AVICANNA

CBD & SKINCARE

01

CBD and Skincare

Cannabidiol (CBD), is a non-psychoactive compound extracted from the cannabis plant that can be applied on the skin to interact with our ECS for beneficial effects on the skin's microbiome such as water retention, anti-inflammatory and anti-oxidant[1, 2].

02

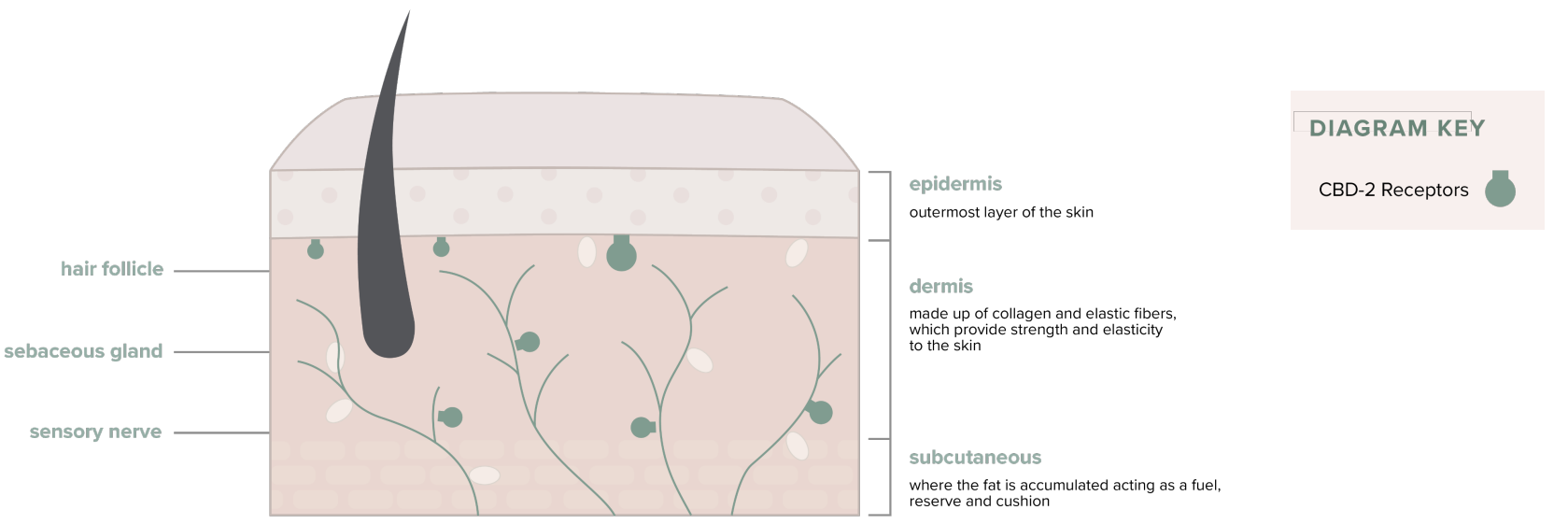
The ECS & Your Skin

What is Endocannabinoid System (ECS)?:

The **endocannabinoid system (ECS)** is known as an intercellular communication system, which regulates and balances the normal functioning of the skin as a barrier and keeps it healthy.

The main components of the ECS are cannabinoid receptors and endocannabinoids, which are produced in different compartments of the skin: the epidermis, hair follicles and sebaceous (oil) glands. Endocannainoids bind to the cannabinoid receptors and act to balance the functioning of the skin.

These endocannabinoids are released on demand, which means that it depends on the needs of the skin in order to know when and how to balance its physiological functioning.



How CBD Works on Your Skin:

CBD binds to receptors in the skin that are critical to maintaining a healthy skin barrier and a balanced skin homeostasis[1, 2]. Some of these receptors are known as endocannabinoid receptors, CB1 and CB2, that are critical to maintaining a fine-tuned barrier by regulating skin growth, immune responses, pain and touch sensation. CBD has also been shown to bind to other receptors present on immune or nerve fibers, providing a wide range of benefits in healthy and damaged skin cells[2].

CBD has been shown to:

- Interaction with key receptors responsible for retaining water in skin layers[1, 2].
- Anti-inflammatory effect to decrease inflammation throughout skin layers that may lead to cell death[1, 2].
- CBD has been shown to increase anti-oxidants action in the skin to combat the generation of free radicals, molecules that contribute to aging and cell death[3-6].
- Interact with the skin microbiome, or skin bacteria populations, to decrease the overproduction of bacteria that may cause infections or swelling around skin pores [8].
- Decrease the activity of sebocytes, cells that are known to contribute to the over production of skin oil in acne[9].

03

Pura Earth: Skin First

At Pura Earth, our mission is to provide first-of-its-kind face topical CBD products that are backed by years of research and development, that consumers can truly trust. Pura Earth is produced in consultation with dermatologists, formulation scientists and cosmetics experts with a deep understanding of the skin and how to care for it.

