Is cannabis a miracle plant?

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Cannabis, also known as marijuana, is a psychoactive drug obtained from the Cannabis sativa, Cannabis indica and Cannabis ruderalis plant. The cannabis plant has been used as a drug for recreational as well as entheogenic purposes in traditional medicines for centuries. The main psychoactive component of cannabis is called delta-9-tetrahydrocannabinol (Δ-9-THC), which is one among other 483 known compounds present in the plant, involving no less than 65 cannabinoids as well as cannabidiol (CBD). There are different ways how cannabis can be used such as smoking, vaporizing, food ingredient or an extract.

Cannabis presents different mental and physical effects involving euphoria, alteration of mental status, sense of time disruption, difficulty concentrating, impaired short-term memory, alteration of body movements (balance together with psychomotor control), relaxation and greater appetite. The effect can be observed within minutes when smoked, although it may take up to 90 minutes when eaten. The effect can last from two to six hours depending on how much cannabis was used. High doses can lead to adverse mental effects which include anxiety, delusions, hallucinations, panic, paranoia as well as psychosis. With regards to physical effects: increase in heart rate, difficulty breathing and nausea can be observed. Short-term side effects also involve dry mouth and red eyes.

Tetrahydrocannabinol (THC)

Tetrahydrocannabinol (delta-9-tetrahydrocannabinol-THC) is the main psychoactive constituent of cannabis and it is one of the oldest hallucinogenic drugs known. THC is an active ingredient within nabiximols; a particular Cannabis extract which was approved as a botanical medication and is used as mouth spray for individuals suffering from multiple sclerosis in order to decrease neuropathic pain, spasticity, overreactive bladder and other symptoms.

Δ9-Tetrahydrocannabinolic acid A (THCA-A)

Δ9-Tetrahydrocannabinolic acid A (THCA-A) is a non-psychoactive acidic cannabinoid found within cannabis. It shows anti-inflammatory, neuroprotective and anticancer effects. Additionally, it reduces adiposity thus prevents metabolic disease arising from diet-induced obesity.

Δ9-Tetrahydrocannabinolic acid B (THCA-B)

Δ9-Tetrahydrocannabinolic acid B (THCA-B) is a cannabidiol that has always been confused with THC and THCA-A. THCA-B only occurs in extremely concentrated samples of things like hashish that contain little or no THCA. THCA-B shows better stability and it crystallizes more easily than THCA-A. There is no or very limited information on how THCA-B works but as it is a THC precursor it can be assumed that they share a similar mode of action.

Cannabidiol (CBD)

Cannabidiol is a chemical occurring in the Cannabis sativa plant, also known as cannabis or hemp. More than 80 different chemicals which are cannabinoids have been discovered within the Cannabis sativa plant. CBD is collected from hemp which is a form of the Cannabis sativa plant which consists of very little amount of THC. CBD influences brain chemicals but they are different from the THC effects. Medicinal indications for CBD include anxiety, pain, dystonia (muscle disorder), Parkinson's disease and Crohn disease.

Cannabigerol (CBG)

Cannabigerol (CBG) is one of more than 120 cannabinoid compounds identified within the genus Cannabis plant. Cannabigerol is the decarboxylated form of the cannabigerolic acid, which is the main molecule from which other cannabinoids are synthesised. Usually, cannabigerol is the minor cannabis component. Throughout, the plant growth a great amount of cannabigerol is transformed into other cannabinoids predominantly tetrahydrocannabinol (THC) as well as cannabidiol (CBD), leaving approximately 1% of cannabigerol.

Potential benefits of cannabigerol were shown with relation to inflammatory bowel disease (IBD), glaucoma, Huntington's disease, antibacterial properties and fighting cancer cells.

Cannabinol (CBN)

Cannabinol (CBN) is a mildly psychoactive component found in cannabis. CBN can be used as a sleep aid as well as sedative. Moreover, this cannabinoid helps with regulation of the immune system and decreases pain and inflammation caused by various conditions including rheumatoid arthritis and Crohn's disease. Studies show that it reduces the intraocular pressure caused by glaucoma. Additionally, CBN has anti-convulsant properties, which means that it is beneficial to individuals suffering from seizures.

Medical Cannabis (Medical Marijuana)

The most common uses of medical cannabis include severe or long-term pain release, nausea/vomiting caused by chemotherapy suppression (cancer treatments) and relief of painful muscle spasms. However, there are various conditions for which patients may consider cannabis use such as Amyotrophic lateral sclerosis (ALS), cancer-related pain, HIV/Aids – (weight loss, nausea or vomiting), glaucoma, muscle spasms, multiple sclerosis, panic disorders, inflammatory bowel disease (IBD), Huntington's disease, severe pain, post traumatic stress disorder (PTSD) and many more.

Food supplements

A cannabis edible, also known as a cannabis-infused food is a food product (homemade or made commercially) which is composed of decarboxylated cannabinoids (cannabinoid acids changed into their orally bioactive structure). Edibles are an optional way, allowing cannabis consumption. Edible may refer to a drink or a food product, however a drink containing cannabis is named more specifically a liquid edible or drinkable. History of cannabis consumption goes as far back as 1000 BC. The edible applications were used for treatment of different medical conditions including chronic pain and digestive disorders. Moreover, products consisting of edible cannabis were also used for stress relief and euphoria induction like alcohol.

The majority of edibles contain a great amount of THC which can cause a broad range of effects such as relaxation, sleepiness, dizziness, euphoria, hallucinations, dry mouth, paranoia as well as decreased/increased anxiety. Applications of THC containing edibles include medical and recreational purposes. As opposed to smoking, in which cannabinoids are inhaled into the lungs and get into the blood system very rapidly, reaching a peak within minutes and wearing off in a few hours, edibles can take even up to a few hours to digest and their peak would be achieved two to three hours later and persist for six even up to 20 hours.

Cosmetics

Main attributes of topical CBD are its anti-inflammatory and analgesic (pain killing) properties. Scientists obtain more evidence supporting CBD as treatment of dry skin, psoriasis and eczema which is why cannabidiol can be found in many face creams, serums and body lotions. A study conducted in 2014 found that CBD also helps with suppression of breakouts by regulating oil production of the sebaceous glands. Moreover, CBD shows its effectiveness in treatment of skin rashes, which cause irritation and itching sensation. On top of that it can also be used in order to relieve pain caused by insect bites, skin abrasions and reduce associated swelling. Recently, it was shown that cannabis is a great potent ingredient for atopic dermatitis (AD) – a skin condition causing itchy, red, swollen and dry skin.

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