

## Cannabis: Therapeutic properties of the plant



**Medicinal cannabis is still illegal to be used in South Africa.**

**In a victory for marijuana users across South Africa, ConCourt has officially legalised cannabis use in a private capacity in September 2018.**

### 1) History of Cannabis and its effects

The cannabis plant is indigenous to Central and South Asia. It had already been cultivated in Japan in the pre-neolithic period. The earliest written references of cannabis were found in China in 2727BC.

The first recorded use of cannabis in humans was done by **Herodotus** in 440BC.

**Jacques-Joseph Moreau** (3 June 1804 – 26 June 1884), was a French Psychiatrist who discovered the mental effects of Hashish (marijuana) in humans and published a book “Hashish and Mental Illness” in 1845.

### 2) Marijuana:(Hashish)

Cannabis has both male and female plants. Marijuana refers generally to the female flowering parts of the plant. It is also the most valuable part of the plant. Resins are formed on the leaves and flowers of the plant which are rich in cannabinoids that hold medicinal and psychoactive properties. It is also commonly known as pot or weed.



### 3) Plant species commonly used:

#### a) **Cannabis sativa L.var. indica**



These plants are generally smaller and more dense, their leaves are broader and they are suitable for indoor gardens. They are richer in THC (2-20%) thus they tend to be more useful for relaxing and sedative purposes. Used to relief symptoms of anxiety, insomnia, pain and muscle spasms.

#### b) **Cannabis sativa L supsp. sativa var.sativa**



These plants are taller and slender, their leaves are slender and longer and are used for outdoor gardening. They contain much less or no THC, are not as psychoactive and tend to be more uplifting and creative for the mind. Used to relieve symptoms of depression, ADD, fatigue and mood disorders.

### 4) Endocannabinoid system of the body

The endocannabinoid system in the body is a multidimensional biochemical balancing act that assists with the homeostasis within the body. It restores the bridges between the mind and the body in assisting with the equilibrium of all functions.

It consists of Cannabinoids that react on receptor sites that are present throughout the body. These cannabinoids are diverse chemical compounds that found naturally in the body or are derived from the cannabis plants or are synthetically made.

### **The cannabinoids:**

- a) The **endocannabinoids** found in the body that are well known are:  
Anandamide and 2-Arachidonoylglycerol (2-AG).
  
- b) The **phytocannabinoids** are derived from the resin of the cannabis plant. There are more than 113 different types analysed. The following are most commonly known:  
**THC** (Tetrahydrocannabinol)  
**CBD** (Cannabidiol)  
**CBC** (Cannabichromene)  
**THCA** (Tetrahydrocannabinolic acid)  
**CBDA** (Cannabidiolic Acid)    **CBN** (Cannabinol)  
**CBG** (Cannabigerol)
  
- c) The **synthetic cannabinoids** that are used :  
Synthetic THC (marinol, dronabinol) and Nabilone.

### **The cannabinoid receptors:**

These are cell membrane G-protein coupled receptors that are activated by three major groups of cannabinoids: Endocannabinoids, Phytocannabinoids and synthetic cannabinoids.

The most common receptors are CB1 and CB2, although other receptors are still to be defined. CB1 receptors are mainly expressed in the brain, lungs and kidney. CB2 receptors are expressed in the immune systems and hematopoietic system. Other novel receptors are also found in the endothelial systems.

These receptors are active in a variety of physiological processes affecting:  
**moods, appetite, pain sensations, anxieties, modulations and healing processes, antipsychotics, dermatitis, pre-and post natal developments, and assisting in cancer healing.**

### **5) Common conditions in animals where cannabis oils could be used :**

- Epilepsia** – CBD - effective in 42% of cases – study 2018
- Anxiety** - thunder, fear phobias, fear of unknown, separation
- Supportive Cancer treatment** – THC / CBD
- Canine Myelopathies** – reduces symptoms - CBD/ THC
- Spinal injuries** - THC/CBD
- Chronic eosinophilic enteritis** - CBD
- Glaucoma** - THC/ CBD
- Stomatitis** – reduces symptoms THC/CBD
- Post surgery** – spinal/intestinal/muscle/nausea
- Diabetes** – CBD - reduces inflammations
- Pain** – CBD/THC
- Enteritis** – CBD
- Dermatitis** – THC/CBD –reduces inflammations/itch
- Fibromyalgias** - CBD/THC –pain/inflammation

6) **Drug interactions:** \* not to be used together

**In some cases, cannabis may actually increase the effectiveness or potency of other drugs. But, even if the interaction is potentially beneficial, close monitoring by a medical professional, along with regular blood work is essential.**

Morphine \*

Tramadol\*

Ibuprofen\*

Adderall (amphetamine / dextroamphetamine)

Alcohol (contained in alcoholic beverages) (ethanol)

Ambien (zolpidem)

Amitriptyline

Ativan (lorazepam)

Benadryl (diphenhydramine)

Cymbalta (duloxetine)

Flexeril (cyclobenzaprine)

Klonopin (clonazepam)

Lamictal (lamotrigine)

Lexapro (escitalopram)

Lyrica (pregabalin)

Paracetamol (acetaminophen)

Tylenol (acetaminophen)

Valium (diazepam))

Xanax (alprazolam)

Zoloft (sertraline)

Zyrtec (cetirizine)

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