

GARY GETTELFINGER MD

HEMP-CBD OIL: POTENTIAL HEALTH BENEFITS

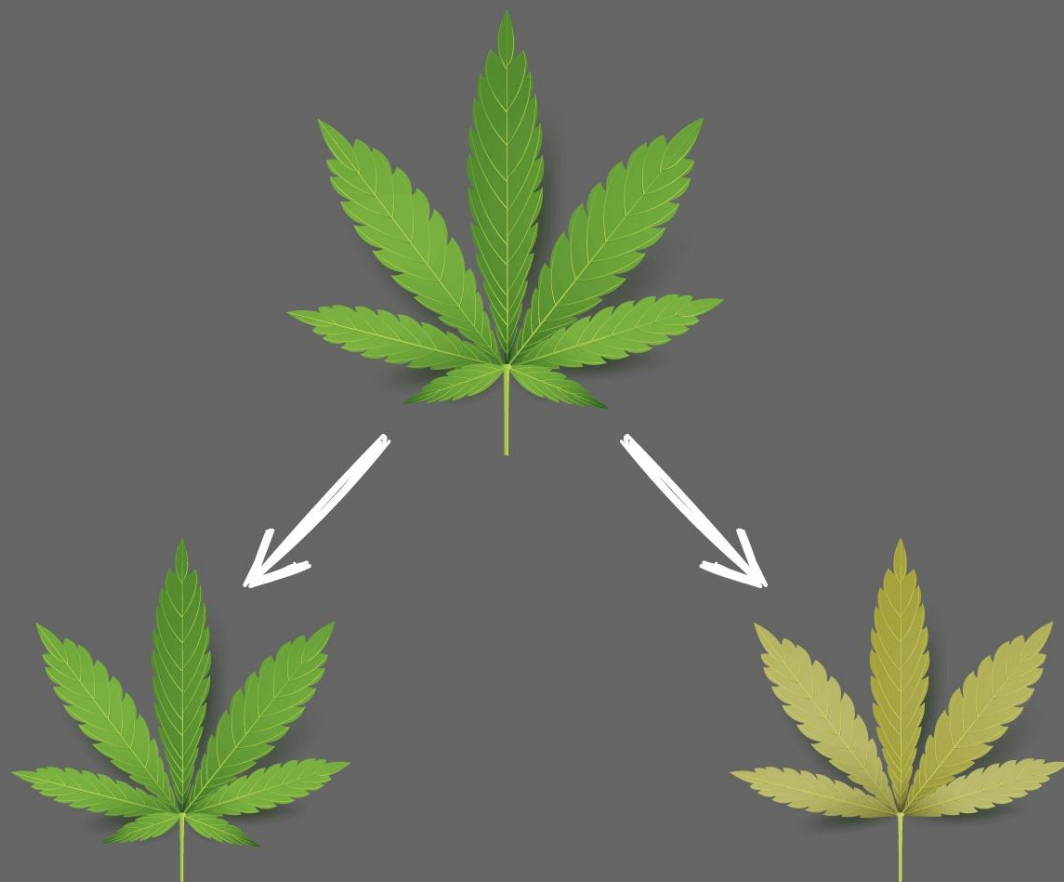
WHAT IS CBD OIL?

WHAT IS CBD OIL?

CANNABIS VS HEMP VS MARIJUANA

Cannabis

is a plant family that includes many species, including both hemp and marijuana.

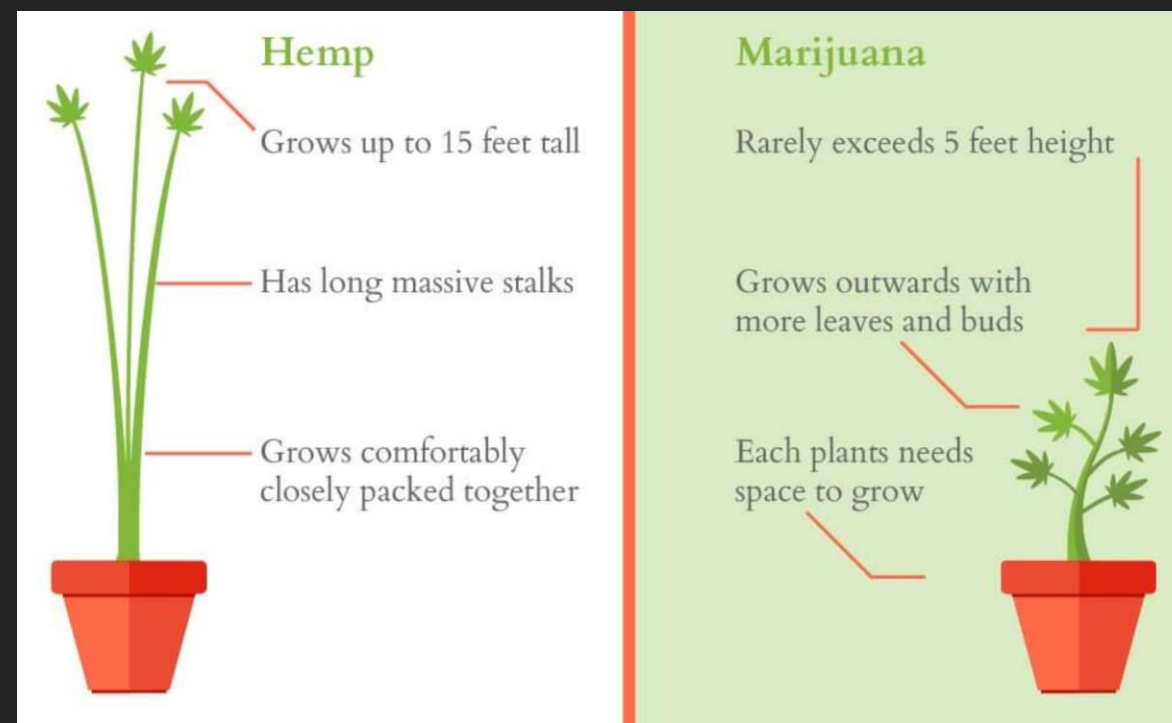


Hemp

is a variety of cannabis grow for its tall, sturdy stalks and **low levels of THC**.

Marijuana

is a variety of cannabis grown for its **high levels of THC**.



Hemp

Grows up to 15 feet tall

Has long massive stalks

Grows comfortably closely packed together

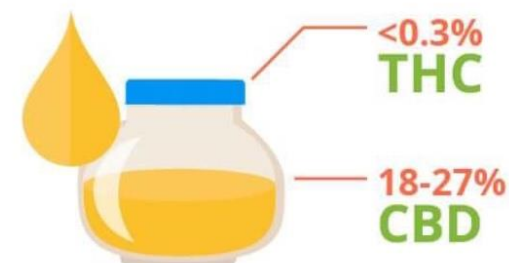
Marijuana

Rarely exceeds 5 feet height

Grows outwards with more leaves and buds

Each plants needs space to grow

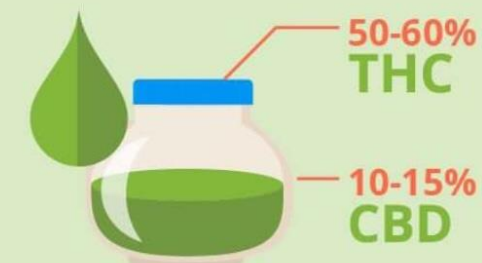
Hemp Oil



<0.3%
THC

18-27%
CBD

Marijuana Oil



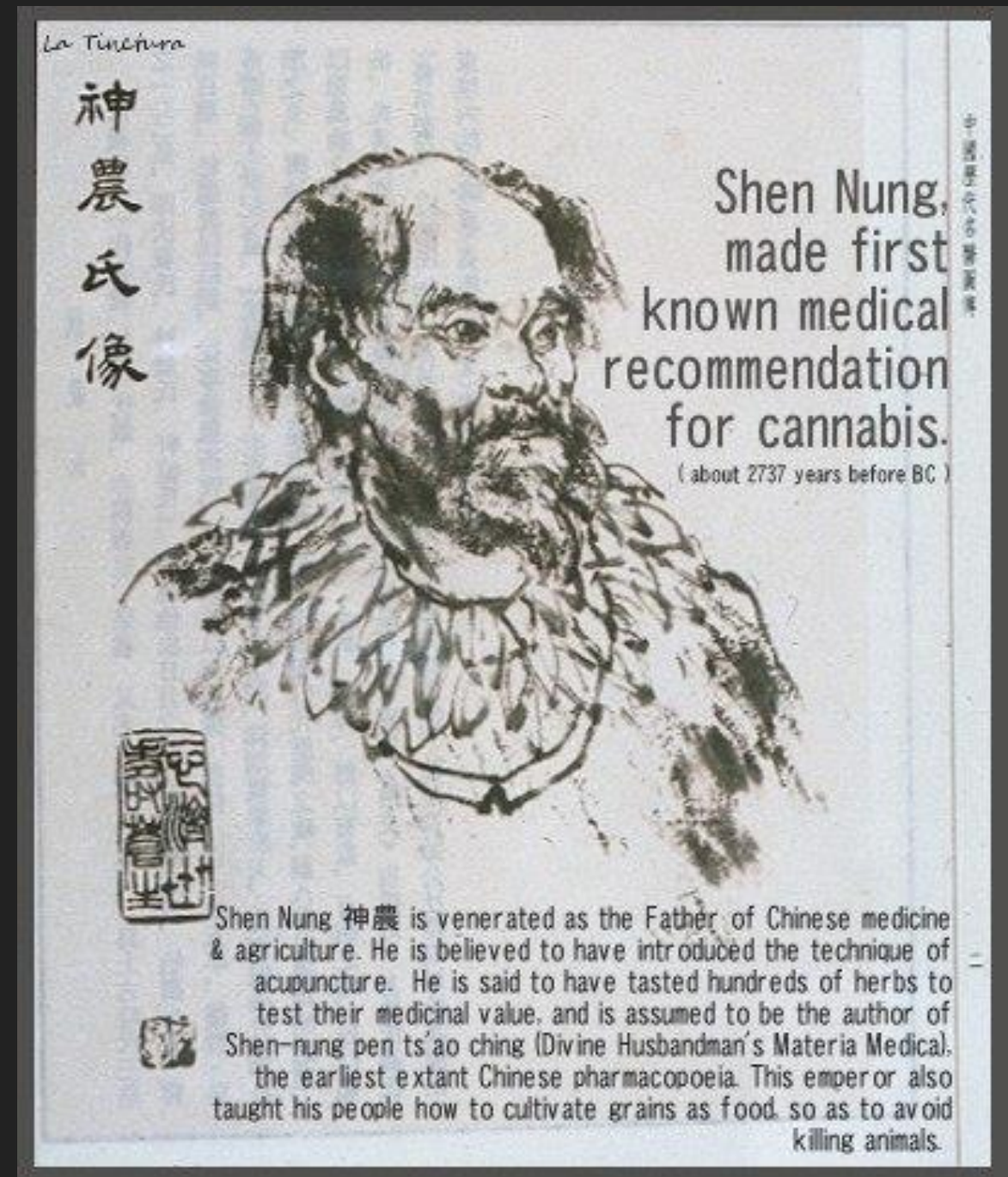
50-60%
THC

10-15%
CBD

Concentrations depend on the type of hemp product or marijuana strain used.

CANNABIS HISTORY - PLANT

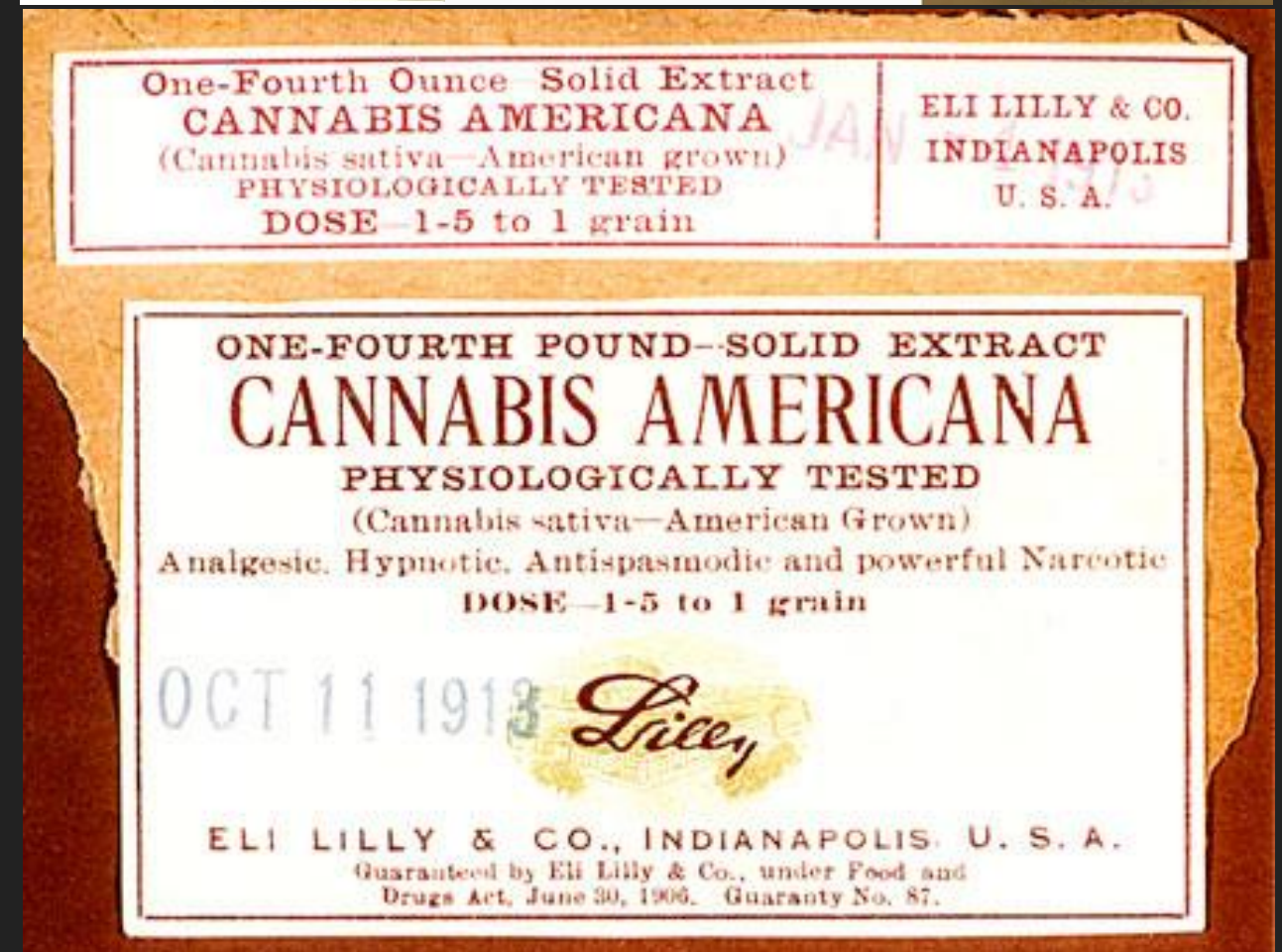
- ▶ ONE OF THE EARLIEST KNOWN CULTIVATED PLANTS
- ▶ USED AND FARMED FOR AT LEAST 12,000 YEARS
- ▶ USED MEDICINALLY FOR AT LEAST 6000 YEARS



WHAT IS CBD OIL?

CANNABIS HISTORY - MEDICATION

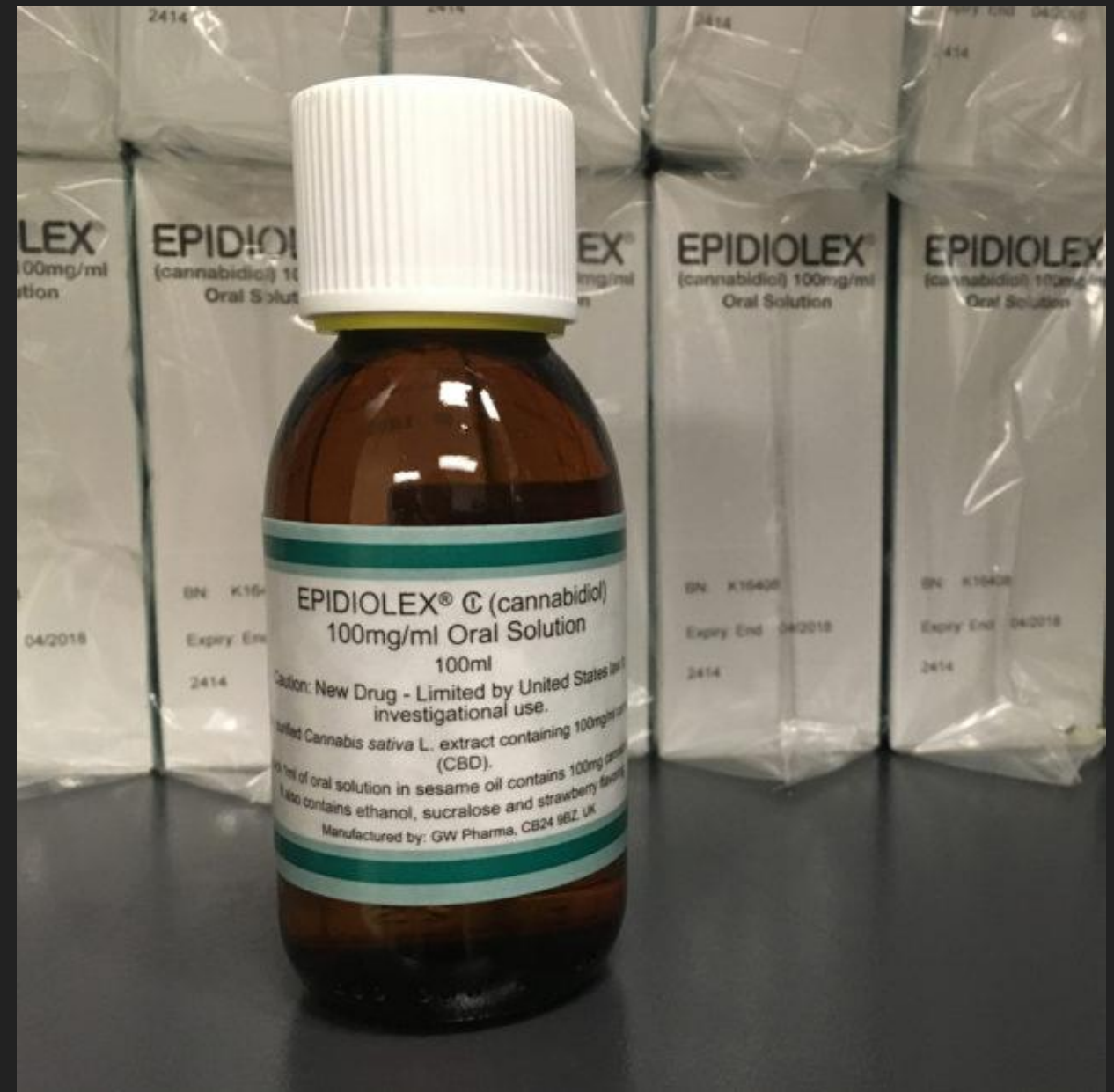
- ▶ ELI LILLY, PFIZER, PARKE DAVIS AND OTHERS HAD MEDICAL CANNABIS PRODUCTS
- ▶ IT WAS THE 3RD MOST PRESCRIBED MEDICINAL AGENT FOR 60 YEARS PRIOR TO ITS PROHIBITION IN 1937.



