

What is in Cannabis?

Demystifying the Cannabis Plant.

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Though we still have some way to go, the conversation around cannabis has evolved significantly in recent years. No longer confined to the stereotypes of the past, this versatile plant is finally being recognised for the myriad of therapeutic benefits it offers to so many who need it. Cannabis is a complex botanical treasure trove that holds promise for a variety of health conditions, thanks in large part to the [more than 700](#) different compounds that it contains.

So, let's get acquainted, and explore just what makes this plant so unique. Once you understand the medicine that's inside the cannabis plant, you'll be much better equipped to harness its full potential and get the most out of this healing ally.

Cannabis. Hemp. Marijuana. What's the Difference?

Despite its [very long history](#) (dating back some 30 million years), we humans have managed to muddy the waters of cannabis terminology in a relatively short amount of time. Let's clear things up. Cannabis is a plant in the *Cannabaceae* family. Hemp and Marijuana are both cannabis plants.

Prior to 1910, the word "marijuana" didn't even exist. The term surfaced in the USA during the War on Drugs and was used as propaganda to perpetuate racist fears against the influx of Mexican immigrants who had brought the "marihuana menace" with them.

On the other hand, hemp has been cultivated for centuries for food, fibre, and medicine. Today, the term "hemp" is used to distinguish cannabis that contains high amounts of CBD and low THC. In Australia, "hemp" refers to cannabis plants with less than 1% THC.

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The Endocannabinoid System: A Regulatory Network

To grasp the effects of cannabis on the body, we need to look inward. Our bodies possess an intricate regulatory system known as the endocannabinoid system (ECS), which is crucial role for maintaining balance, or homeostasis, for a variety of physiological processes. The ECS consists of cannabinoid receptors, endocannabinoids (which are produced naturally by the body), and the enzymes responsible for their synthesis and degradation.

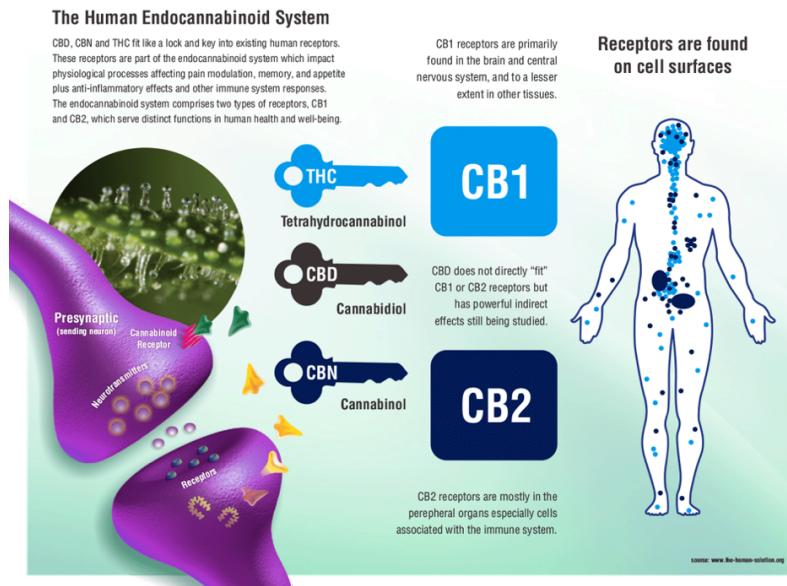
These cannabinoid receptors are found almost everywhere in the body as the ECS helps to regulate so many different functions, including mood, sleep, appetite, immune function, memory, inflammation, pain and stress. When we fall out of balance in any of these areas, our body produces cannabinoids to bring the system back into homeostasis. You can think of a receptor as a "lock", and cannabinoids as the "keys". When a "key" activates one of the "locks" it stimulates a physiological response, such as a reduction in anxiety, or pain.

Cannabinoids: Nature's Healing Compounds

You've probably heard of CBD and THC, the most famous cannabinoids. But did you know there are over 120 chemically similar compounds found in the cannabis plant? These plant cannabinoids interact with your very own ECS, mimicking or influencing the effects of your natural endocannabinoids. Tetrahydrocannabinol (THC) is responsible for the psychoactive effects commonly associated with cannabis consumption, while cannabidiol (CBD) has captured our attention for the array of therapeutic properties it offers, without the high.

Beyond THC and CBD, other "minor" cannabinoids like CBG, CBN, CBE and THCV are also present in varying concentrations in different cannabis strains and have their very own therapeutic effects. Even though they are typically present in much lower concentrations, these "minor" cannabinoids play a crucial role in the overall effect of the plant as they help to supercharge the effects of the other cannabinoids, boosting their strength and power.

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Terpenes: Nature's Aromatherapy

Terpenes are aromatic molecules found in many plants, including cannabis. These compounds are responsible for the distinct flavours and aromas of different cannabis strains, ranging from fruity and citrusy to earthy and piney. Beyond their sensory appeal, terpenes also possess therapeutic properties that can complement the effects of cannabinoids.

For example, myrcene, commonly found in cannabis as well as in hops and lemongrass, is believed to have sedative and muscle-relaxant effects. Limonene, abundant in citrus fruits, exhibits antidepressant and anxiolytic properties. Pinene, also found in pine needles and rosemary, has been shown to have anti-inflammatory and bronchodilator properties.

Flavonoids: Plant Pigments with Potential Health Benefits

Flavonoids are another group of compounds found in cannabis, responsible for the plant's vibrant colors. These phytonutrients have antioxidant and anti-inflammatory properties, contributing to their potential health benefits. While less studied than cannabinoids and terpenes, flavonoids in cannabis have shown their potential as important players in the game as well.

One notable flavonoid found in cannabis is cannflavin A, which exhibits potent anti-inflammatory effects. Other flavonoids, such as quercetin and kaempferol, have demonstrated antioxidant and neuroprotective properties.



The Entourage Effect: Teamwork Makes the Dream Work

Perhaps the most intriguing aspect of cannabis chemistry is the entourage effect, a phenomenon in which the combination of various compounds—cannabinoids, terpenes, and flavonoids—work together synergistically to enhance therapeutic outcomes. Researchers have found that full spectrum CBD is three times more effective than an isolated CBD extract for seizure disorders. Rather than acting in isolation, these compounds interact with one another, amplifying their respective effects and modulating the overall response.

For example, the presence of myrcene in a cannabis strain may increase the permeability of cell membranes, allowing cannabinoids like THC to enter more easily and exert their effects. Similarly, terpenes like limonene and pinene may alter neurotransmitter levels, potentially enhancing the mood-elevating properties of cannabinoids like CBD. The presence of CBD can help to moderate the psychoactive effects of THC. This is why it's so important to choose whole-plant, full-spectrum formulas, rather than isolated single-molecule remedies.

Harnessing the Power of Cannabis Chemistry

As our understanding of cannabis continues to evolve, it becomes increasingly clear that its therapeutic potential lies not in any single compound, but in the intricate interplay of its parts. From cannabinoids and terpenes to flavonoids, each component contributes to the unique effects of cannabis, with the entourage effect serving as a testament to the power of synergy.

Mother Nature knows best.

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