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# Understanding Cannabidiol

## EVERYTHING YOU NEED TO KNOW ABOUT CBD

### OVERVIEW

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- Discovered in 1940, it was isolated and given to young healthy men who felt no psychoactivity (no “high” effect)
- Because it was thought to be inactive, it was ignored for many years; when the human endocannabinoid system was discovered in 1988, interest in CBD research took off
- CBD is the second most prominent cannabinoid compound in the cannabis plant, THC is the most common overall
- CBD has become a major focus of research due to ongoing studies showing tremendous medicinal value
- CBD and THC work together to enhance certain effects (pain relief, anxiety relief) but also balance each other to minimize the negatives that can be associated with THC (CBD attenuates the high from THC, can suppress the hunger associated with CBD and can minimize memory loss from THC)
- If the cannabis product has higher CBD than THC, often the effects of THC are not felt
  - For example, if the CBD:THC ratio is 25:1, THC has no psychoactive effects but its presence is important in enhancing CBD effects
  - A ratio of CBD:THC of 5:1 may still have some THC effects in a new user of cannabis; a more experienced patient may not feel the THC

**Cannabis plants can be grown to be high in CBD and low in THC. These plants are more medicinal for some, there is no THC “high”, and they are usually not sedating.**

### CBD PROPERTIES

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**Potent anti-inflammatory** - Not only decreases inflammation but blocks the pro-inflammatory compounds like interleukin, cytokines and tumor necrosis factor from being produced so it plays preventive role also

**Potent anti-oxidant**

**Pain reliever** - Can provide enhanced pain relief when an increased amount of THC is present

**Muscle Relaxer**

**Neuro-protectant** - Multiple animal studies show that CBD protects the brain, kidneys, and liver from hypoxia/ischemia, even when given after the insult

**Anti-convulsant** - Multiple lab and animal studies show that CBD in higher doses (200 to 400 mg) stops seizures through multiple mechanisms (receptor independent, calcium channels, sodium channels, gaba receptors)

**Anti-cancer effects** - Lab/animal studies show anti tumor effects of both CBD and THC - CBD appears to stop metastasis and THC kills cancer cells - cancer patients taking concentrated cannabis oil (sometimes called Rick Simpson Oil) of about 1 gram per day (1000 mg per day) have seen shrinkage of tumors - it’s not an easy treatment because it can cause significant lethargy and psychoactivity but it is more tolerated than chemotherapy

**Anti-anxiety, anti-depressant, and anti-psychotic**

## CBD EFFECTS

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### **CBD is alerting in low doses and sedating in high doses.**

- Some patients cannot take CBD-rich medicine right before bedtime as it can be alerting and may interfere with falling asleep, THC appears to work better to induce sleep
- Since CBD is not sedating and not psychoactive, it is a perfect daytime choice for someone who has to work or who does not want to feel high during the day. THC-rich medicine may be a better choice for someone looking for nighttime relief or who prefers the high as part of the relief.

## CBD CONTENT

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### **CBD strains are defined by >4% CBD content when tested:**

- Example: “ACDC” strain is typically grown very high in CBD (18%) and low in THC (<1%) and it has no psychoactivity
- Other cannabis strains that are CBD-rich: Charlotte’s Web, Harlequin, Cannatonic, Omrita, Sour Tsunami

## CBD PRODUCTS

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- There are a number of CBD-rich products currently on the market – edibles and under the tongue tincture/oils are the most popular
- Once you see a product labeled “CBD”, you must then check the THC amount to see what the ratio is to determine whether there will be some THC effects
- It is recommended that you use products that are tested and labeled so that you can determine what dosing works for you and maintain consistent results



### **DO NOT BUY HEMP!**

The industrial hemp plant contains CBD but no significant THC – most hemp is not grown for human consumption and may contain dangerous heavy metals; if the product says, “CBD is a natural constituent of the hemp plant”, it is a hemp product and is not recommended!