WHAT IS CBD OIL?

CANNABIS - TODAY

- ▶ EPIDIOLEX: APPROVED BY FDA IN JUNE 2018
- ▶ HIGH CBD:LOW THC FORMULATION OF CANNABIS DERIVED FROM MARIJUANA
- ▶ ESTIMATED TO COST \$2500-5000 PER MONTH



CANNABIS (AS HEMP-CBD): IS IT SAFE?

- ▶ WORLD HEALTH ORGANIZATION (WHO):

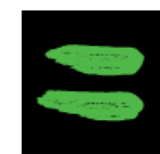
- ▶ NO abuse or dependence potential
- ▶ NO evidence of risk with PURE CBD



**World Health
Organization**

- ▶ WORLD ANTI-DOPING AGENCY (WADA):

- ▶ NOT a banned substance for athletes



**WORLD
ANTI-DOPING
AGENCY**
play true

WHY DOES IT WORK?

ENDOCANNABINOIDS: OUR BODIES MAKE THEM

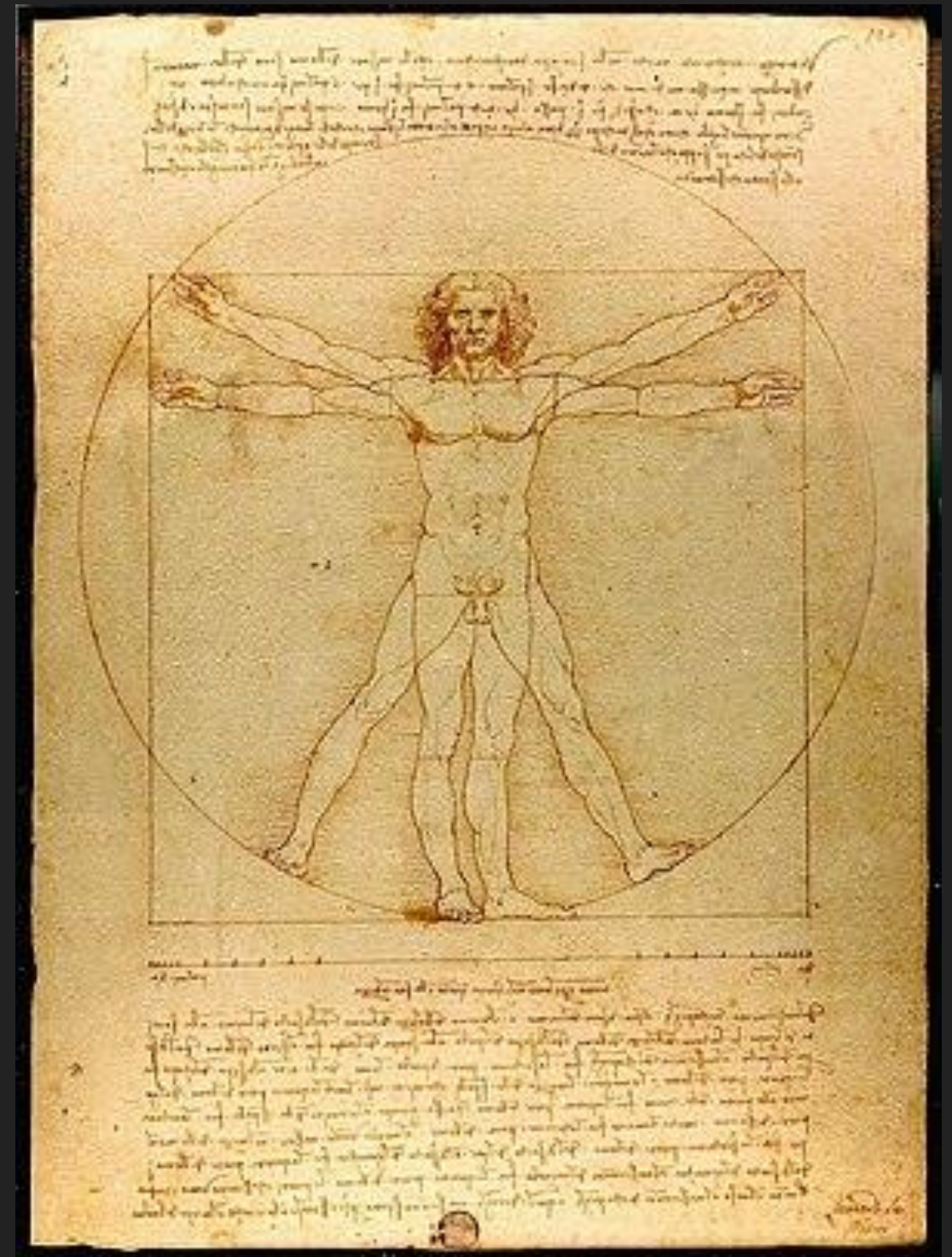
- ▶ The ENDOcannabinoid system (ECS) is the body's primary tool of homeostasis
- ▶ Two primary ENDOcannabinoids
 - ▶ 2-AG
 - ▶ Anandamide



WHY DOES IT WORK?

HOMEOSTASIS: REGULATES AND BALANCES

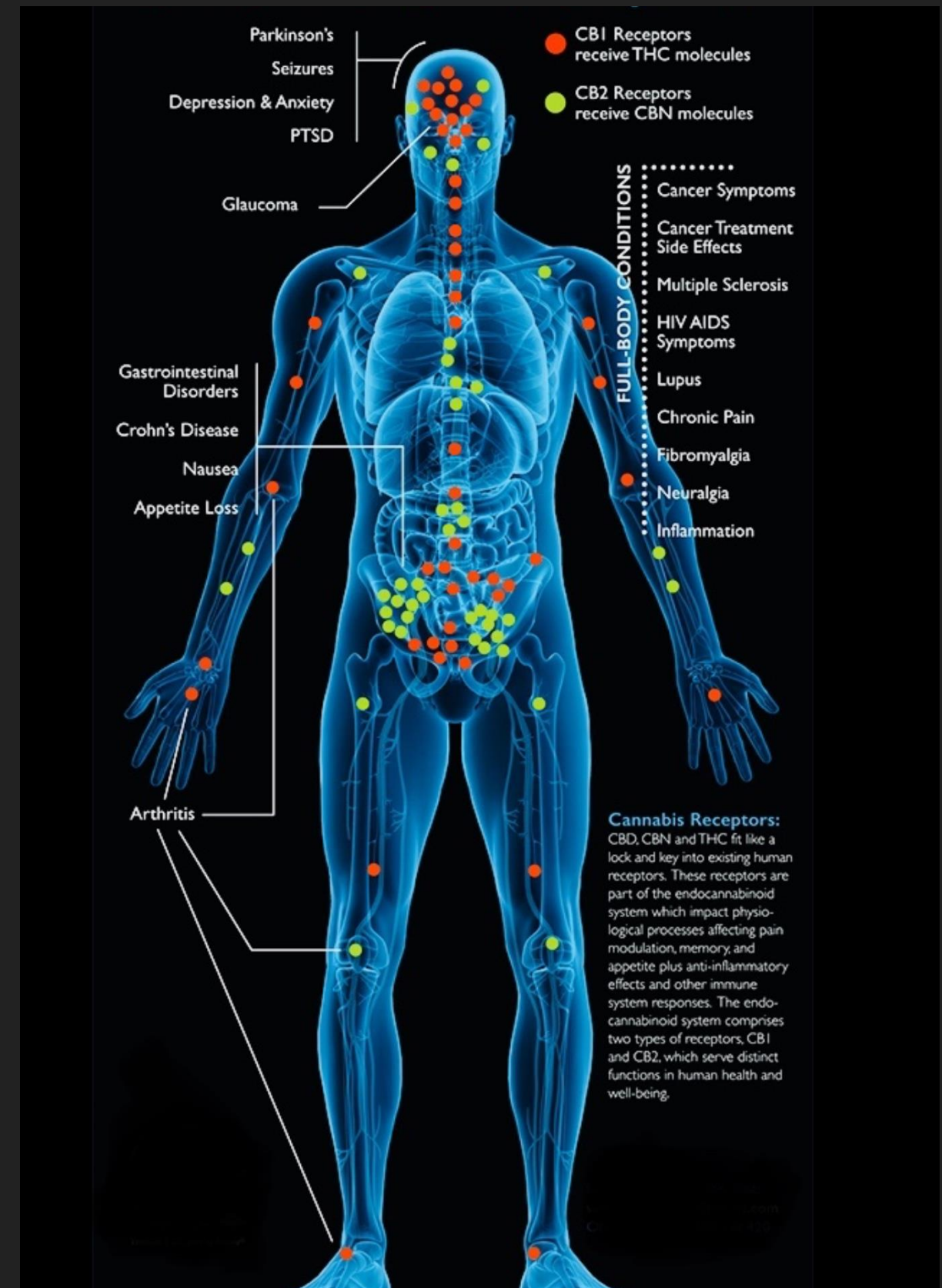
- ▶ Nerve function
- ▶ Movement
- ▶ Immune system
- ▶ Energy
- ▶ Circulatory system
- ▶ Bone



WHAT HAPPENS WHEN IT DOES NOT WORK?

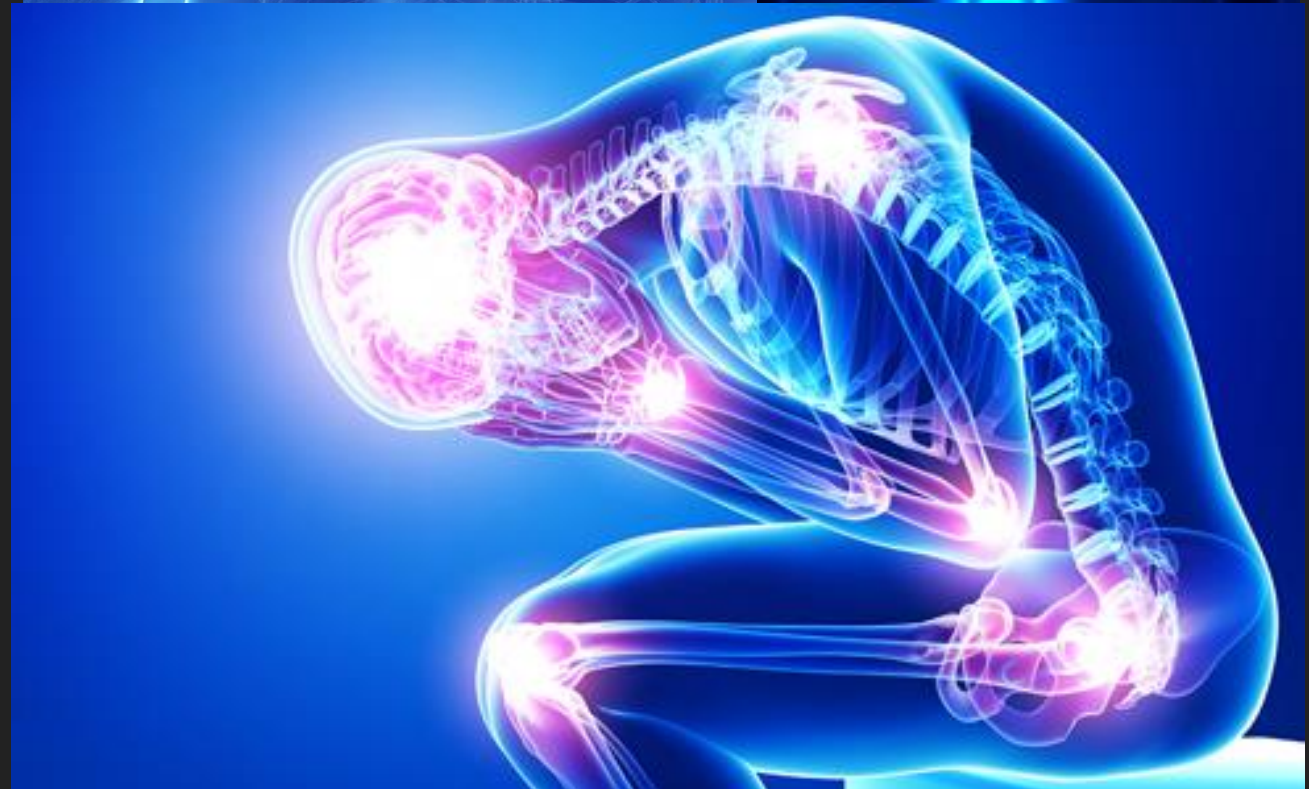
ENDOCANNABINOID DEFICIENCY

- ▶ Endocannabinoid levels are LOW
- ▶ CLINICAL ENDOCANNABINOID DEFICIENCY (CECD)



ENDOCANNABINOID DEFICIENCY

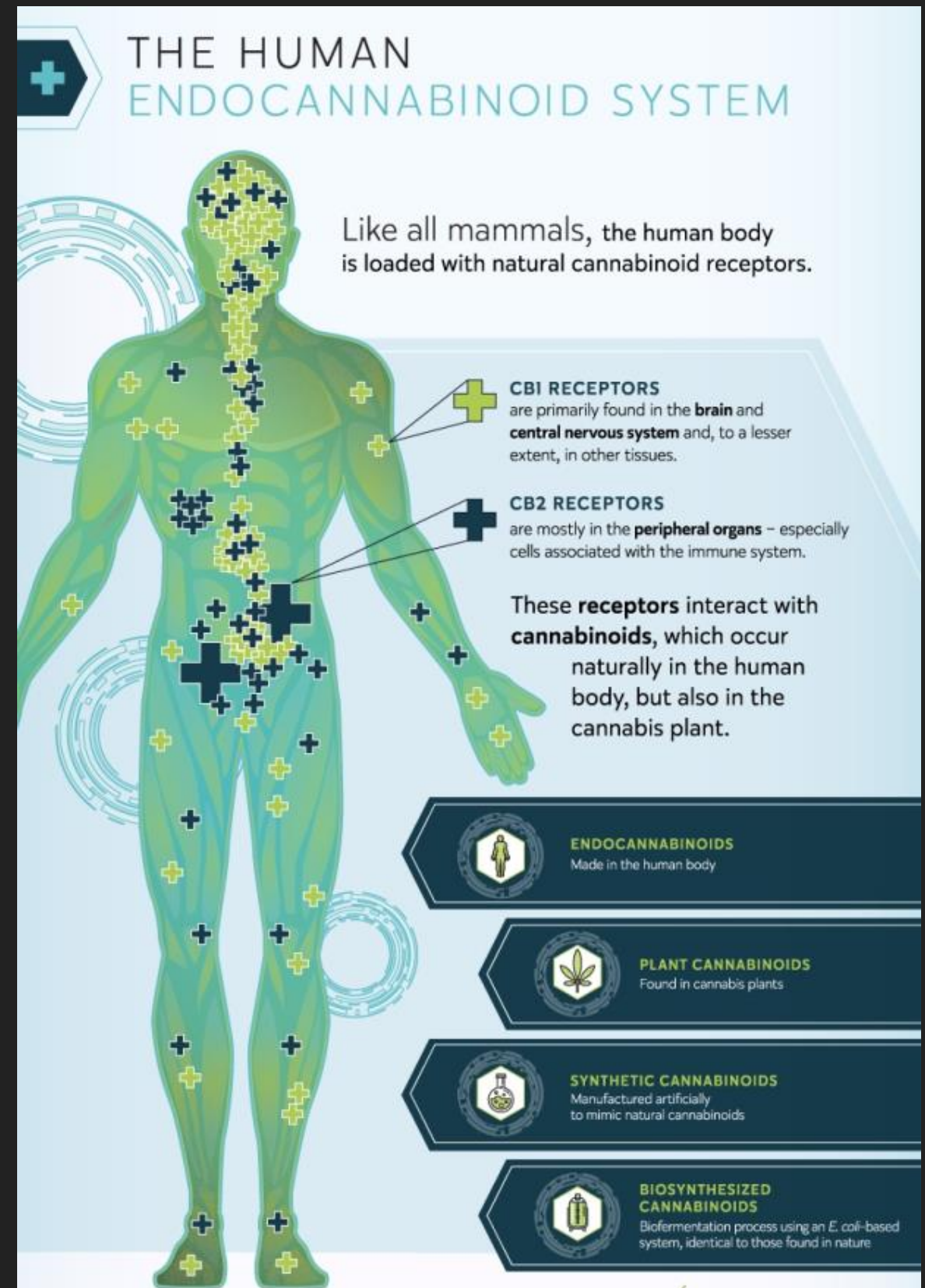
- ▶ ECD is implicated in many hard-to-treat disease states:
 - ▶ Fibromyalgia
 - ▶ Chronic migraine
 - ▶ Depression and Anxiety
 - ▶ Irritable Bowel Syndrome
- ▶ <https://www.ncbi.nlm.nih.gov/pubmed/28861491>
- ▶ <https://www.liebertpub.com/doi/full/10.1089/can.2016.0009>



HOW DOES IT WORK?

