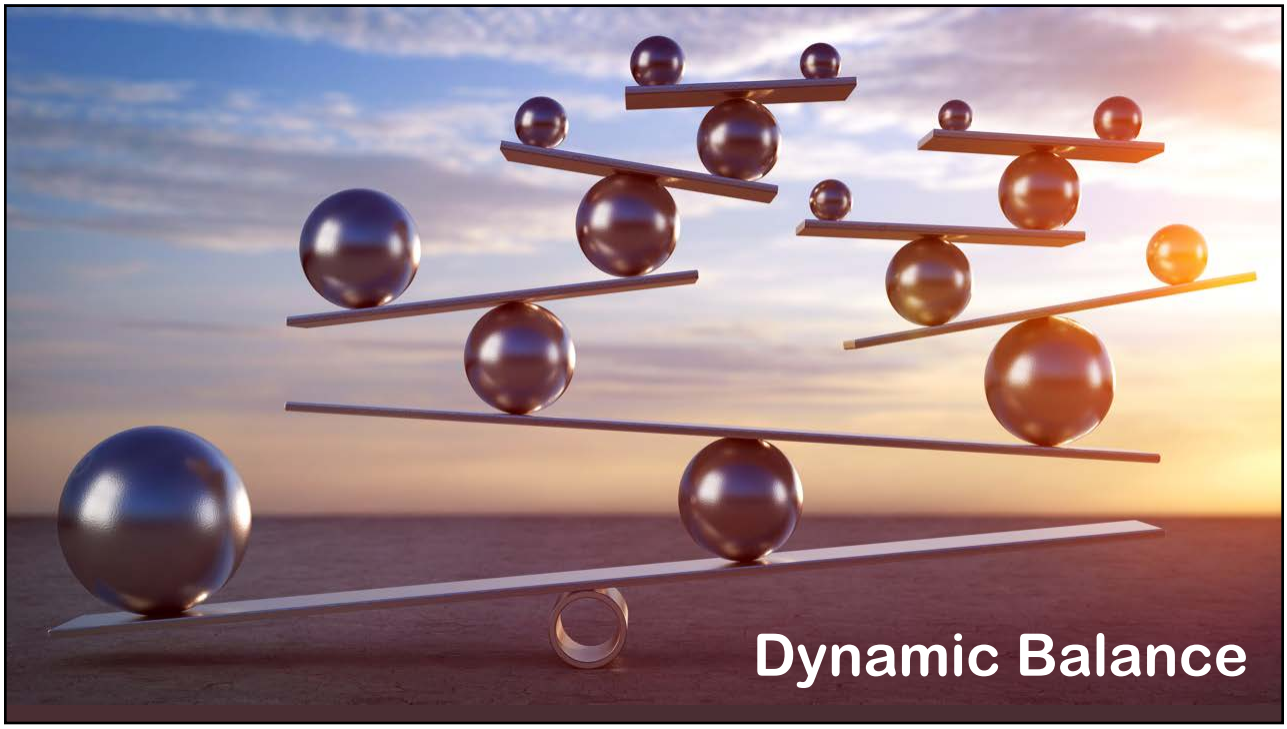


14

Striving for Balance



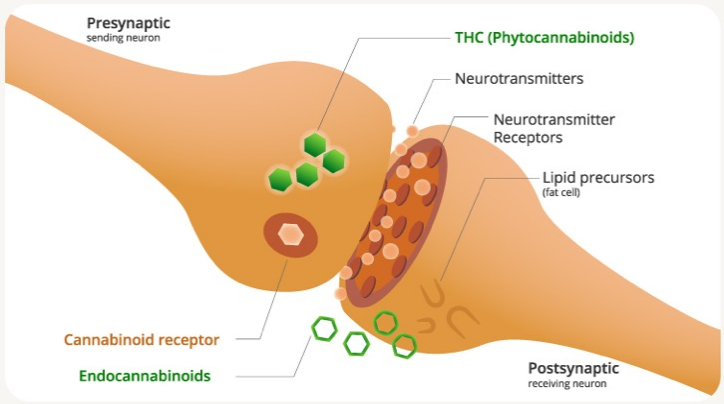
15

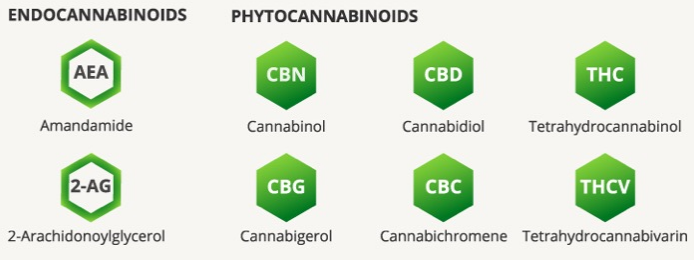


16

Cannabinoid Function

- When the postsynaptic cell is receiving too many neurotransmitters there is an increase in calcium flowing into the cell
- The postsynaptic cell makes endocannabinoids which bind to receptors on the pre-synaptic cell
- This tones down the production of the neurotransmitter, balancing the signalling





