Beyond CBD and Cannabis: A More Complete View of the Endocannabinoid System

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DISCOVER YOUR ENDOCANNABINOID SYSTEM

Your Endocannabinoid System is a critically important physiologic system involved in establishing and maintaining optimal health.
THE ENDOCANNABINOID SYSTEM
A Surprise Discovery!

- Surprise Discovery of previously unknown bodily system occurring in 1988
- Discovered by Dr. Raphael Machoulam while tracing the metabolic pathway of THC
- The ECS is estimated to have originated 600 million years ago
- The ECS exists in ALL animals except insects
- A receptor-site system similar to the nervous system

PLAYS A CENTRAL ROLE IN THE:
Regulation, maintenance and balance of optimal health and healing – defined as HOMEOSTASIS
The ECS plays a key role in promoting homeostasis.

Homeostasis is the maintenance of relatively stable conditions within the body’s internal environment (such as body temperature, blood pressure, pH, hormones...etc) despite changes occurring both inside and outside the body (eating, exercise, pregnancy, stress...etc)

The ECS is a communication system vital to life, as well as overall health and wellness.
INVOLVED IN EVERY ASPECT OF HUMAN HEALTH
Your Endocannabinoid System

The Endocannabinoid System Mediates Systemic Health

- Brain
- Nervous System
- Heart & Lung
- Bone & Muscle
- Immune System
- Digestive System
- Kidney
- Liver & Spleen
- Endocrine Glands
- Fat And Adiposity
- Blood Vessels
- Blood Cells
- Lymph Cell

The Endocannabinoid System Regulates

- Pain
- Motivation & Reward
- Appetite
- Inflammation
- Thermoregulation
- Eye Ocular Pressure
- Muscle Control
- Sensation
- Energy
- Metabolism
- Mood
- Stress Response
ENDOCANNABINOID SYSTEM ACTIVATORS

ECS Activators are compounds that have the ability to bind and activate ECS receptor sites.

**ECS Activators:**
- Endocannabinoids
- Phytocannabinoids
- Cannabimimetics

**ECS ACTIVATORS:**
CBD and THC are only two of MANY ECS Activators that bind to CB1 and CB2 Receptors.
ENDOCANNABINOID SYSTEM RECEPTORS

There are 2 major receptor sites in the ECS, CB1 & CB2.

- CB1 Receptor sites are found primarily in the Central Nervous System and the Brain
- CB2 Receptor Sites are found primarily in the Immune system, gastrointestinal tract, and peripheral nervous system

ACTIVATION IS KEY!
ENDOCANNABINOID SYSTEM SUPPORTERS

ECS Supporters are dietary, lifestyle and environmental factors that help to replenish and renew your ECS!

ECS SUPPORTERS:

- Healthy Fats & A Whole-food based Diet rich in Omega 3 fatty acids
- Stress Reduction & Modification like yoga, meditation, walks in nature, baths
- Regular Exercise
- Dietary Supplements and Botanicals
- Hot/Cold Therapy
ENOCANNABINOID DEFICIENCY SYNDROME (CEDS)

Clinical Endocannabinoid Deficiency (CECD), is a condition in which the ECS is compromised due to poor nutrition and or prolonged exposure to psychological and or physical stress or disease.

Causal Factors:
- Poor Diet/Nutrition
- Lack of Exercise
- Drug Abuse / Addiction
- Environmental Toxins
- Genetic Factors
- Chronic Stress
- Chronic Illness

THOUGHT TO BE A CONTRIBUTING FACTOR IN:
- Chronic Fatigue Syndrome
- Fibromyalgia
- Migraines
- IBS
- Seizure Disorders
HOW YOUR ENDOCANNABINOID SYSTEM WORKS
ACTIVATING THE ENDOCANNABINOID SYSTEM

The Endocannabinoid system is comprised of key-in-lock receptor sites* and is activated by…

THE ACTIVATORS

• Phytocannabinoids - from plants
• Endocannabinoids - produced in the body
• Cannabimimetics - cannabinoid mimicking compounds

THE RECEPTORS

THE SUPPORTERS

□ Healthy Fats & A Whole-food based Diet
□ Stress Reduction & Modification Regular Exercise
□ Dietary Supplements and Botanicals
□ Hot/Cold Therapy
ONCE ACTIVATED…

an intricate cascade of neurotransmitters are released that communicate vital information to…

• Cells
• Tissues
• Organs
• Glands
AHHH...HOMEOSTASIS
A perfectly functioning ECS ensures balance in cells, tissues, and organs

Communication ➔ Balance ➔ Homeostasis
NUTRITIONAL SUPPORT FOR YOUR ECS

• Proper nutritional support of the ECS is required for optimal health, in the same manner that diet and nutrition, stress relief, sleep, and exercise are important to other systems of the body.

• Dietary and nutritional plant and food sources are important co-factors in the support of a health ECS.

ENDOCANNABINOID DEFICIENCY

• Clinical endocannabinoid deficiency (CECD), is a condition is which the ECS is compromised to poor nutrition and or prolonged exposure to psychological and or physical stress or disease.

• Internally produced endocannabinoids, plant based phytocannabinoids and other “ECS Activators” can reignite a beaten down ECS and help regain homeostasis.
What about CBD? Does the Emperor Have No Clothes?

- Is CBD really derived from hemp “stalks”?

- What is the existing clinical research for CBD in:
  - Epilepsy?
  - Insomnia?
  - Anxiety?
  - Pain?

- Is there a different effect with oral, buccal spray, & vaped CBD? Extracts vs. purified?

- What about the other questions? Legal, Rx effect, why no funding of research, etc.
EMERALD HEALTH POINTS OF DIFFERENTIATION

Safe, Legal & Effective

- Derived from NON-Cannabis sourced “ECS Activators” (plants, herbals, botanicals)
- NO CBD or THC
- PhytoCann™ Complex provides Full-Spectrum ECS support, more comprehensive support than CBD
- FOUR-pronged holistic approach to support ECS health
- **Condition Specific Formulas each with a clinically proven “HERO” ingredient**
Phyto-Cann™ Complex

A proprietary and foundational formulation developed by Emerald Health Bioceuticals that takes a holistic and comprehensive approach to support Endocannabinoid Health.

Phyto-Cann™ Complex is the foundation and workhorse of all Emerald Health Bioceuticals formulations.
NEW AND INNOVATIVE WAYS TO ADDRESS THE MOST COMMON HEALTH CONCERNS

CBD ALTERNATIVE PRODUCTS
Supports the ECS with external ECS Activators.

Feeds the ECS with raw materials to help support production of our own internal supply of Activators (endocannabinoids).

Supports the creation of more ECS receptor sites in the body.

Protects and preserves the ECS from breaking down.

PHYTO-CANN™ FOUR-PRONGED APPROACH