PHYTOCANNABINOIDS

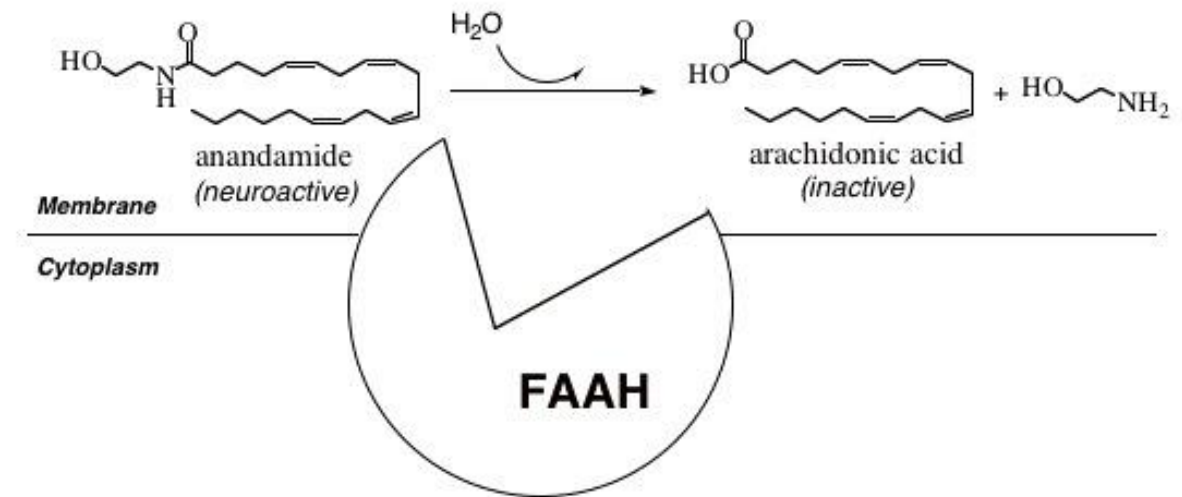
- ▶ Found in Cannabis
- ▶ PHYTOcannabinoids are botanical substitutes for ENDOcannabinoids
- ▶ A NATURAL PLANT VERSION OF WHAT OUR BODIES MAKE



ENZYME BLOCKING

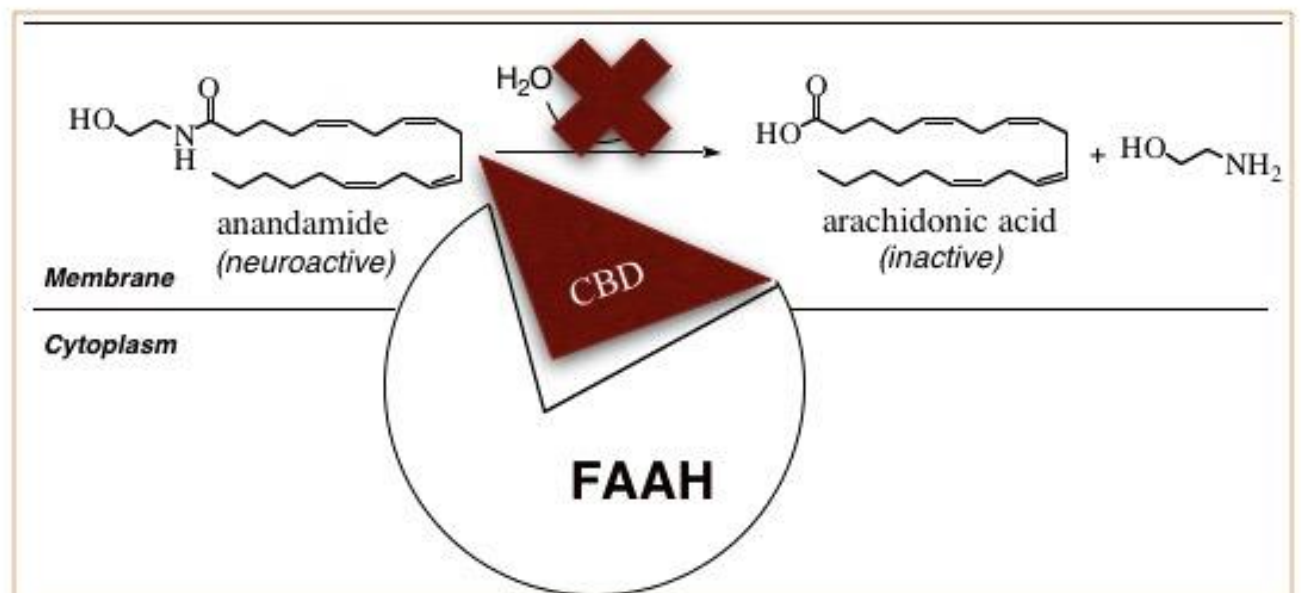
- ▶ Blocks the breakdown of Anandamide by FAAH
- ▶ This increases the blood levels in the body

FAAH Breaks Down Anandamide



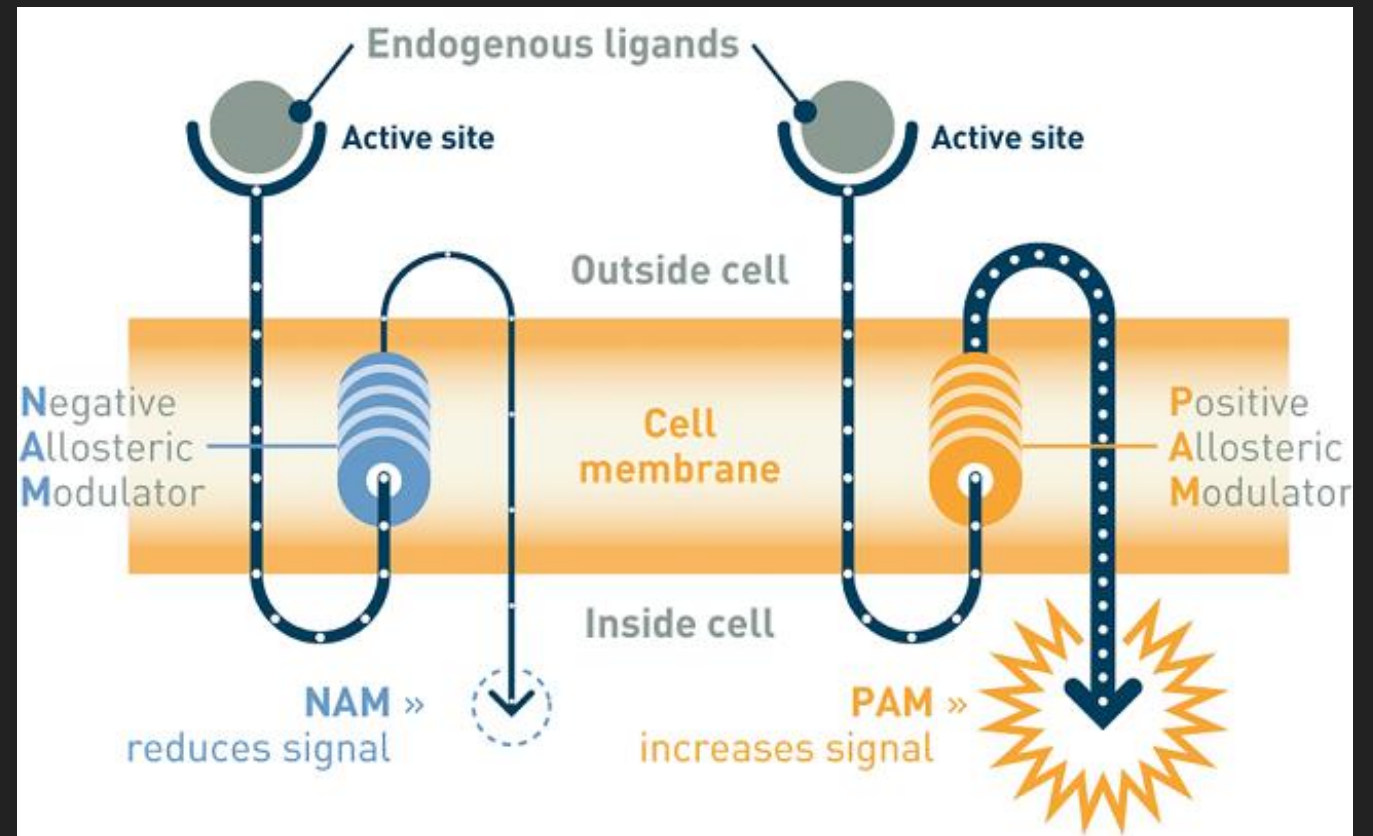
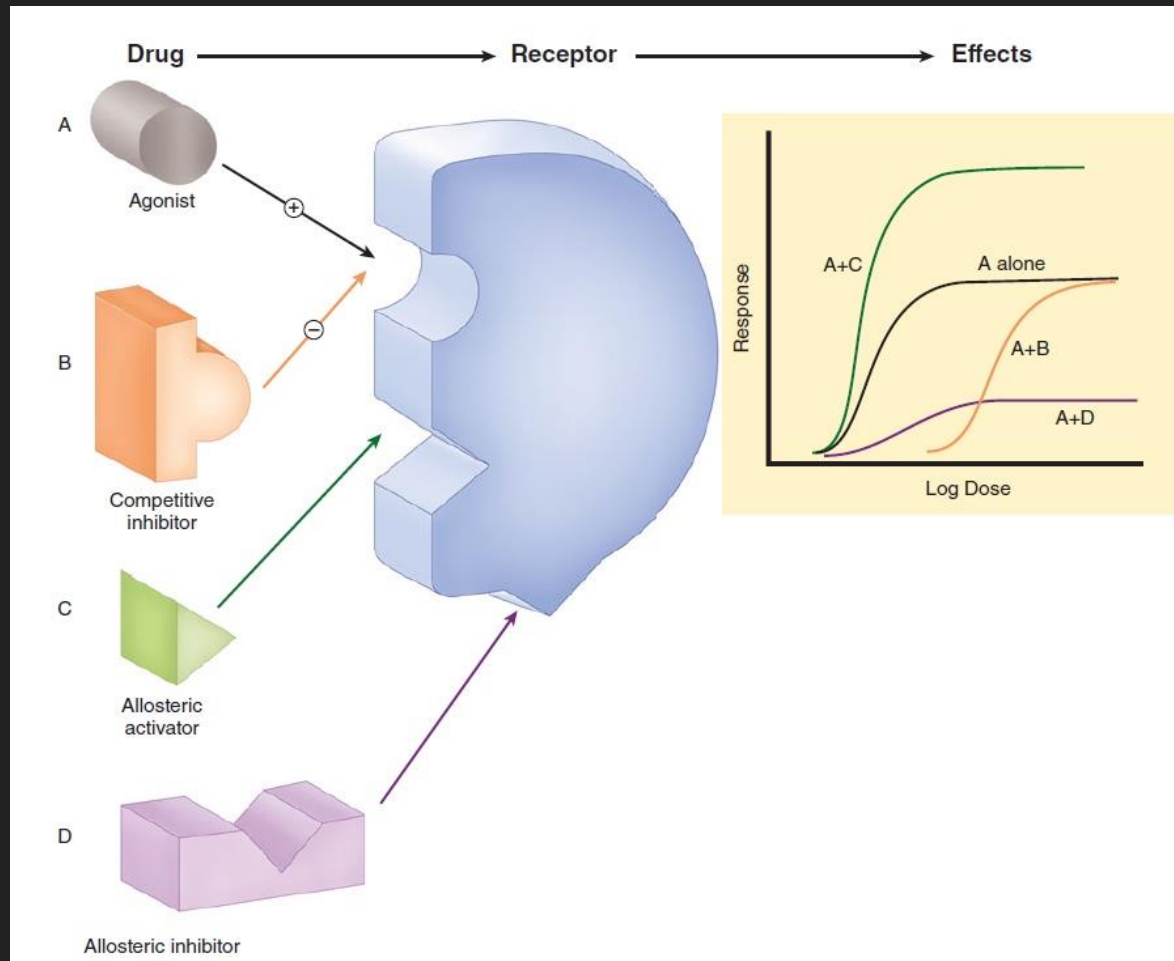
22. Bracey, 29 Nov 2002 Vol 298 SCIENCE. 1793-1796.

CBD Raises Anandamide by Blocking FAAH

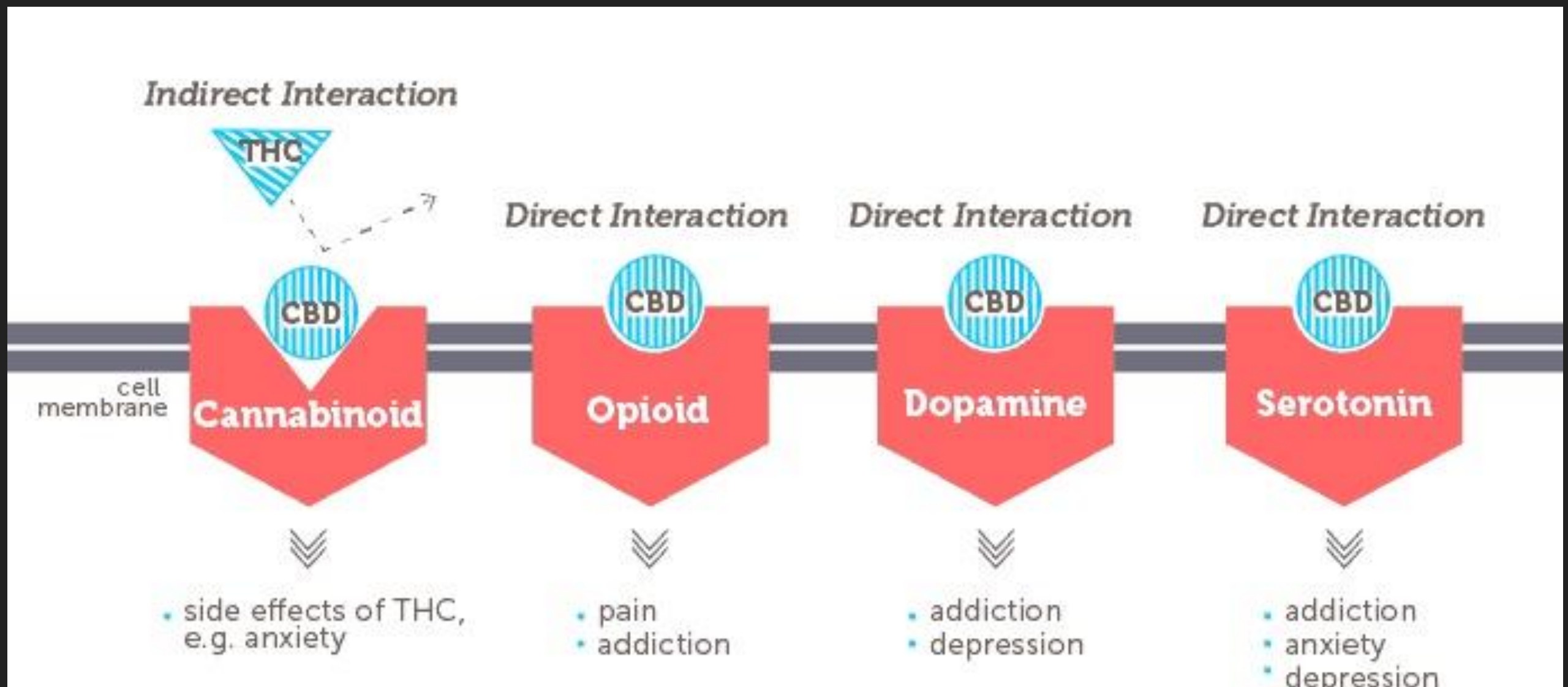


HOW DOES IT WORK?