17

Phytocannabinoids

- About 113 phytocannabinoids have been identified in the cannabis plant
- Only a few have been well researched
- There are also phytocannabinoids and cannabinoid mimics in other plants such as echinacea, kava kava, chocolate, green tea and truffles
- Research is ongoing so we may find more cannabinoids and plants containing phytocannabinoids

18

Echinacea

- Echinacea contains cannabimimetics in the form of alkylamides
- Approximately 25 alkylamides have been identified, and some have affinities for the CB2-receptor
- They are primarily found in the roots and flowers
- This may enhance echinacea's immune activity and work synergistically with the other compounds in echinacea that boost the immune response and fight infection

19

Kava Kava

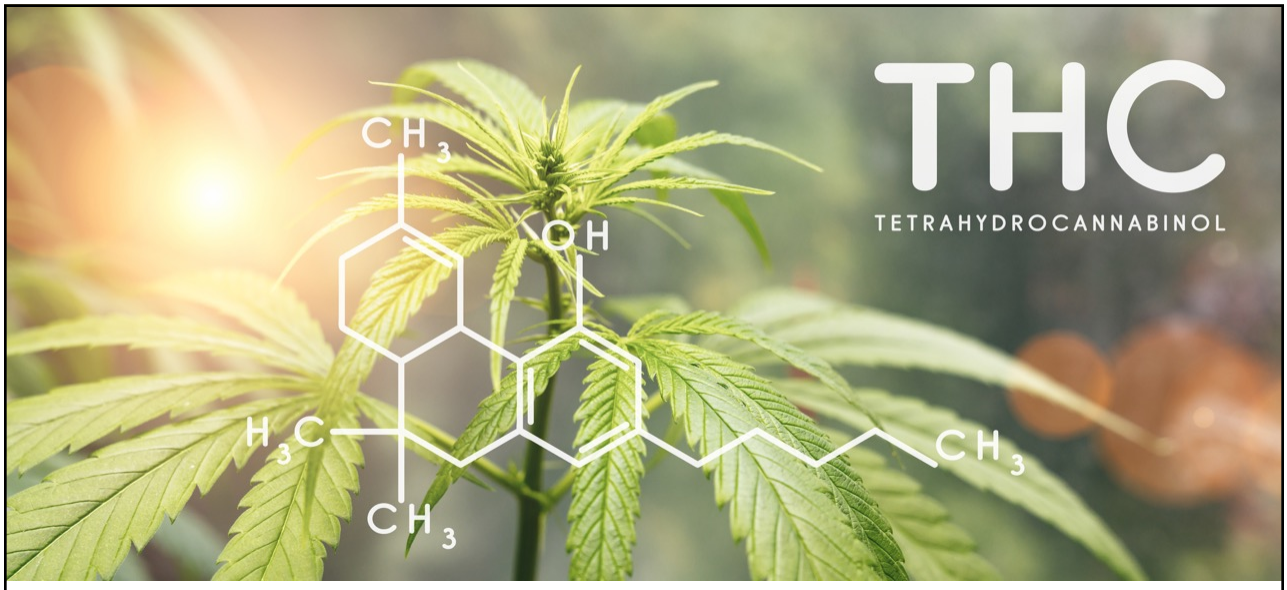
- Kava supplies kavalactones, which are known to relax muscles and ease pain while maintaining mental alertness
- One is called yangonin and interacts directly with the CB1 receptor.
- Kavalactones also bind to similar brain locations as cannabinoids, which may help explain how they work to reduce anxiety, ease muscle tension and relieve pain

