



Healer

Brought To You By



441-705-BUDS(2837)
www.bestbudsbermuda.com



Endocannabinoid Diet and Activities

Certain foods and activities can help the endocannabinoid system function optimally, improve your health, and increase the effectiveness of medical cannabis.

By Dr. Dustin Sulak, Co-founder, Healer

www.Healer.com



ENDOCANNABINOID-ENHANCING FOODS

Essential fatty acids, chocolate, herbs, spices, and tea can naturally help the endocannabinoid system function optimally, improve your health, and enhance the effectiveness of medicinal cannabis.

ESSENTIAL FATTY ACIDS:

A healthy ratio of omega-3 and omega-6 fatty acids can enhance the activity of the endocannabinoid system. Endocannabinoids are produced from arachidonic acid, an omega-6 fatty acid. Having enough arachidonic acid is essential for endocannabinoid production, but having too much may lead to downregulation of cannabinoid receptors. Excessive omega-6 intake is also pro-inflammatory. Most western diets already contain an excess of omega-6 oils, commonly found in cooking oils such as safflower, sunflower, corn, and soy, and in animal products like meat, poultry, and eggs.

Omega-3 fatty acids are needed to balance the omega-6 intake for the endocannabinoid system to function properly. These fatty acids are much harder to come by in the diet, and are also proven to have cardiovascular and neurological health benefits. An ideal ratio of omega-3 to omega-6 in the diet is 1:1, and the typical western diet often has a 1:10 ratio. Animal sources of omega-3 are the most potent, but the vegetarian sources tend to provide other excellent health benefits.

Sources of endocannabinoid-enhancing fatty acids:

- [Hemp seeds and hemp oil](#)
- [Flax seeds \(grind at home in a coffee grinder\) and flax oil](#)
- [Chia seeds](#)
- [Walnuts](#)
- [Sardines and anchovies](#)
- [Eggs \(pasture-fed or omega-3 enriched only\)](#)



CHOCOLATE

Cacao powder contains three compounds that are structurally very similar to endocannabinoids. These compounds can inhibit the breakdown of your body's own endocannabinoids, resulting in higher endocannabinoid levels, and may have some cannabinoid activity of their own. The content of cannabinoid-like compounds in chocolate varies widely and is highest in dark chocolate and raw cacao. Other compounds in chocolate may be able to help prevent heart disease, stroke, and dementia. Look for at least 70% dark chocolate, or try adding raw cacao nibs to smoothies or cereal!

HERBS AND TEA

Numerous herbs and teas contain compounds that can enhance the endocannabinoid system. Beta-caryophyllene is a terpene found in black pepper, oregano, cinnamon, clove, cannabis, and many other herbs. It selectively stimulates the CB2 receptor, a sought-after property in the development of treatments for inflammatory disorders. Echinacea, often used by herbalists for up to 2 weeks to stimulate the immune system during infections, also contains CB2 agonists. Camelia sinensis, commonly known as "tea," contains a compound that prevents the breakdown of endocannabinoids, and another compound that stimulates the CB1 receptor. Turmeric, the yellow spice in curry powder, contains curcumin, which also raises endocannabinoid levels amongst numerous other health benefits.

Maca root powder, often used to improve resilience to stress and sexual vitality, contains a compound that slows the breakdown of endocannabinoids. Probiotics and unpasteurized fermented food can also help improve the function of the endocannabinoid system in the gut.

EAT ORGANIC AND AVOID PLASTIC

Certain pesticides (e.g. chlorpyrifos and piperonyl butoxide) are known to disrupt the endocannabinoid system. It's especially important to choose organic foods when shopping for meat, dairy, and the highest pesticide-containing produce (see <http://www.ewg.org/foodnews/>). Phthalates, frequently added to plastic and tin food containers and water bottles, are known to block cannabinoid receptors and disrupt the body's hormonal system. Choose glass or stainless steel food containers and packaging whenever possible, and never eat food that's been heated in plastic.

Regular use of moderate to high quantities of alcohol can also impair the endocannabinoid system, so for optimal health and endocannabinoid function, please use moderation when drinking or avoid alcohol entirely.



ENDOCANNABINOID-ENHANCING ACTIVITIES

Certain activities can naturally enhance the endocannabinoid system's function, improve your health, increase the effectiveness of medicinal cannabis, and feel great.

STRESS-REDUCING ACTIVITIES

While chronic stress can deplete your endocannabinoid system (ECS), a highly tuned endocannabinoid system can protect you from the detrimental effects of stress. Incorporating exercise into your daily routine will keep your ECS well-tuned, but only if you enjoy it! Animal studies teach us that if you force yourself to exercise, your ECS will interpret the activity as stress, but freely choosing and enjoying the same activity will increase endocannabinoid levels.

Healer offers a number of fun, easy-to-learn mind and body exercises that Dr. Sulak has designed to specifically augment the endocannabinoid system and synergize with the cannabis state of consciousness. In addition to joining in with Dr. Sulak, we encourage you to explore any of the following health-promoting activities:

- **Social interaction** Socializing can also be great for stress reduction and enhancing ECS function. Rats in social isolation produced less cannabinoid receptors, while social play and grooming behavior increased function of the ECS. Let's learn from them, and remember that in-person, not virtual, socializing works best, especially with hand shakes, hugs, and other forms of touch.
- **Meditation**
- **Yoga**
- **Massage**
- **Osteopathic Manipulation (OMT)**
- **Acupuncture**
- **Breathing exercises**
- **Voluntary and enjoyable exercise**

McPartland JM, Guy GW, Di Marzo V. Care and Feeding of the Endocannabinoid System: A Systematic Review of Potential Clinical Interventions that Upregulate the Endocannabinoid System. Romanovsky AA, ed. *PLoS ONE*. 2014;9(3):e89566. doi:10.1371/journal.pone.0089566.

Gertsch, Jürg, et al. "Beta-caryophyllene is a dietary cannabinoid." *Proceedings of the National Academy of Sciences* 105.26 (2008): 9099-9104.

Di Tomaso, Emmanuelle, Massimiliano Beltramo, and Daniele Piomelli. "Brain cannabinoids in chocolate." *Nature* 382.6593 (1996): 677-678.

Quistad, Gary B., et al. "Cannabinoid CB1 receptor as a target for chlorpyrifos oxon and other organophosphorus pesticides." *Toxicology letters* 135.1-2 (2002): 89-93.

Dhopeswarkar, Amey S., et al. "The actions of benzophenanthridine alkaloids, piperonyl butoxide and (S)-methoprene at the G-protein coupled cannabinoid CB1 receptor in vitro." *European journal of pharmacology* 654.1 (2011): 26-32.

Russo, Ethan B. "Beyond cannabis: plants and the endocannabinoid system." *Trends in pharmacological sciences* 37.7 (2016): 594-605.