RECEPTOR: POSITIVE ALLOSTERIC MODULATION



RECEPTOR: POSITIVE ALLOSTERIC MODULATION

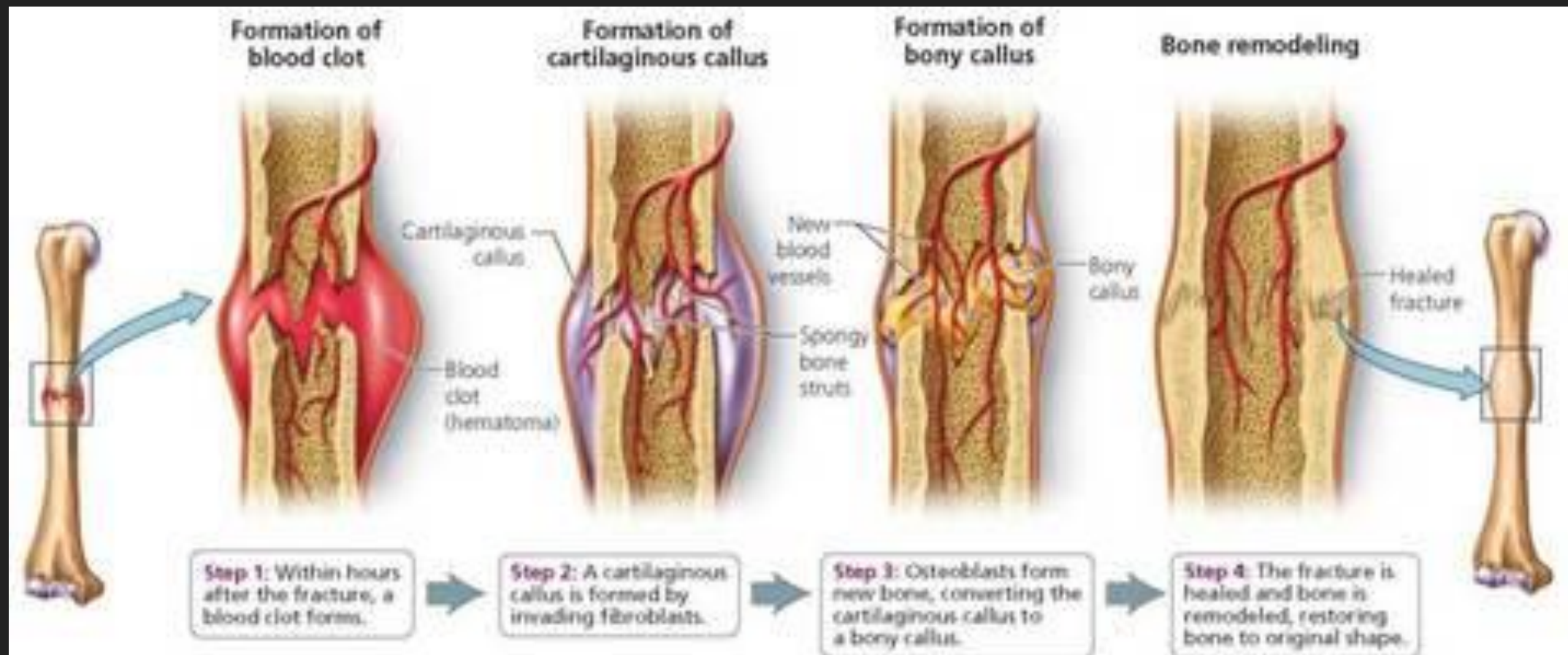


WHAT IS THE EVIDENCE?

HEALTH STUDIES PUBLISHED

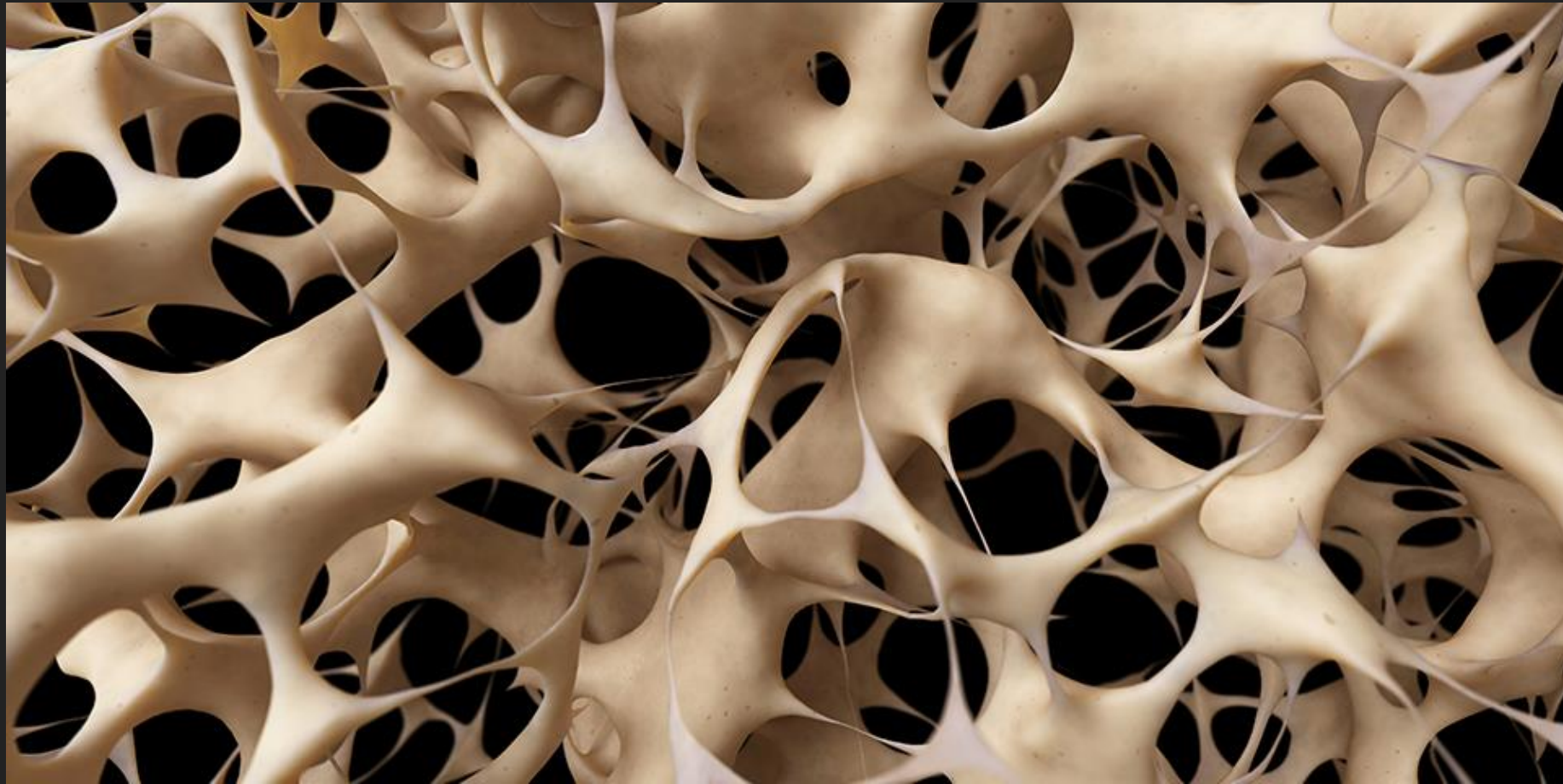
- Analgesic (Costa, *et al.* 2007)
- Neuroprotective antioxidant (greater than ascorbate or tocopherol) (Hampson, *et al.*, 1998)
- Anticonvulsant (Carlini & Cunha, 1981)
- Anti-emetic (Parker, *et al.*, 2002)
- Cytotoxic to breast CA cells (Ligresti, 2006)
- Antagonizes TNF α in RA (Malfait, 2000)
- Agonizes 5HT_{1A}, reducing anxiety (Russo, 2005)
- Anti-depressant action via 5HT_{1A} (Zenlati, *et al.*, 2010)
- Induces apoptosis and reduces angiogenesis in tumors. (Chakravati, *et al.* 2014)
- Antibacterial. Effective against MRSA (MIC = 0.5-2 microM⁻¹) (Appendino, *et al.*, 2008)
- Non-opioid responsive cancer pain improvement (Johnson, *et al.*, 2010)
- Reduced development of diabetes (PPAR gamma activity) (Weiss *et al.*, 2006)
- Reduces blood pressure (Jadoon, *et al.*, 2017)
- Cardioprotective. Reduced arrhythmias and infarct size after MI. (Walsh, *et al.*, 2010)
- Reduces inflammation in UC (Filippis, 2011)
- Improved function in Alzheimer's Disease (Watt, 2017)
- Reduces substance abuse behaviors (Prud'homme, *et al.*, 2015)

HEALTH STUDIES PUBLISHED: BONE HEALING



- ▶ Journal of Bone and Mineral Research, Vol 30, Issue 10
- ▶ Cannabidiol, a Major Non-Psychotropic Cannabis Constituent Enhances Fracture Healing and Stimulates Lysyl Hydroxylase Activity in Osteoblasts

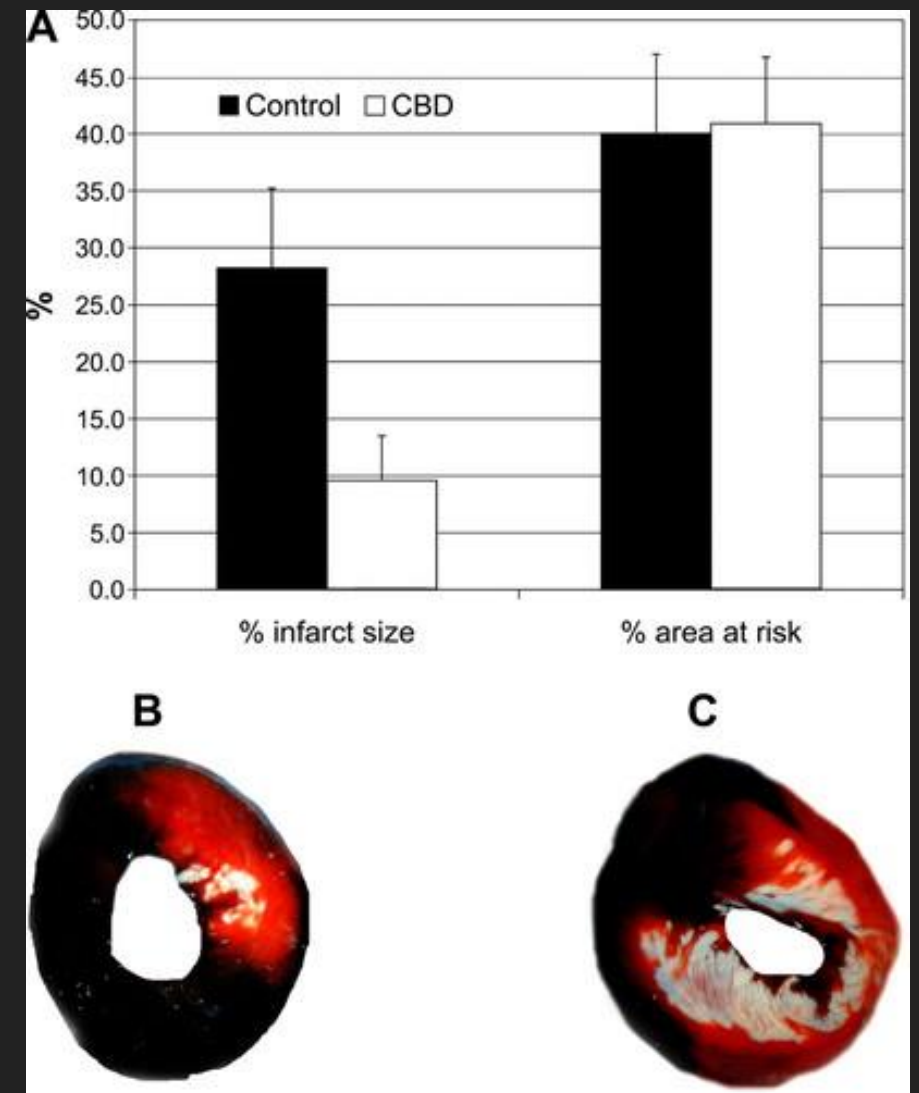
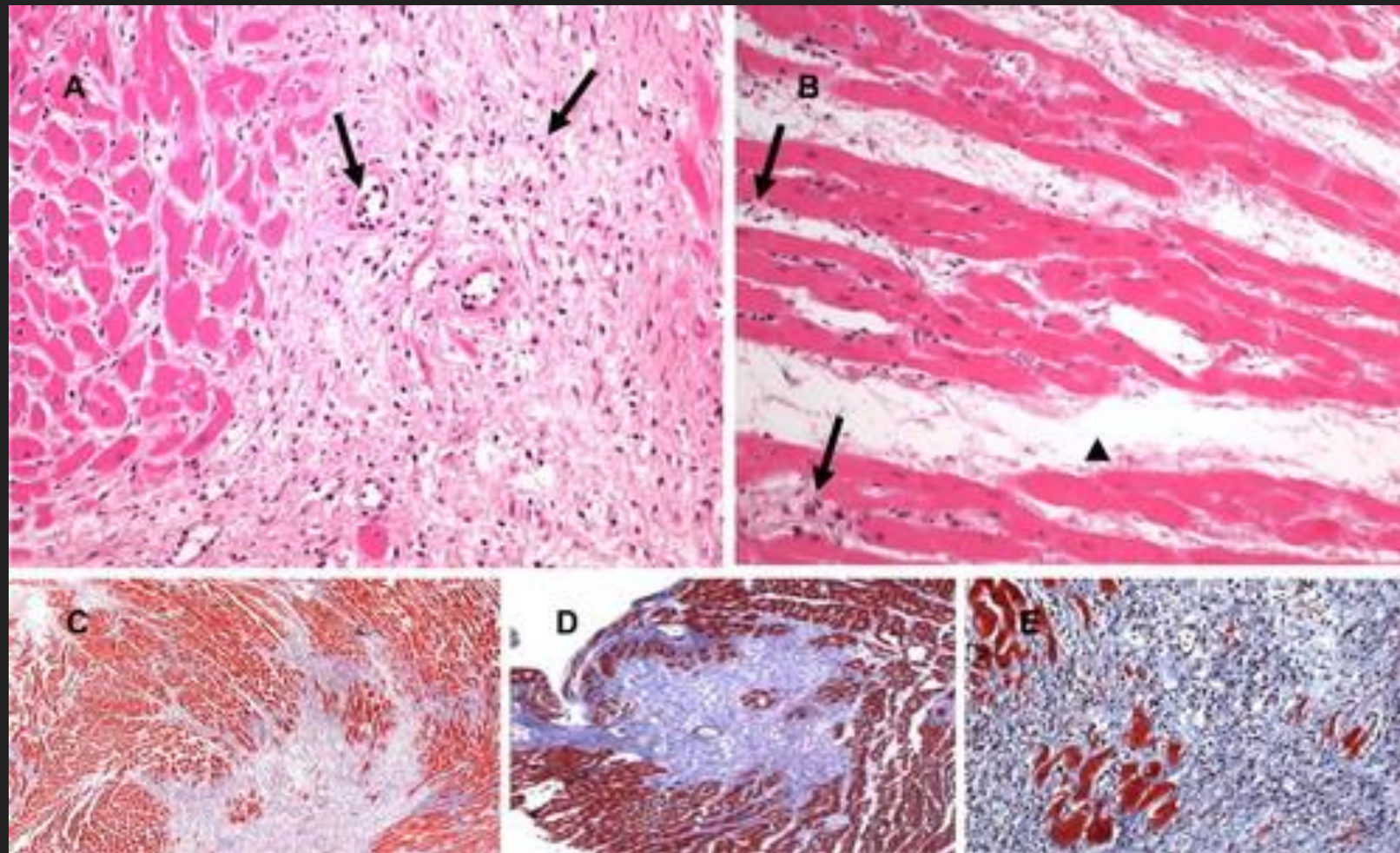
HEALTH STUDIES PUBLISHED: BONE FORMATION



- ▶ Ann Med. 2009;41(8):560-7. doi:10.1080/07853890903121025.
- ▶ Cannabinoids and the skeleton: from marijuana to reversal of bone loss

WHAT IS THE EVIDENCE?

HEALTH STUDIES PUBLISHED: CARDIOPROTECTIVE



- ▶ Am J Physio Heart Circ Physiol. 2007 Dec;293(6):H3602-7. Epub 2007 Sep 21.
- ▶ Cannabidiol, a nonpsychoactive Cannabis constituent, protects against myocardial ischemic reperfusion injury.

WHAT DOES THIS MEAN?

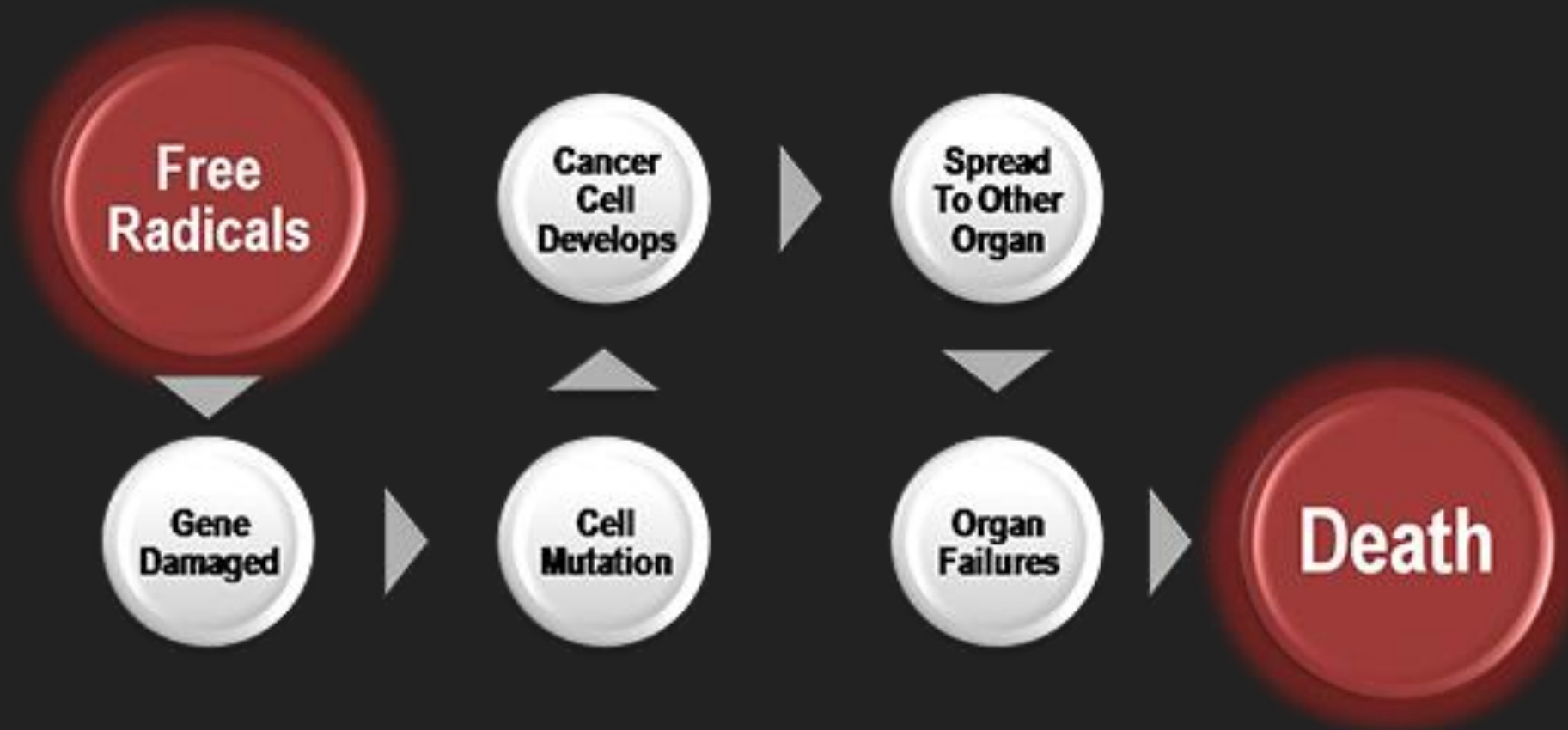
POSSIBLE BENEFITS

- ▶ Pain
- ▶ Inflammation
- ▶ Sleep
- ▶ Stress
- ▶ Nervousness
- ▶ Irritability

WHAT COULD WE SEE IN THE FUTURE?