20

Chocolate and Black Truffles

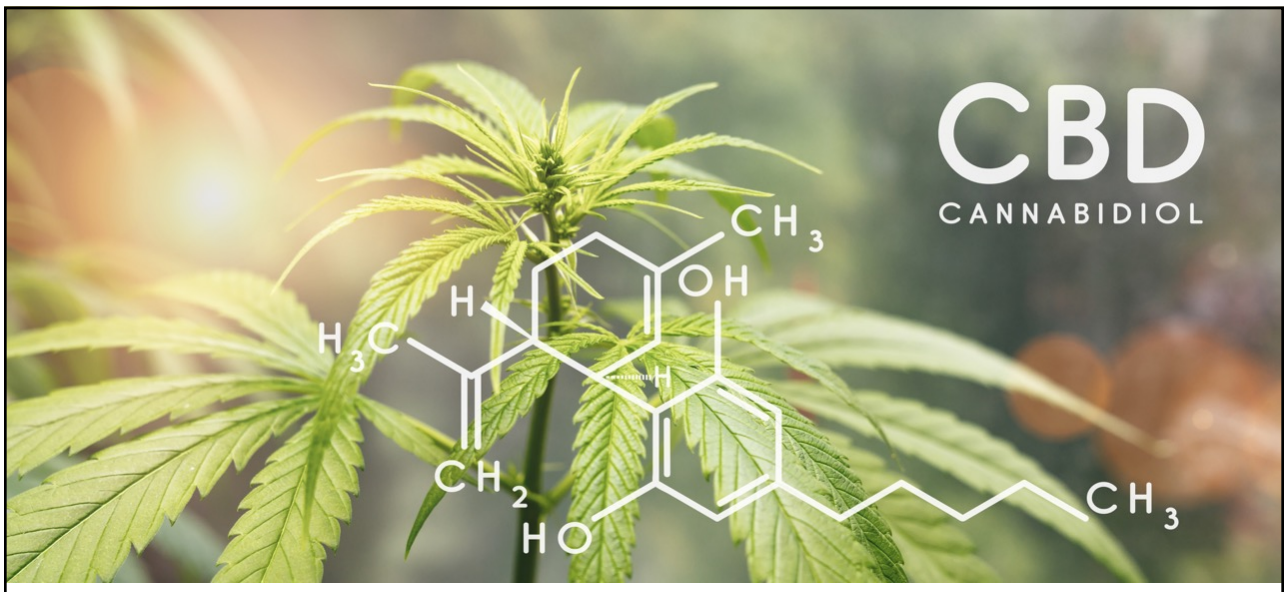
- Cacao contains many "feel good" chemicals theobromine, tryptophan, phenylethylamine, and the mineral magnesium
- It also contains the endocannabinoid, anandamide, which has been called the "bliss molecule"
- One more reason why we might crave chocolate sometimes
- Black truffles also contain anandaminde

21



- THC is the phytocannabinoid that produces the psychoactive effects in marijuana

22



- CBD is a non-psychoactive phytocannabinoid in cannabis

23

Upcoming Education

- Channels, Cycles, Constitutions and Chinese Herbs
  - Nov 7, 14, 21 at 5:30 PM MT ($60, $5 members with Chinese Herb Bundle $74, $25 for members)
  - (http://treelite.com/proddetail.php?prod=lc-813&cat=17)
- A Holistic Approach to Disease
  - Two free webinars on Dec 5, 12 at 6:00 PM MT introducing next year's member webinar series (https://events.genndi.com/channel/wholisticapproach)
- 2019 Healthy Perspective Webinar Series
  - https://events.genndi.com/channel/healthyperspective
- 2019 Seeking Light and Truth
  - Webinar series: https://events.genndi.com/channel/seekinglight

24

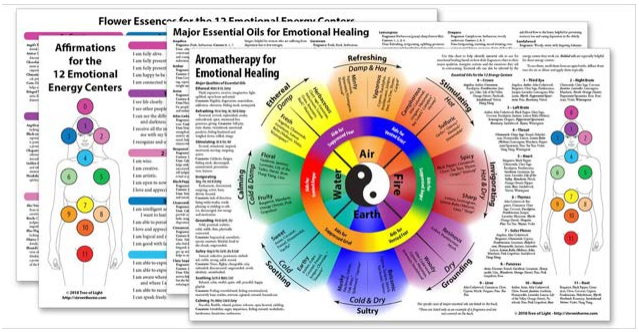
Subscribe, Like and Share

https://events.genndi.com/channel/healthyperspective

25

Visit StevenHorne.com

- Sign up for our free mailing list
- Join our member program
  - Monthly member webinars
  - Online member database
  - Discounts on products and courses
- Checkout our store for charts, books and courses



26