

The Endocannabinoid System as Scientific Proof that Cannabis is Medicine

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What we know of cannabis as medicine

- ▶ 60,000+ doctors practicing cannabis medicine
- ▶ Their stories are all variations of “miraculous” cures
 - ▶ A 13 y.o. has 70 chest tumors disappear
 - ▶ 2 y.o. not expected to live 3 months – is now 6 ½
 - ▶ Opioid addiction: decreases across all demographics, often dramatically
 - ▶ Providing great relief to veterans with PTSD and suicide ideation
 - ▶ Sophie – 250-300 seizures/day; seizure free for 16 months
- ▶ Benefits for a huge range of diseases and conditions

Composite of the 33 States Qualifying Conditions for a Medical Marijuana Card

Parkinson's Disease

Glaucoma

Muscle Spasms

Anorexia

Autism

Cancer

Hydrocephalus

Cerebral Palsy

Migraines

AIDS

Spinal Stenosis

Huntington's Disease

Dystonia

Crohn's

Arthritis

Lupus

Diabetes

Cervical Dystonia

Anxiety

Tarlov Cysts

Fibromyalgia

Severe Psoriasis

Osteogenesis Imperfecta

Multiple Sclerosis

Loss of Appetite

Irritable Bowel Syndrome

Muscular Dystrophy

Decompensated Cirrhosis

Rheumatoid Arthritis

Mitochondrial Disease

Peripheral Neuropathies

Fibrous Dysplasia

Myasthenia Gravis

Nail Patellar Syndrome

Residual Limb Pain

Chronic Traumatic Encephalopathy

Spinocerebellar Ataxia

Lennox-Gastaut Syndrome

Reflex Sympathetic Dystrophy

Obstructive Sleep Apnea

Inclusion Body Myositis

Interstitial cystitis

Cystic Fibrosis

Vomiting

Chronic Pain

Seizures

Cramping

Neural Tube Defects

Hydromyelia

Myoclonia

Chronic Pancreatitis

Ulcerative Colitis

Spinal Cord Injury

Terminal Illness

Sjorgen's Syndrome

Syringomyelia

Traumatic Brain Injury

Dravet's Syndrome

Sickle Cell

Nausea

HIV Positive

Renal Failure

Hepatitis C

Spinal cord injury with intractable spasticity

Incurable neurodegenerative diseases

Amyotrophic Lateral Sclerosis

Post Laminectomy syndrome with chronic radiculopathy

Psoriatic Arthritis

Neuropathic Facial Pain

Post-Traumatic Stress Disorder

Tourette's Syndrome

Epidermolysis bullosa

Agitation of Alzheimer's

Post concussion syndrome

Any condition the cannabis doctor deems cannabis would help

Any condition the MD Cannabis Board believes would help

Epilepsy

Rates of Success

- ▶ Patricia Frye, MD (Takoma Park Alternative Care, MD)
 - ▶ Decreased opioid use in 60-75% of patients in **chronic pain**
 - ▶ Patients with **migraines** or daily headaches – 66% improvement
- ▶ Dustin Sulak (Integr8 Health, ME), Russell Saneto (Seattle Children's Hospital, WA), Bonnie Goldstein (Canna-Centers, CA)
 - ▶ Observational, data on 272 patients with medically refractory **epilepsy** – some degree of seizure reduction was seen in 86% of the patients*

*Sulak et al. Epilepsy Behavior, 2017 May; 70 (part B):328-333

Endocannabinoid System

Main Components

- ▶ Receptors
 - ▶ CB1
 - ▶ CB2
 - ▶ CB3
- ▶ Endogenous Cannabinoids
 - ▶ AEA
 - ▶ 2-AG
- ▶ Enzymes that synthesize them
- ▶ Enzymes that degrade them

Systems in the Human Body

- Muscular
- Skeletal
- Lymphatic (immune)
- Nervous
- Circulatory
- Endocrine
- Respiratory
- Digestive
- Urinary
- Reproductive

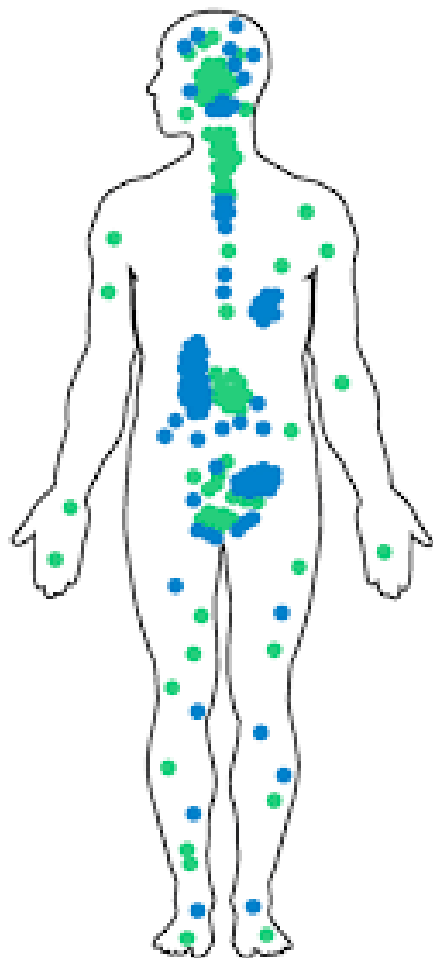


The Endocannabinoid System





The Endocannabinoid System



- Is everywhere
- Maintains balance in every system
- Maintains balance between systems
- Disruptions of ECS components are seen in many conditions and diseases
- Conventional medicine is not effective because it's not treating the real problem
- Cannabis resolves conditions because it fixes the disrupted ECS
- It is the only medicine that can do this
- Demonstrating scientific evidence that cannabis is medicine!