POTENTIAL USES FOR FULL-SPECTRUM HEMP OIL:

- ▶ ANTIOXIDANTS HELP NEUTRALIZE FREE RADICALS WHICH IN TURN DECREASES THE INCIDENCE OF CELLULAR DEGENERATION.



WHAT COULD WE SEE IN THE FUTURE?

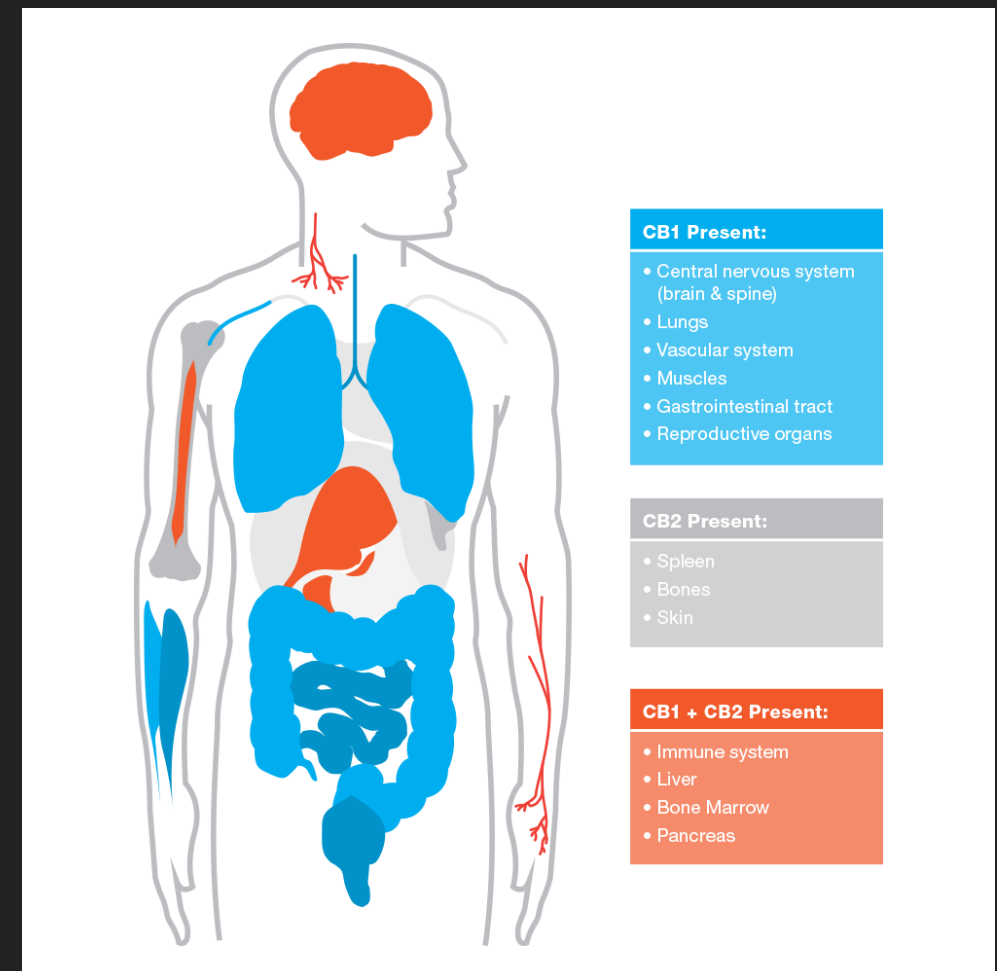
MORE POTENTIAL USES FOR FULL-SPECTRUM HEMP OIL:

- ▶ HELPS SUPPORT CARTILAGE AND JOINT FUNCTION
- ▶ REDUCES MUSCLE PAIN FOLLOWING EXERCISE



MORE POTENTIAL USES FOR FULL-SPECTRUM HEMP OIL:

- ▶ PROMOTES HEALTHY:
 - ▶ NORMAL CARDIOVASCULAR HEALTH
 - ▶ RESPIRATORY FUNCTION
 - ▶ BLOOD SUGAR
 - ▶ CHOLESTEROL LEVEL




MORE POTENTIAL USES FOR FULL-SPECTRUM HEMP OIL:

- ▶ PROMOTES HEALTHY:
 - ▶ IMMUNE SYSTEM



MORE POTENTIAL USES FOR FULL-SPECTRUM HEMP OIL:

- ▶ RELIEF OF OCCASIONAL SLEEPLESSNESS
- ▶ RELIEF OF STRESS/NERVOUSNESS
- ▶ NORMAL/STABLE MOOD



DEAR
BRAIN,
PLEASE
SHUT UP.

FOOD AND DRUG ADMINISTRATION

- ▶ THESE STATEMENTS HAVE NOT BEEN EVALUATED BY THE FOOD AND DRUG ADMINISTRATION. THIS PRODUCT IS NOT INTENDED TO DIAGNOSE, TREAT, CURE , OR PREVENT ANY DISEASE.

SCIENTIFIC ARTICLES PUBLISHED

- ▶ <http://www.mdpi.com/1422-0067/17/2/230/pdf> ENDOCANNABINOIDS AS GUARDIANS OF METASTASIS
- ▶ <https://www.spandidos-publications.com/10.3892/or.2015.3746> PROAPOPTOTIC EFFECT OF ENDOCANNABINOIDS IN PROSTATE CANCER CELLS
- ▶ <https://www.ncbi.nlm.nih.gov/pubmed/24373545> INHIBITION OF COLON CARCINOGENESIS BY A STANDARDIZED CANNABIS SATIVA EXTRACT WITH A HIGH CONTENT OF CANNABIDIOL

SCIENTIFIC ARTICLES PUBLISHED

- ▶ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2430692/> ACUTE AND CHRONIC PAIN
- ▶ <https://www.ncbi.nlm.nih.gov/pubmed/11164622> CANNABINOID RECEPTORS AND PAIN
- ▶ <https://www.ncbi.nlm.nih.gov/pubmed/17119542> ENDOCANNABINOIDS IN CHRONIC MIGRAINE
- ▶ <https://www.ncbi.nlm.nih.gov/pubmed/22442371> ANANDAMIDE - RUNNERS HIGH

SCIENTIFIC ARTICLES PUBLISHED

- ▶ <https://www.medicalnewstoday.com/articles/321501.php> HOW CAN CBD HELP WITH FIBROMYALGIA?
- ▶ <https://www.ncbi.nlm.nih.gov/pubmed/11164622> CANNABINOID RECEPTORS AND PAIN
- ▶ <https://www.ncbi.nlm.nih.gov/pubmed/24373545> CANNABIDIOL AS A POTENTIAL TREATMENT FOR ANXIETY DISORDERS

TO FIND OUT WHAT RESEARCH HAS BEEN DONE

- ▶ GOOGLE:

- ▶ (1) CANNABIS - CBD
- ▶ (2) HEALTH CONDITION

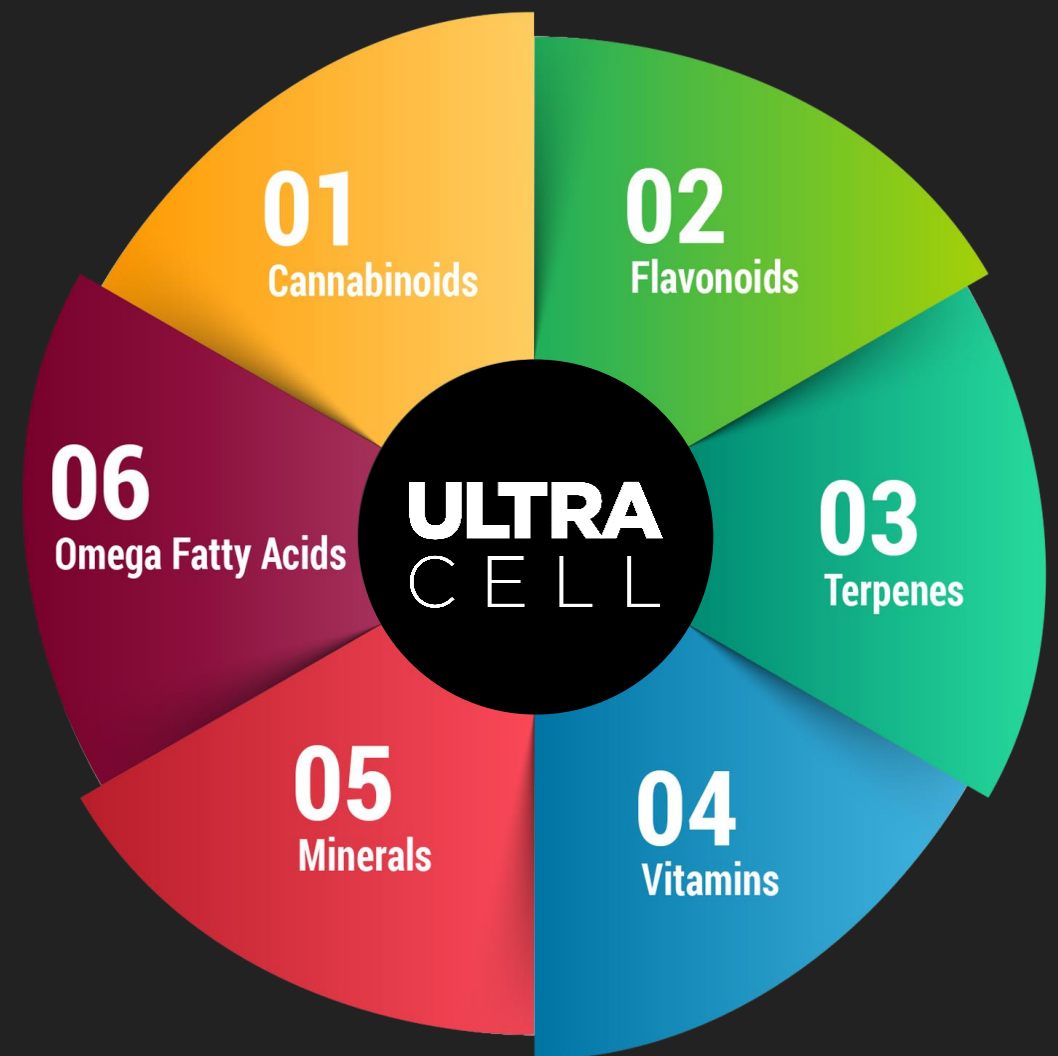
- ▶ REPUTABLE SOURCES:

- ▶ NATIONAL INSTITUTES OF HEALTH (NIH)
- ▶ MEDSCAPE, WEBMD, MAYO CLINIC

WHAT TO LOOK FOR

THE POWER OF FULL SPECTRUM HEMP OIL

- ▶ Entourage Effect
- ▶ Superfood
- ▶ Vitamins
- ▶ Minerals



WHAT TO LOOK FOR:

M.A.P.

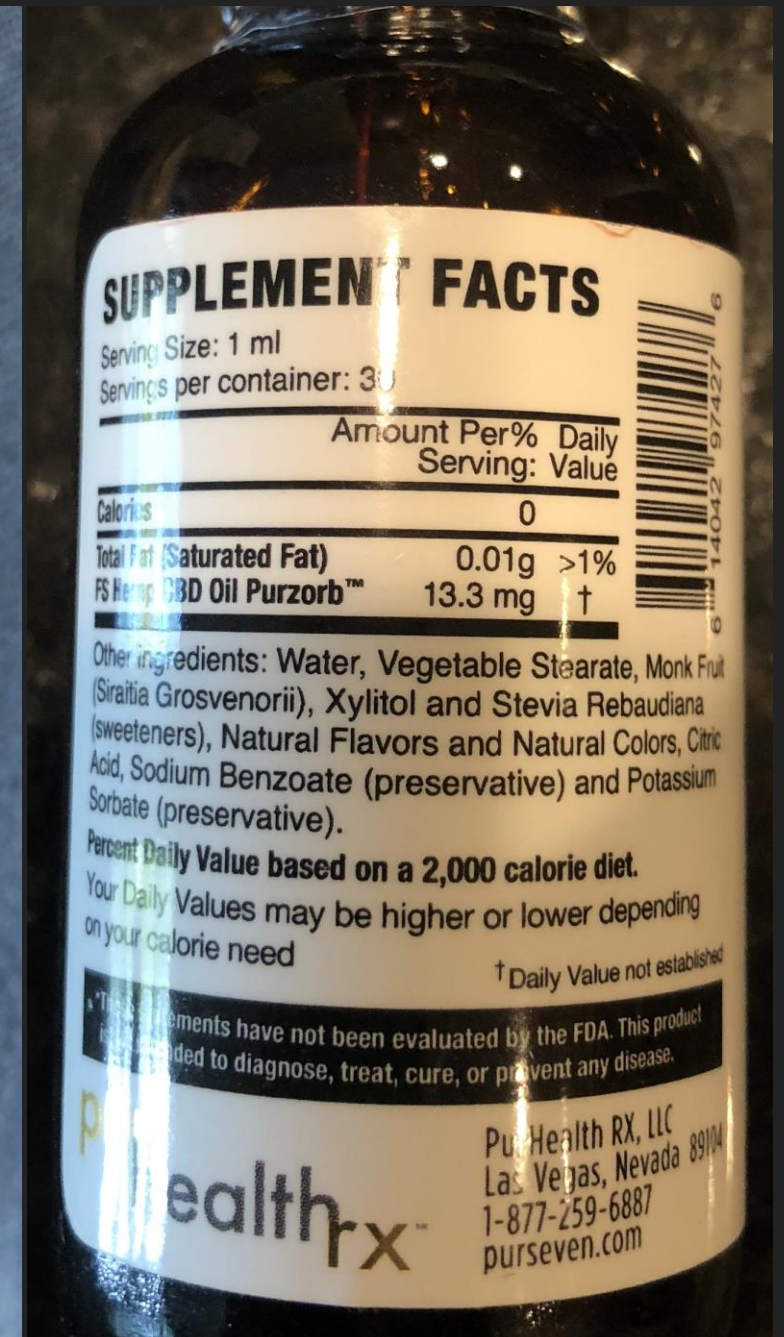
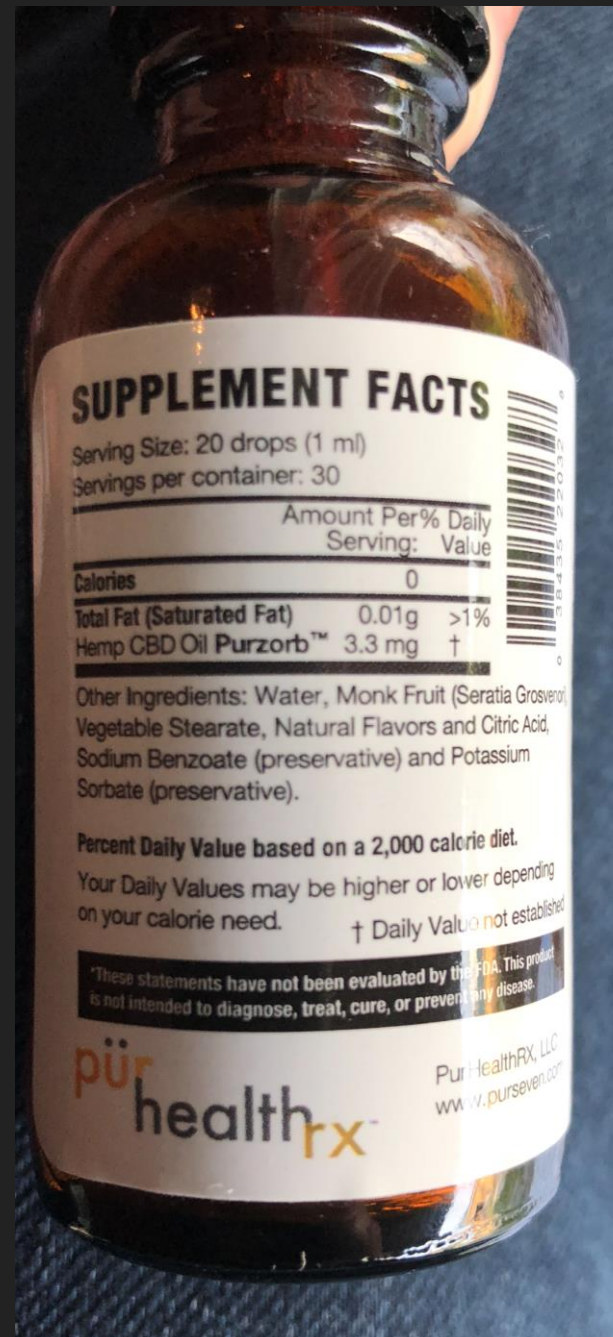
- ▶ Milligrams
- ▶ Absorption
- ▶ Purity