Our research focuses on the benefits of Cannabidiol (CBD), a non-psychoactive part of the hemp plant, in combination with other natural ingredients when applied to the skin. We are the first topical CBD line with cosmetic studies completed in a clinical setting.

About Pura Earth:

- Premium CBD face topical brand available in **5 international markets**
- **3 years of R&D** with the support of dermatologists
- **THC-FREE formulas** combining CBD with natural ingredients

Product Highlights:

- **Non-greasy** and **fast absorbing**
- **Natural ingredients** with functional benefits for specific needs
- **Dermatologist tested against irritation**
- Airless bottles to preserve cannabinoid quality

All of our products are:

Cruelty-Free · Vegan · THC-Free · Dermatologist tested

Clear Skin Treatment* (Oily Skin)

Rosemary and Tea Tree Gel

50mL / 250mg CBD

Lightweight, fast-absorbing and lightly scented water-based gel combining rosemary, tea tree and clove extracts, pure CBD and hemp oil.

Anti-Aging Syrum* (Oily Skin)

Japanese Cedar Bud Face Cream

50mL / 250mg CBD

Rich, fast-absorbing and lightly scented facial cream combining pure CBD with Japanese cedar bud extract, vitamin E and hemp oil.

Intensive Moisturizing Cream* (Dry Skin)

Colloidal Oatmeal Cream

50mL / 250mg CBD

Gentle, fast-absorbing and fragrance-free oil-based cream formulated with colloidal oatmeal, pure CBD, and hemp oil.

*The above names and functional use are associated to clinical trials and names of the products outside of Canada

Completed Cosmetic Clincal Studies

Pura Earth is the first advanced CBD dermacosmetics backed by clinical trials

Rosemary and Tea Tree Gel

Study Design: 54 People

What we Measured:

- Hydrating Effect
- Oil production, oily skin feeling
- Acne
- Tolerabilty/ acceptability

What We Found:

Immediately 90% of the participants tested found that the product was not too greasy. 85% of participants tested felt that the product absorbed well.

After 2 Weeks 93% of subjects tested had improvements in the oiliness of their skin.

After 4 Weeks 88% of subjects tested had significant improvements in their skin's appearance.

Colloidal Oatmeal Cream

Study Design: 51 People

What we Measured:

- Hydrating effect
- Skin elasticity, skin softness
- Redness
- Water loss
- Tolerability/acceptability

What We Found:

Immediately 74% of subjects tested were found to have increased skin elasticity.

After 3 Hours 86% of subjects tested were found to have significantly increased hydration. 86% of subjects tested were found to have significantly decreased skin redness.

After 4 Weeks 97% of participants tested liked the long-lasting moisturizing feel of the cream.

04 Appendix

1. Tóth, K. F., et al. (2019). Cannabinoid Signaling in the Skin: Therapeutic Potential of the “C(ut)annabinoid” System. Molecules (Basel, Switzerland), 24(5), 918. https://doi.org/10.3390/molecules24050918 |
2. Baswan, S. M., et al. (2020). Therapeutic Potential of Cannabidiol (CBD) for Skin Health and Disorders. Clinical, cosmetic and investigational dermatology, 13, 927–942. https://doi.org/10.2147/CCID.S286411
3. Juknat, A., et al (2012). Differential transcriptional profiles mediated by exposure to the cannabinoids cannabidiol and 9-tetrahydrocannabinol in BV-2 microglial cells. British journal of pharmacology, 165(8), 2512–2528. |
4. Juknat, A., Pietr, M., Kozela, E., Rimmerman, N., Levy, R., Gao, F., Coppola, G., Geschwind, D., & Vogel, Z. (2013). Microarray and pathway analysis reveal distinct mechanisms underlying cannabinoid-me[1]diated modulation of LPS-induced activation of BV-2 microglial cells. PloS one, 8(4), e61462. https://doi.org/10.1371/journal.pone.0061462 |
5. Atalay S, et al. (2020). Antioxidative and Anti-Inflammatory Properties of Cannabidiol. Antioxidants. 9(1):21. |
6. G gotek, A., et al. (2019). The Differences in the Proteome Profile of Cannabidiol-Treated Skin Fibroblasts following UVA or UVB Irradiation in 2D and 3D Cell Cultures. Cells, 8(9), 995. |
7. Zengin, G., et al. (2018). Chromatographic Analyses, In Vitro Biological Activities, and Cytotoxicity of Cannabis sativa L. Essential Oil: A Multidisciplinary Study. Molecules (Basel, Switzerland), 23(12), 3266.
8. Oláh, A., Tóth, B., et al. (2014). Cannabidiol exerts sebostatic and anti-inflammatory effects on human sebocytes. The Journal of clinical investigation, 124(9), 3713–3724