WHAT TO LOOK FOR:

MILLIGRAMS

- ▶ 1 - Milligrams PER SERVING
- ▶ 2 - Milligrams PER BOTTLE

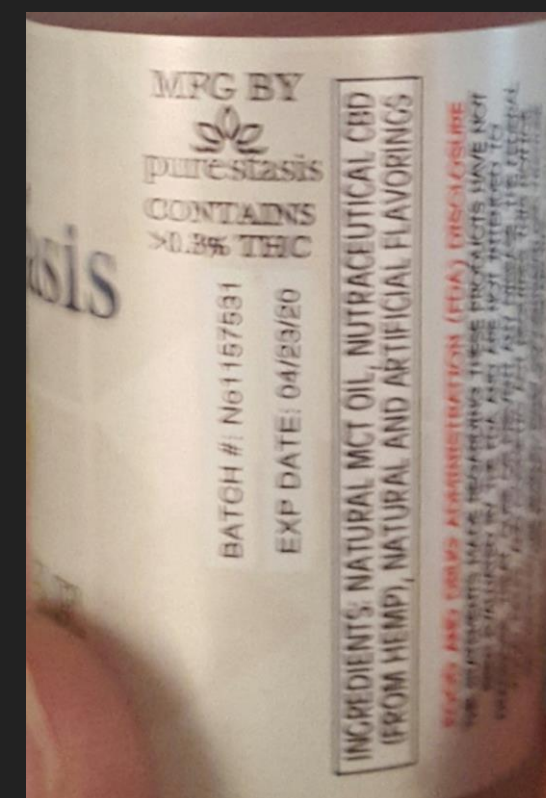


WHAT TO LOOK FOR:

MILLIGRAMS

- ▶ Milligrams of 'WHAT'?
- ▶ Ideally the 'whole plant'.
- ▶ NOT just seeds or parts

Amount Per Serving	% DV
Hemp Oil (Aerial Plant Parts) 12 mg † (Cannabidiol (CBD) 1 mg)	
† Daily Value (DV) not established.	
Other Ingredients: Extra Virgin Olive Oil, Peppermint Oil, Monk Fruit (Siratia Grosvenori), Silica, Monolaurin, Quillaja Saponaria, Ascorbyl Palmitate, Alpha Tocopherol, Water	
Dist. by: CV Sciences, Inc. 2688 South Rainbow Blvd, Suite B, LAS VEGAS, NV 89146	



Phytocannabinoid	10mg	**
Hemp Oil		
*Percent Daily Values are based on 2,000 calorie diet.		
**Daily Value not established.		
Ingredients: Pressed Hemp (seed) oil, CBD-rich Whole Hemp Extract		

Supplement Facts	
Serving Size: 2mL (10 pumps)	Amount Per Serving
Servings per container: 5	
Hemp Extract (stems and stalks) [†]	24mg
Phytocannabinoid Diols [†]	16mg
†Daily Value Not Established	
Other Ingredients: Water, Glycerin, Phospholipids (from Sunflower Seed Oil), Ethanol (derived from Pure Sugar Cane), Vitamin E, Natural Citrus Oils.	
Suggested Use: 5-10 pumps	

ABSORPTION: THE PROBLEM

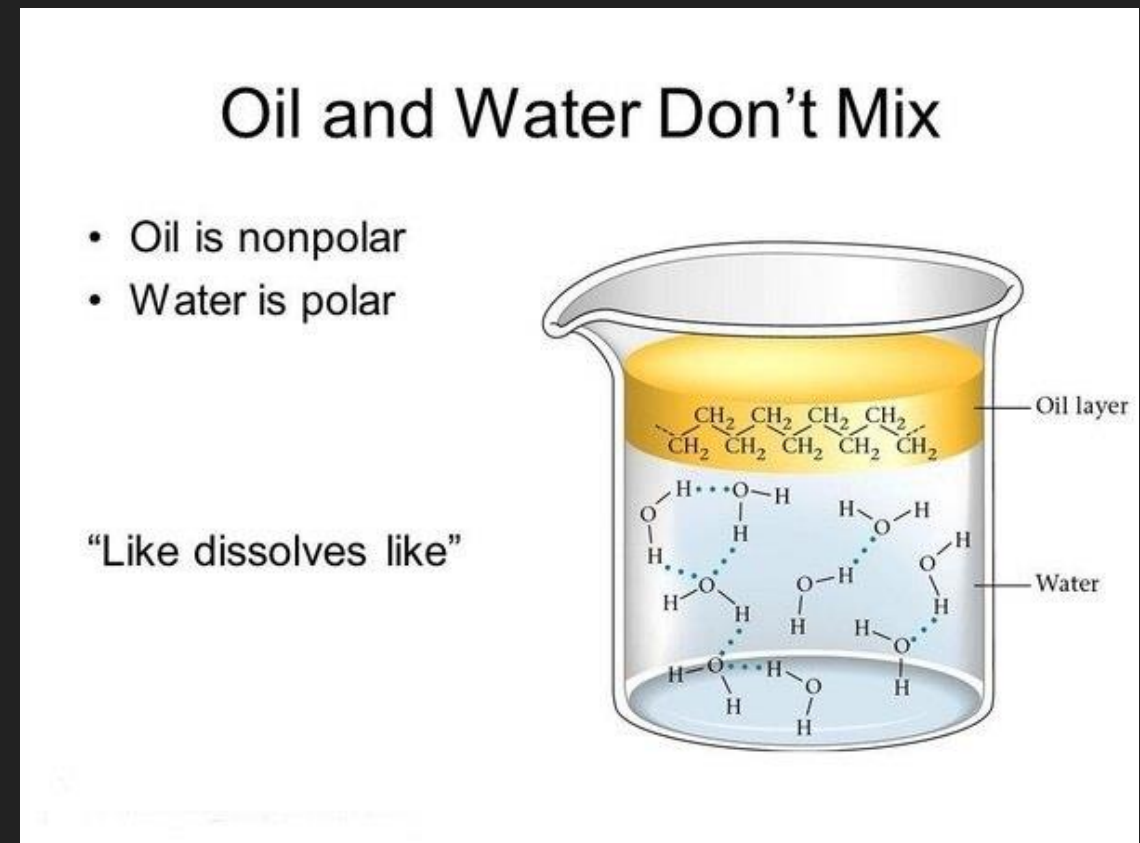
▶ HEMP OIL IS...OIL

▶ THE RESULT?

▶ ONLY 6% ABSORPTION

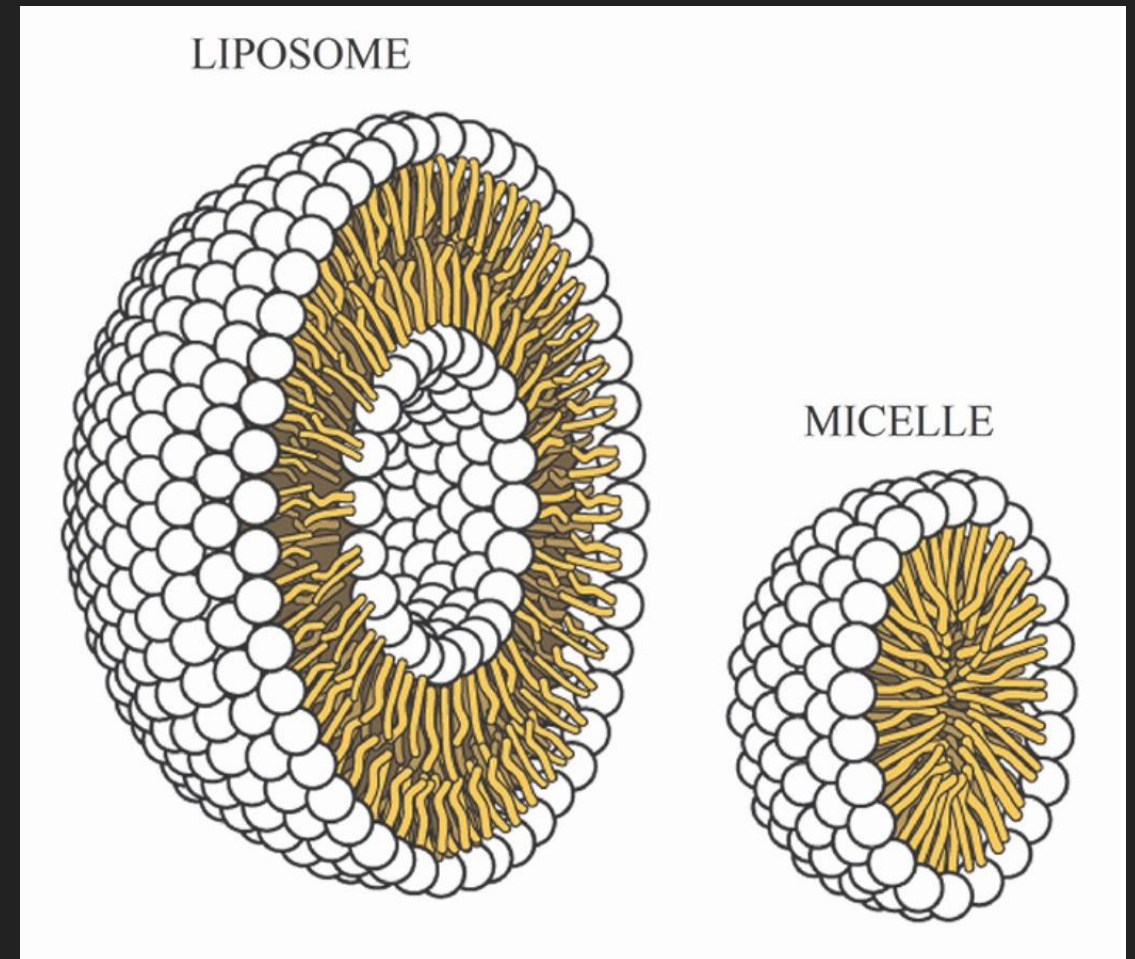
▶ DELAYED ONSET OF ACTION: 60-90 minute

▶ SHORT DURATION: 3-4 hours



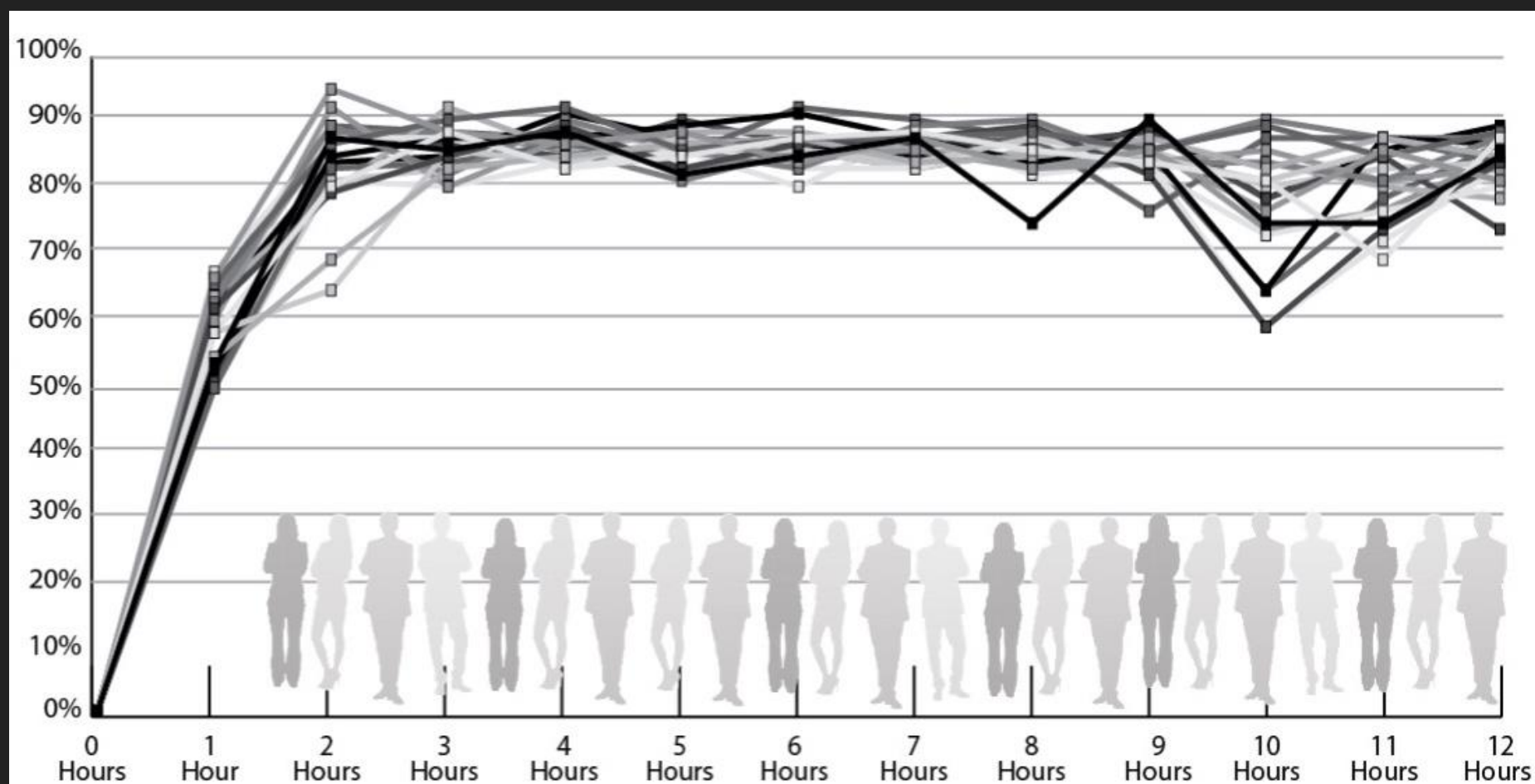
ABSORPTION: THE SOLUTION (MAKE IT WATER-SOLUBLE)

- ▶ Micelle - Liposome
 - ▶ Patent-pending technology
- ▶ THE RESULT?
 - ▶ 94%
 - ▶ QUICK ONSET OF ACTION: 5-15 MINUTES
 - ▶ LONG DURATION OF ACTION: 12 HOURS



WHAT TO LOOK FOR:

COMBINING WATER-SOLUBLE TECHNOLOGIES: QUICK ONSET AND LONG DURATION OF ACTION



Conducted at Mayo Clinic Professional
Research Center - February 2018

WHAT TO LOOK FOR:

WATER-SOLUBLE
HEMP

VS

OIL-BASED HEMP

- ▶ LEFT VIAL : WATER-SOLUBLE
- ▶ RIGHT VIAL: OIL-BASED



WHAT TO LOOK FOR:

PURITY: USDA CERTIFIED AS ORGANICALLY SOURCED

- Is buying organic worth it?

 Apples & oranges Below are the retail price differentials between organic and conventional foods found at a local supermarket.		
ORGANIC		CONVENTIONAL
	APPLES 1 POUND RED DELICIOUS \$2.49	 \$1.99
	ORANGES BAG OF NAVEL (8-9 IN A BAG) \$5.99	 \$4.50
	MILK HALF-GALLON 2-PERCENT \$4.09	 \$1.76
	EGGS 1 DOZEN \$3.99	 \$1.79
	BREAD LOAF OF SEVEN-GRAIN \$5.69	 \$3.99
	BROCCOLI 1 POUND CROWNS \$2.99	 \$2.49
	POTATOES 5-POUND BAG OF RUSSET \$5.99	 \$3.99

Todd D. Spills/Tulsa Jay News

WHAT TO LOOK FOR:

PURITY: USDA CERTIFIED AS ORGANICALLY SOURCED

- ▶ Is buying organic worth it?
 - ▶ YES

RESEARCH INTO HEMP AS A SOIL DECONTAMINANT

There is extensive research into the ability of hemp to act as a phytoremediator. An Italian study published in *Plant and Soil* in 2003 showed that hemp had the ability to absorb **cadmium, chromium and nickel** from soil, and that high concentrations of the heavy metals had little effect on plant morphology.

Hemp Eats Radiation, Cleans Toxic Metals From Soil

JANUARY 18, 2016 ENVIRONMENT 2 COMMENTS



Terre Haute, IN: This Unbelievable, Tiny Company Is Disrupting A \$200 Billion Industry

EVERETT

15.2K 36 135 199 13 ... Like



Listen to Article

By Brandon Turbeville

It appears the uses of hemp are endless. In addition to myriad industrial products such as paper, construction material, clothing, food and fuel, hemp is also known to draw out toxic substances from the soil. In other words, not only does hemp provide humans with innumerable products, it also helps to clean the environment of the mistakes we have made in the past. It has already been discovered that hemp may be extremely useful in the removal of cadmium from the soil and other toxic metals.

7:22 AMhightimes.com

NEWSHEALTHCULTUREGROWGUIDESPRODUCTSEVENTSDIRECTORYSUBSCRIBE

NEWS

Home » How Cannabis Cleans Up Nuclear Radiation And Toxic Soil

How Cannabis Cleans Up Nuclear Radiation And Toxic Soil



Published 1 year ago on March 16, 2017
By [Chris Roberts](#)



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Beat The Heat With The Chill: The Freezable Tube Vaporizer

CULTURE / 14 hours ago

7 Ways People Used Cannabis in 1930

NEWS / 15 hours ago

Researchers in Lebanon Hope to Study Medical Benefits of Cannabis

NEWS / 15 hours ago

Oklahoma Senator: Medical Marijuana Would Be "Harmful" To Families

Europe's largest steel mill is in the city of Taranto in southern Italy. In its heyday, the ILVA steel plant produced more than 10 million tons of steel every year—about 40 percent of all the steel made in Italy—and it currently employs about 12,000 people.

This is no small deal in an area where unemployment is north of 20 percent; indeed, the

7:23 AMhemphelps.org

Hemp Removes Toxic Metals & Radiation from Soil

November 9, 2016 | Sarah S.

Hemp continues to break the restricting chains of the government as studies prove to reveal more benefits of industrial Hemp!

Featured Posts

All About that Hemp! Part 3
February 5, 2018

Recent Posts

Cannabis and Parkinson's
February 13, 2018

All About that Hemp! Part 3
February 5, 2018

All About that Hemp! Part 2
January 27, 2018

All About that Hemp! Part 1
January 17, 2018

WHAT TO LOOK FOR:

PURITY: IT MATTERS

- ▶ COUNTRY OF ORIGIN: USA
- ▶ USDA CERTIFIED AS ORGANICALLY SOURCED
- ▶ TESTED

THE PAY IT FORWARD COMPANY

PRODUCT SPEC/COA
BATCH NO. UCLD002-01/02

UltraCell™ Lemon

Proprietary Full Spectrum Hemp Oil
Phytocannabinoid Rich and Water Soluble

ZILIS ULTRACELL HEMP OIL EXTRACT – Lemon 500 mg (30 ml) / 116.7 mg (7 ml)

Product description:

Additional Ingredients:

Manufacture date:

Country of Origin:

Storage/handling:

Packaging:

100% Industrial Hemp Extract with "Ultracell" Technology

Purified Water, Glycerin, MCT (from Coconut), Natural Flavors, Prebiotic Polysaccharides (Xanthan and Acacia Gum, Natural Lipids (from non-GMO Sunflower), Stevia (from leaf), & Potassium Sorbate.

12-07-17

USA

Keep in room temperature, protected from light, excessive heat and moisture. Refrigeration recommended for optimal preservation.

30 ml blue cobalt glass bottle (UCLD002-01) / 15 ml blue cobalt glass bottle (UCLD002-02)



TESTS: UCLD002-01/02

Appearance:

Light to Medium thickness yellow color.
Characteristic taste and smell.
(Testing method: Visual inspection/Organoleptic)

CBD/THC Profile:

CBD

125 mg (-01) / 29.2 (-02)

THC

0 mg/ml (-01 & -02)

(Testing method: HPLC)

Heavy Metals Results:

		Limits:
Arsenic (As)	ND	1.5 ppm
Cadmium (Cd)	ND	25 ppm
Mercury (Hg)	ND	15 ppm
Lead (Pb)	0.053 ppm	5 ppm

(Testing method: TXRF, in accordance with ISO/IEC 17025)

Microbiological Results:

S. aureus	Neg. in 1 g	Total Coliform	<10 cfu/g
Total Plate Count	< 10 cfu/g	P. Aeruginosa	Neg. in 1 g
E coli / Salmonella	Neg. in 1 g	Total Yeast/mold	<10 cfu/g
Total Enterobacteria	<10 cfu/g		

(Testing method: 3M Petrifilm and plate counts for microbiological contamination)

Pesticide Results:

Abamectin	ND	Acequinocyl	ND	Bifenazate	ND
Azoxystrobin	ND	Bifenthrin	ND	Chloromequat Cl.	ND
Cyfluthrin	ND	Fenoxycarb	ND	Imidacloprid	ND
Daminozide	ND	Etoazole	ND	Imazalil	ND
Trifloxystrobin	ND	Cyhalothrin	ND	Resmethrin	ND
Permethrin	ND	Carbaryl	ND	Diazinon	ND
Myclobutanil	ND	Paclobutrazol	ND	Pyrethrium	ND
Spinosad	ND	Spiromesifen	ND	Spirotetramat	ND

(Testing method: HPLC-Mass Spectrometry for 19 compounds including pesticides, fungicides, and plant growth regulators)

ND=None Detected

All analytical work has been conducted professionally in accordance with all applicable standard laboratory practices using validated methods. Data was generated using an unbroken chain of comparison to NIST traceable Reference Standards and Certified Reference Materials. Online publication of this document, including social media, is strictly prohibited. Reproduction, except in full, without written approval from Zilis is strictly prohibited. Statements have not been evaluated by the FDA and are not intended to diagnose, treat or cure any disease. Check with your qualified healthcare provider before using this product, not intended for use by those under 18 years of age.

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(214) 705 -3702 health@zilis.com www.zilis.com
Approved: 12-24-17

WHAT TO LOOK FOR:

PURITY: IT MATTERS

- ▶ COUNTRY OF ORIGIN: USA
- ▶ USDA CERTIFIED AS ORGANICALLY SOURCED
- ▶ TESTED
 - ▶ LAB TESTED/CERTIFICATE OF ANALYSIS FOR:
 - ▶ CBD
 - ▶ THC
 - ▶ PESTICIDES - HERBICIDES
 - ▶ HEAVY METALS
 - ▶ PATHOGENS



PRODUCT SPEC/COA
BATCH NO. UCBB002-01/02

UltraCell™ Berry

Proprietary Full Spectrum Hemp Oil
Phytocannabinoid Rich and Water Soluble

ZILIS ULTRACELL HEMP OIL EXTRACT – Berry 500 mg (30 ml) / 116.7 mg (7 ml)



Product description: 100% Industrial Hemp Extract with "Ultracell" Technology

Additional Ingredients: Purified Water, Glycerin, MCT (from Coconut), Natural Flavors, Prebiotic Polysaccharides (Xanthan and Acacia Gum, Natural Lipids (from non-GMO Sunflower), Stevia (from leaf), & Potassium Sorbate.

Manufacture date: 12-07-17

Country of Origin: USA

Storage/handling: Keep in room temperature, protected from light, excessive heat and moisture. Refrigeration recommended for optimal preservation.

Packaging: 30 ml blue cobalt glass bottle (UCBB002-01) / 15 ml blue cobalt glass bottle (UCBB002-02)

TESTS: UCBB002-01/02

Appearance:
Light to Medium thickness reddish color.
Characteristic taste and smell.
(Testing method: Visual inspection/Organoleptic)

CBD/THC Profile:
CBD 125 mg (-01) / 29.2 (-02)
THC 0 mg/ml (-01 & -02)
(Testing method: HPLC)

Heavy Metals Results: Limits:
Arsenic (As) ND 1.5 ppm
Cadmium (Cd) 0.003 ppm 25 ppm
Mercury (Hg) ND 15 ppm
Lead (Pb) 0.057 ppm 5 ppm
(Testing method: TXRF, in accordance with ISO/IEC 17025)

Microbiological Results:

S. aureus	Neg. in 1 g	Total Coliform	<10 cfu/g
Total Plate Count	< 10 cfu/g	P. Aeruginosa	Neg. in 1 g
E coli / Salmonella	Neg. in 1 g	Total Yeast/mold	<10 cfu/g
Total Enterobacteria	<10 cfu/g		

(Testing method: 3M Petrifilm and plate counts for microbiological contamination)

Pesticide Results:

Abamectin	ND	Acequinocyl	ND	Bifenazate	ND
Azoxystrobin	ND	Bifenthrin	ND	Chloromequat Cl.	ND
Cyfluthrin	ND	Fenoxycarb	ND	Imidacloprid	ND
Daminozide	ND	Etoxazole	ND	Imazalil	ND
Trifloxystrobin	ND	Cyhalothrin	ND	Resmethrin	ND
Permethrin	ND	Carbaryl	ND	Diazinon	ND
Myclobutanil	ND	Paclobutrazol	ND	Pyrethrium	ND
Spinosad	ND	Spiromesifen	ND	Spirotetramat	ND

(Testing method: HPLC-Mass Spectrometry for 19 compounds including pesticides, fungicides, and plant growth regulators) ND=None Detected

All analytical work has been conducted professionally in accordance with all applicable standard laboratory practices using validated methods. Data was generated using an unbroken chain of comparison to NIST traceable Reference Standards and Certified Reference Materials. Online publication of this document, including social media, is strictly prohibited. Reproduction, except in full, without written approval from Zilis is strictly prohibited. Statements have not been evaluated by the FDA and are not intended to diagnose, treat or cure any disease. Check with your qualified healthcare provider before using this product, not intended for use by those under 18 years of age.

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(214) 705 -3702 health@zilis.com www.zilis.com
Approved: 12-24-17

WHAT TO LOOK FOR:

PURITY: IT MATTERS

- ▶ COUNTRY OF ORIGIN: USA
- ▶ USDA CERTIFIED AS ORGANICALLY SOURCED
- ▶ TESTED
- ▶ NON-GMO
- ▶ GLUTEN-FREE
- ▶ CO2 EXTRACTION WITH NO CHEMICALS
- ▶ NON-PRESCRIPTION



UltraCell™

Proprietary Full Spectrum Hemp Oil
Phytocannabinoid Rich and Water Soluble



Available in Lemon and Berry

Did You Know?

There is an intricate group of receptors within the body called the endocannabinoid system (ECS). This complex network impacts many areas of health and is most abundant in the brain and immune system. Studies have shown the ECS to be responsible for important functions such as sleep, relaxation, inflammatory responses, and cognitive ability. The ECS is normally fueled by the healthy production of endocannabinoids. The challenge arises when endocannabinoid production becomes impaired or slowed. The good news is that nature has gifted us with a solution. Phytocannabinoids innately occur in the hemp plant and can serve as a replacement for the endocannabinoids your body may be lacking.

Exclusive Technology

As we all know, oil and water don't mix. It's a widely known fact that oil-based supplements are poorly absorbed by the body. Our proprietary UltraCell technology has been developed by Dr. Derrick DeSilva and our team of experts to make the product 100% water soluble. Through our proprietary process, every compound available is delivered deep into your system. More bio-availability means more health benefits and a faster onset of action.

The News Is Out

Since ancient times, the hemp plant has been revered for an abundance of health benefits. Hemp is naturally rich in phytocannabinoids, yet it doesn't stop there. This amazing botanical includes hundreds of other biologically active compounds. Each one represents its own potential for health benefits. However, when the plant is consumed in its full and natural arrangement the potential for health impact explodes. This phenomenon is known as the "entourage effect" and it only occurs in full spectrum hemp oil. The way that nature intended.

Introducing UltraCell™

Available exclusively from Zilis. UltraCell is a full spectrum, phytocannabinoid rich, and water soluble hemp oil. Our team of experts delicately extracts the complete oil profile of certified USDA organic hemp to make every bottle of UltraCell. Every delightful serving provides phyto cannabinoids, flavonoids, terpenes, vitamins, minerals, omega fatty acids, and more. UltraCell comes in two delicious flavors to please the palate: berry or lemon.

UltraCell sets the standard:

- USDA Certified as Organically Sourced
- 500 mg Full Spectrum Hemp Oil
- Greater Absorption
- Contains Prebiotics
- Pet Friendly
- No Sodium Benzoate
- Infused with Acai*

All in a delicious, water soluble oil

Nutrition Info

Serving Size: 1 mL

Servings per Container: 30	Amount per Serving	% Daily Value*
UltraCell Full Spectrum Industrial Hemp Oil	16.67 mg	*

OTHER INGREDIENTS: Purified Water, Glycerin, MCT (from coconut), Natural Flavors (from plant extract), Prebiotic Polysaccharides (from Xanthan and Acacia Gum), Natural Lipids (from non-GMO sunflower), Stevia (from leaf), Potassium Sorbate.

DIRECTIONS: Take 1 mL daily or as directed by a physician. Shake before using. Intended for oral use only. Everyone should consult their qualified healthcare provider prior to using this product. Not intended for use by those under age 18.

*Percent Daily Values (DV) are based upon a 2,000 calorie diet
† Daily Value not established

* Acai berry is used for coloring and flavor purposes in berry flavor UltraCell.

These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

UltraCell™ is not made from marijuana. The product is sourced from USDA certified organic industrial hemp plants cultivated under license by the Colorado Department of Agriculture and contract grown pesticide and herbicide-free. The fields from which UltraCell™ is derived were tested by the Colorado Department of Agriculture and certified compliant with the Colorado Industrial Hemp Regulatory Program Act. UltraCell™ is independently HPLC tested and verified to contain 0.00% THC and less than 4.9% cannibidiol by weight.

1 of 1

WHAT IF YOU CANNOT TAKE HEMP PRODUCTS:

REASONS TO AVOID HEMP:

1 - ALLERGY TO HEMP

2 - EMPLOYMENT

- ▶ BOTANICALS THAT MODULATE CANNABINOID RECEPTORS
- ▶ NATURAL SLEEP AIDS
- ▶ NATURALLY BOOST COGNITION







UltraCell™

PROPRIETARY FULL SPECTRUM HEMP OIL

Available exclusively from Zilis, UltraCell™ is a full spectrum, phytocannabinoid rich, and water-soluble hemp oil. Our team of experts delicately extracts the complete oil profile of certified USDA organic hemp to make every bottle of UltraCell™. Though notoriously difficult to absorb, our hemp oil uses a proprietary process which allows the body to use nearly every compound within UltraCell™. This greater bio-availability means more health benefits and a faster onset of action. In addition to more efficient absorption, every delightful serving provides phytocannabinoids, flavonoids, terpenes, vitamins, minerals, omega fatty acids, and more. UltraCell™ comes in the two delicious flavors of berry and lemon so that our hemp oil is not a chore, but a pleasure, to take.



UltraEdge™

FULL SPECTRUM COGNITIVE SUPPORT

UltraEdge™ is a water-soluble, cognitive support product designed to explode your mental and physical productivity. UltraEdge™ contains a proprietary blend of powerful nootropics along with our exclusive Mimetix™ formula. UltraEdge™ is formulated to help with every aspect of mental acuity, performance, and cognition. serving is packed with the fuel necessary to help you perform at your optimal level, whether at work, home, or on the go. Ignite your mental potential, and get the edge you need to take on the day.



UltraIce™

FULL SPECTRUM HOMEOSTASIS SUPPORT

Homeostasis is the scientific name for balance. UltraIce™ is designed to help you capture the balance your body desperately needs. By combining our proprietary homeostasis support complex with our breakthrough Mimetix™ formula, UltraIce™ delivers hemp-free mind and body balance. Much like cannabinoids, the curcuminoids found in UltraIce™ have multiple naturally occurring structures. UltraIce™ is formulated using all three of these forms, also known as three-peak. Research has also proven that three-peak curcuminoids modulate cannabinoid receptors. Why settle for inferior products that are limited in their scope when you could create an entourage effect of benefits? Our revolutionary technology allows the ingredients a more dynamic and effective internal delivery. Optimal body function is an elusive goal, but with the help of UltraIce™, that balance can be achieved.



UltraDream™

FULL SPECTRUM SLEEP SUPPORT

Sleep plays an important role in every aspect of our physical health. Ongoing sleep deficiency is linked to an increased risk in a host of health issues. Studies show that the gap between getting enough sleep and getting little sleep can affect your mood, your weight, and much more. UltraDream™ is a breakthrough for those who desire to enrich the quality of their sleep. By combining our Sleep Support blend containing well known sleep aids GABA and Melatonin with our proprietary Mimetix™ formula, UltraDream™ taps into the ECS where it helps settle you into a gentle sleep and promotes a deep restfulness. Unlike other sleep aids, UltraDream™ contains no inconvenient side effects. You'll awake each morning ready to take on your day. Discover the difference UltraDream™ can make tonight.

[for more information go to zilis.com]

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ULTRACELL

- PET FRIENDLY
- NO XYLITOL



XYLITOL FREE
PET FRIENDLY

FULL SPECTRUM
HEMP CBD OIL

AVAILABLE IN
LEMON AND BERRY

YOU LOVE THEM.
WE LOVE THEM.

OTHER INGREDIENTS: Purified Water, Glycerin, MCT (from coconut), Natural Flavors (from plant extract), Prebiotic Polysaccharides (from Xanthan and Acacia Gum), Natural Lipids (from non-GMO sunflower), Stevia (from leaf), Potassium Sorbate.



UltraCell™ Full Spectrum Hemp CBD Oil Pet Dosing Suggestions

As humans, our recommended dose of UltraCell™ is about 20 drops (1 mL) daily. The suggested dosage for dogs and cats is roughly 1-2 drops per 20 pounds twice daily.

SUGGESTED DOSING RANGE

PET TYPE	SIZE	DOSAGE	FREQUENCY
Dog or Cat	Less than 20 lbs	.005 to .1 mL	1 - 2 drops applied to gums twice daily
Dog	21 - 40 lbs	.005 to .2 mL	1 - 4 drops applied to gums twice daily
Dog	41 - 60 lbs	.01 to .3 mL	2 - 6 drops applied to gums twice daily
Dog	61 - 80 lbs	.01 to .4 mL	2 - 8 drops applied to gums twice daily
Dog	81 - 100 lbs	.02 to .5 mL	4 - 10 drops applied to gums twice daily
Dog	101 - 120 lbs	0.6 mL	10 - 12 drops applied to gums twice daily
Dog	121 - 140 lbs	0.8 mL	12 - 14 drops applied to gums twice daily
Dog	141 - 160 lbs	0.9 mL	10 - 16 drops applied to gums twice daily

Always start low and slowly increase dose as needed and tolerated by your pet.

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POPULAR LEADING BRANDS

- ▶ ULTRACELL
- ▶ PRIME MY BODY
- ▶ HEMPWORX
- ▶ +CBD OIL
- ▶ ANANDA
- ▶ PURE STASIS
- ▶ ENDOCA
- ▶ KOI CBD

ESSENTIAL CHARACTERISTICS

- ▶ EIGHT (8) THINGS TO LOOK FOR

POPULAR LEADING BRANDS

- ▶ ULTRACELL

VITAL CHARACTERISTICS

- ▶ WATER-SOLUBLE
- ▶ 12-HOUR DURATION
- ▶ COUNTRY OF ORIGIN: USA
- ▶ USDA CERTIFIED AS ORGANICALLY SOURCED
- ▶ WHOLE PLANT - NOT JUST PARTS, AND NOT JUST HEMP SEED OIL
- ▶ CO2 EXTRACTION - NO CHEMICALS
- ▶ LAB TESTING: COA
- ▶ PHYSICIAN CONSULTANT ON STAFF (I.E. CHIEF MEDICAL OFFICER)

ULTRACELL BY ZILIS

- ▶ ULTRACELL IS THE ONLY FULL-SPECTRUM HEMP OIL THAT MEETS OR EXCEEDS ALL OUR REQUIREMENTS.
- ▶ THE ONE WE CHOOSE FOR FAMILY, FRIENDS, AND PATIENTS MORE THAN ANY OTHER CURRENTLY ON THE MARKET.



FOOD AND DRUG ADMINISTRATION

- ▶ THESE STATEMENTS HAVE NOT BEEN EVALUATED BY THE FOOD AND DRUG ADMINISTRATION. THIS PRODUCT IS NOT INTENDED TO DIAGNOSE, TREAT, CURE , OR PREVENT ANY DISEASE.

EVIDENCE-BASED VS NOT EVIDENCE-BASED

EXAMPLES:

VITAMINS - PRENATAL VITAMINS AND IRON
FISH OIL SUPPLEMENTS



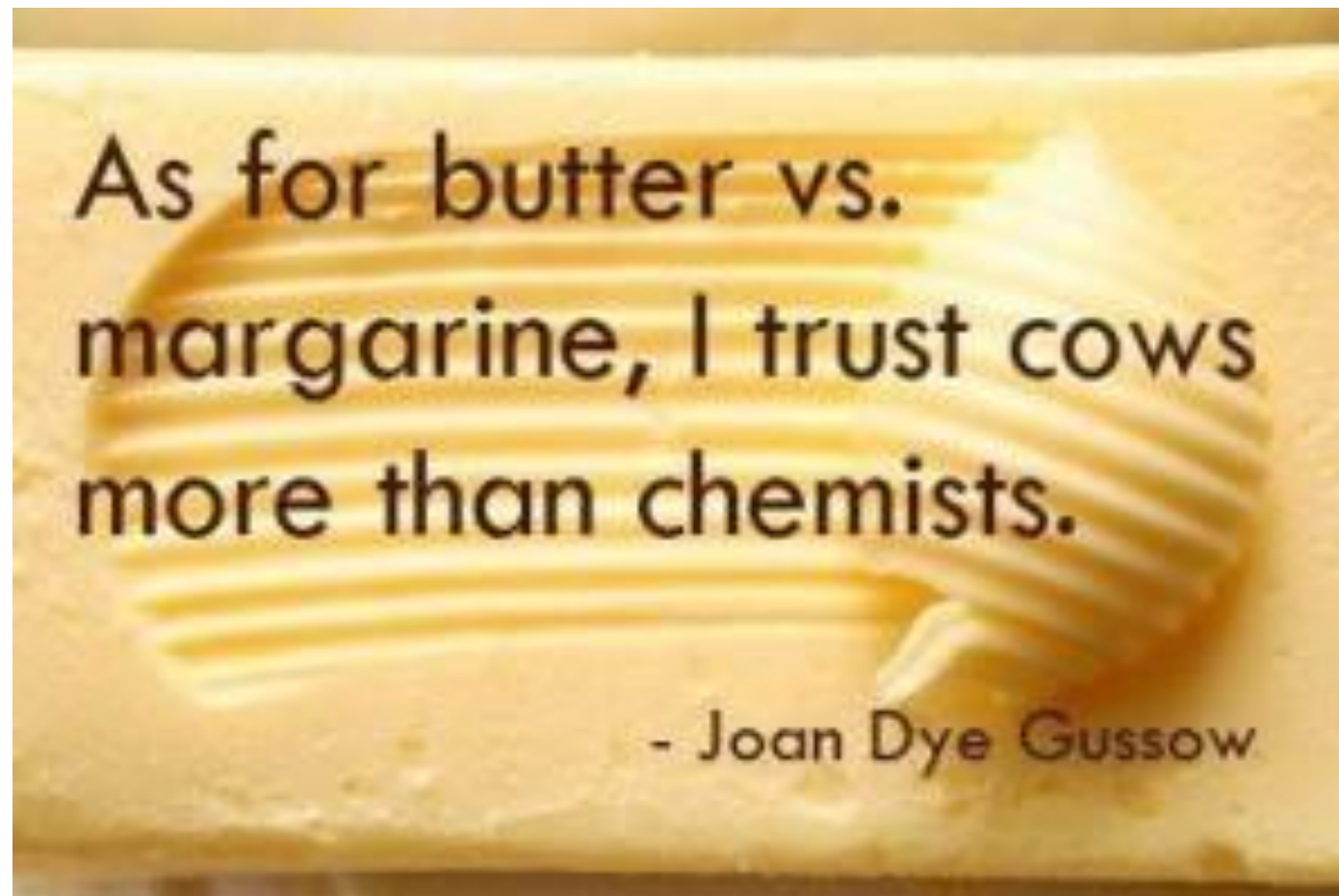
EVIDENCE-BASED VS NOT EVIDENCE-BASED

EXAMPLES:

MARGARINE

ARTIFICIAL SWEETENERS

GMO-FOODS

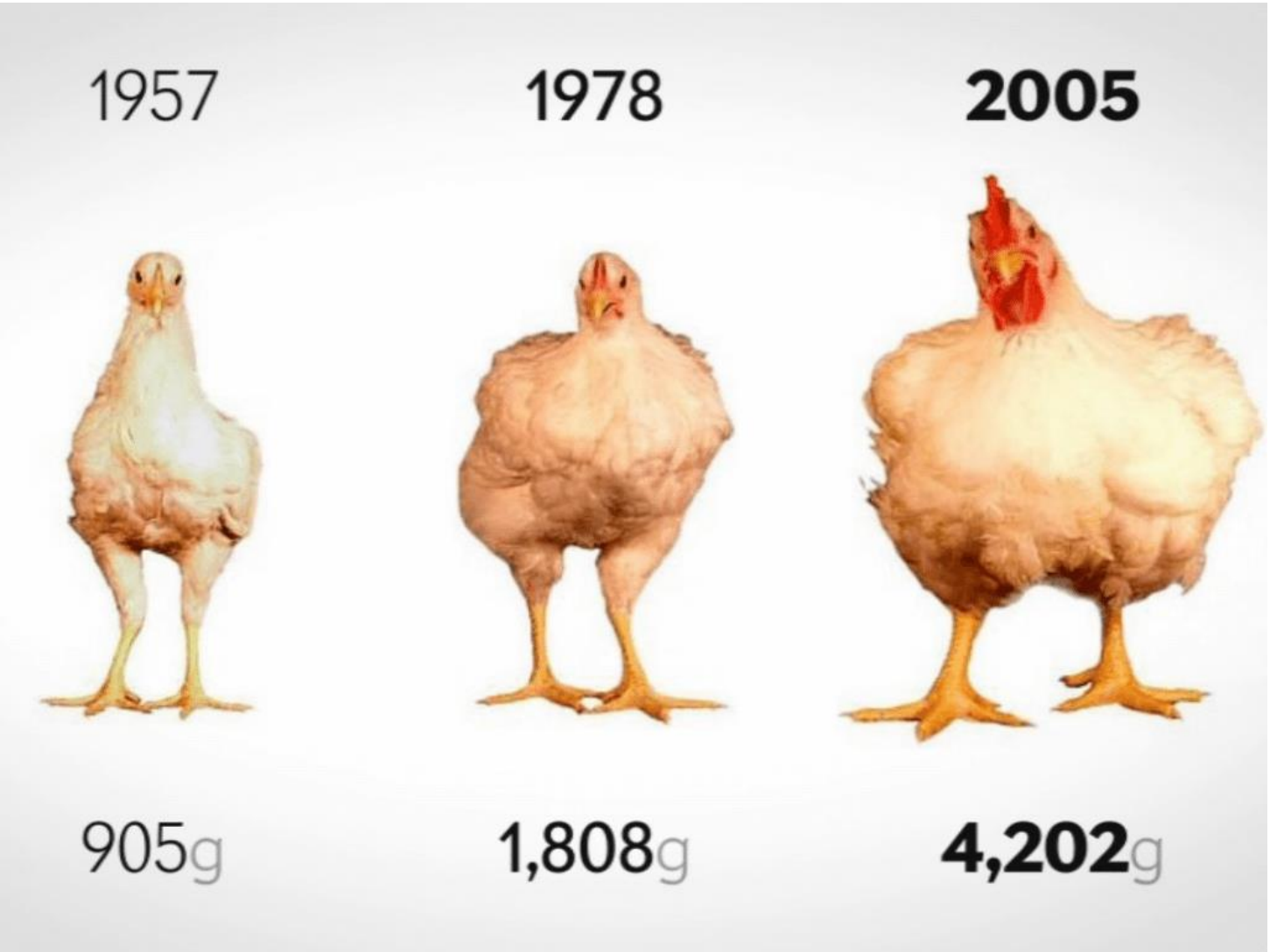
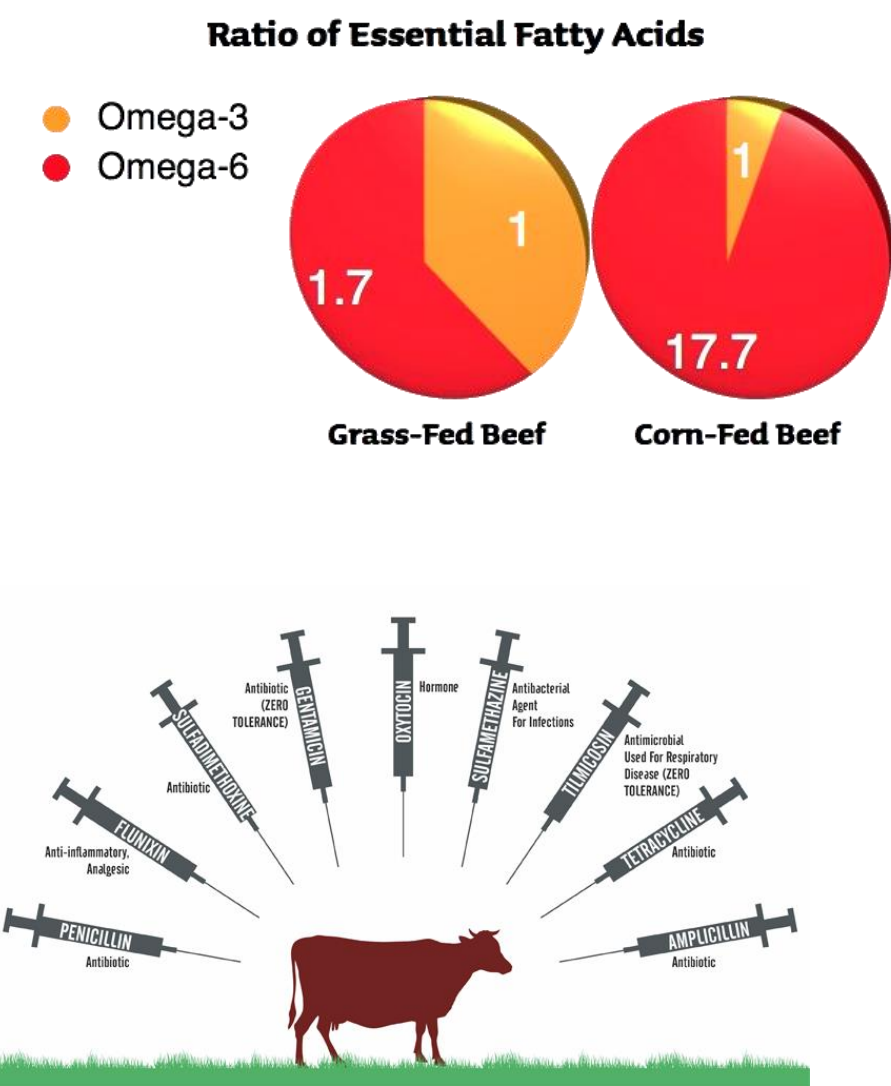


EVIDENCE-BASED VS NOT EVIDENCE-BASED

EXAMPLES:

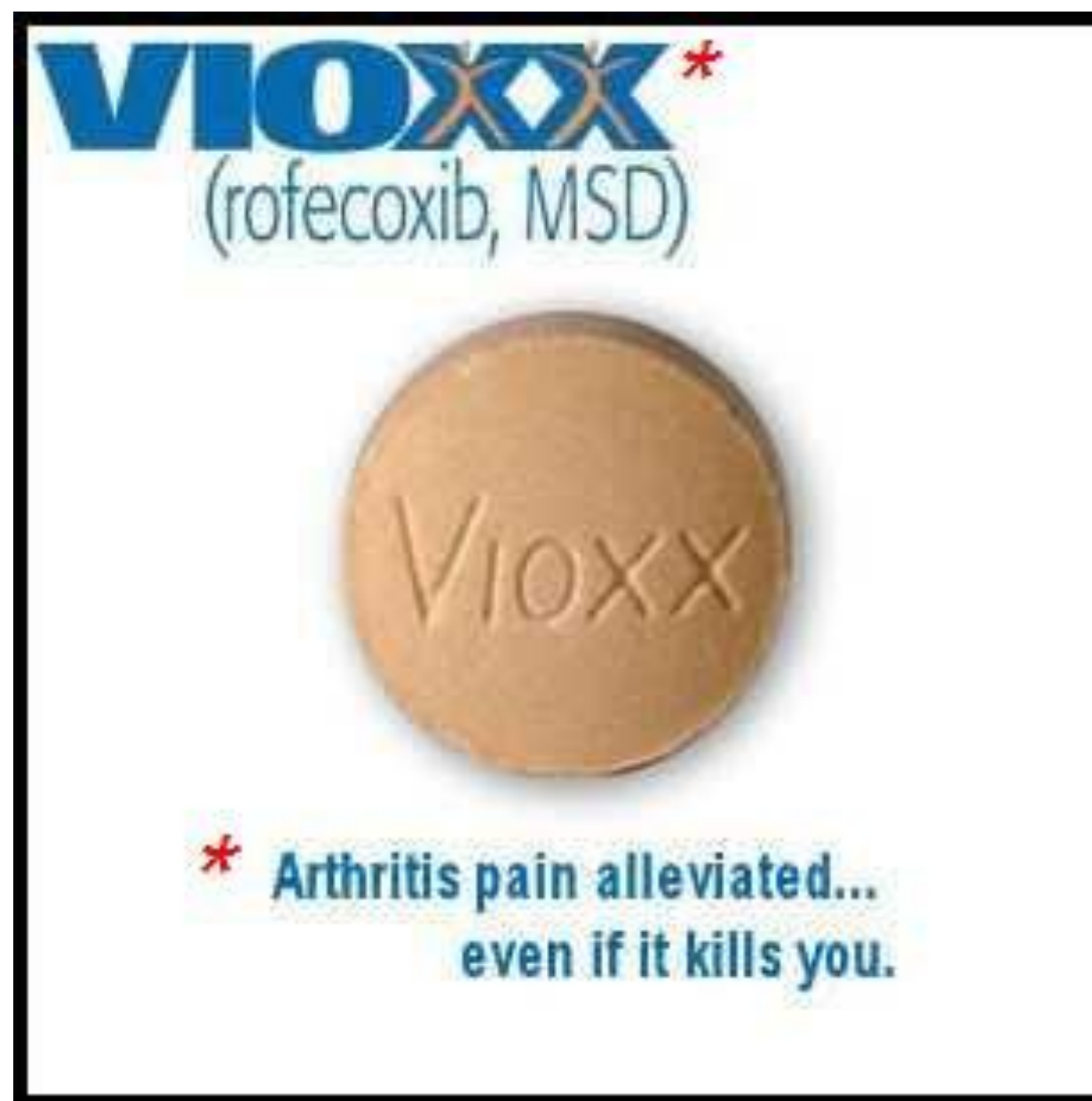
CORN-FED COWS

ANTIBIOTICS-HORMONES IN COWS AND CHICKENS



EXAMPLE: VIOXX

- ▶ FDA-Approved
- ▶ Released 1999
- ▶ Withdrawn 2004 by Merck



“FIRST OF ALL, DO NO HARM”

FULL-SPECTRUM HEMP OIL

▶ PROS:

- ▶ NATURAL, PLANT-BASED, NON-GMO
- ▶ NO ABUSE OR DEPENDENCE POTENTIAL
- ▶ NO CASES OF OVERDOSE
- ▶ 6000 YEARS OF USE IN EASTERN MEDICINE
- ▶ 60 YEARS OF USE IN USA PRIOR TO 1937.
- ▶ EXPANDING BODY OF CURRENT RESEARCH THAT SUGGESTS BENEFITS

▶ CONS:

- ▶ ALLERGIES TO HEMP
- ▶ EMPLOYMENT CONCERNS
- ▶ MEDICOLEGAL (PREGNANT, ORGAN TRANSPLANT, PEDIATRIC)