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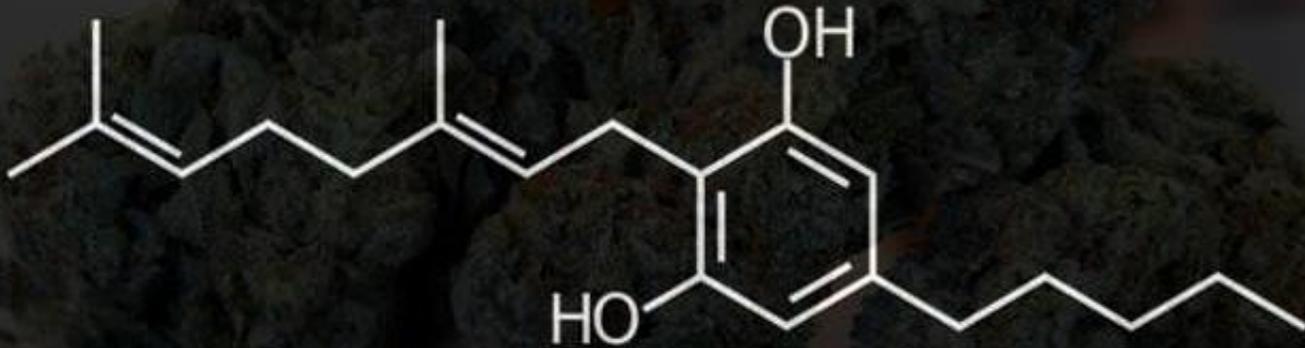
Cannabigerol (CBG): A Minor Cannabinoid With A Major Impact



[Drake Dorm](#) August 03, 2013

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Cannabigerol (CBG)



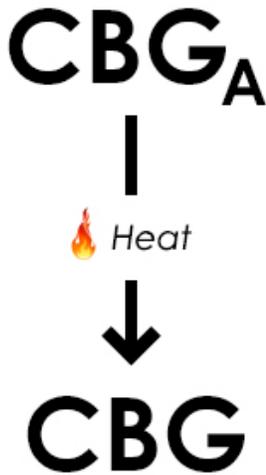
What Is Cannabigerol (CBG)?

When considering the medicine that best suits you, it's helpful to know the science behind a strain's cannabinoid profile. The prevalence of [lab testing](#) is a great tool and has rapidly become the industry standard. Teams of chemists at locations like [SC Labs](#) in California and [Sunrise Analytical](#) in Oregon allow patients to see the breakdown of cannabinoids in their medicine, to an exact percentage.

This trend has led to an increased interest in the "minor" cannabinoids. Tetrahydrocannabinol (THC) was the focus of breeders for decades until the many [medicinal benefits](#) of [cannabidiol \(CBD\)](#) started being published. Discoveries like these spurred an interest in [cannabigerol \(CBG\)](#) and phytocannabinoids (cannabinoids found in plants) as a whole.

Cannabigerolic Acid (CBGA) Is The Primary Cannabinoid

The ability to produce cannabigerolic acid (CBGA) is what makes the cannabis plant unique.



It is the precursor to the three major branches of cannabinoids: tetrahydrocannabinolic acid (THCA), cannabidiolic acid (CBDA), and cannabichromenic acid (CBCA). The plant has natural enzymes, called synthases, that break the CBGA down and mold it toward the desired branch. The plant's synthases (THC-synthase, CBD-synthase, CBC-synthase) are named for after the cannabinoid they help create.

When any of the cannabinoid acids are exposed to heat, or prolonged UV light, they lose a molecule of carbon dioxide (CO₂). At this point, they are considered to be in the neutral form (CBG, THC, CBD, CBC, etc.). In most medicinal strains, CBGA is immediately converted to another cannabinoid and is not typically found in high concentrations. However, if a strain is high in CBGA, then smoking it would cause it to change to cannabigerol (CBG).

While most strains of cannabis are less than 10% CBG, industrial hemp strains test much higher. They have been tested as high as 94% CBG with as low as 0.001% THC.

Testing of industrial hemp has found much higher levels of cannabigerol (CBG) than most strains of cannabis. Further studies have shown that this phenomenon may be due to a [recessive gene](#). It is believed that the gene keeps the plant from producing one of the cannabinoid synthases (what converts CBGA to one of the major branches).

That being said, breeders are able to manipulate a plant's cannabinoid profile by adjusting the amount of each synthase it naturally produces. If a breeder wants to focus on a specific cannabinoid they are able to do so by cross-breeding two plants that are genetically predisposed to make a lot of it. In the case of CBG, the breeder would instead focus on plants with the [recessive gene](#) that inhibits the ability of the cannabinoid synthase.

In fact, Odie Deisel is one of the new head breeders at [TGA genetics Subcool Seeds](#) and he has helped create a strain with high levels of cannabigerol (CBG). According to the [TGA website](#), Mickey Kush is a [Sativa-dominant](#) strain resulting from Sweet Irish Kush and Jack The Ripper. Not only does the [Mickey Kush strain test](#) at 28.6% tetrahydrocannabinol (THC), but the website boasts about its high CBG content as well.

The Effects of Cannabigerol (CBG)

The research surrounding this specific cannabinoid (and its effects) are somewhat limited. Restrictions on the testing of cannabis make it difficult to find volumes of quality research about cannabigerol (CBG).

Cannabigerol (CBG) seems to work with the other cannabinoids (such as THC and CBD) to provide overall synergy, as well as balance.

That being said, it has been classified as an antagonist of the CB1-receptor, which affects the central nervous system. Because of this, CBG is believed to partially counteract the paranoid, “heady” high typically associated with tetrahydrocannabinol (THC). **Cannabigerol (CBG)** has also been determined to affect the CB2-receptor, which influences the body more. However, researchers aren’t sure if CBG promotes or inhibits CB2-receptor activity yet.

Another effect cannabigerol (CBG) has on the brain is that it inhibits the uptake of GABA, a brain chemical that determines how much stimulation a neuron needs to cause a reaction. When GABA is inhibited it can [decrease anxiety](#) and muscle tension similar to the effects of [cannabidiol \(CBD\)](#).

An Italian study published in the May 2013 edition of *Biological Psychology* suggests that cannabigerol (CBG) has strong [anti-inflammatory properties](#) and may benefit patients with inflammatory bowel disease (IBD). It also is useful in the treatment of [glaucoma](#), as CBG can increase the fluid drainage from the eye and reduce the amount of pressure. Further, cannabigerol (CBG) has anti-depressant qualities and may [inhibit tumor growth](#).

Cannabigerol (CBG) Deserves More Attention

Not only is cannabigerolic acid (CBGA) the first stage in the development of cannabinoids, but it has been found to have benefits of its own when smoked. It becomes cannabigerol (CBG) as a result of a CO2 molecule escaping the compound in response to heat (when you spark it).

Because of its newly discovered uses, breeders like Odie Diesel have paid more attention to CBG in their strains and patients should follow suit. Medicinal strains that are also high in cannabigerol (CBG) are likely to have a much more balanced effect. The CBG seems to help your brain find a happy medium between the rest of the cannabinoids, causing a feeling of synergy.

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Angel Gonzales

Posted 3 months ago

Have rheumatoid arthritis, PTSD, bad anxiety attacks. Came back from war now have major health problems. Could you help me. Tired of being on oxycodones.

Helpful 0 Not Helpful 0 Flag

Reply

LW

Posted a month ago

I realize this is an older post, but just in case...contact an organization called Grow for Vets.

Helpful 0 Not Helpful 0 Flag

Reply

Andy

Posted 4 months ago

A couple of things in this article strike me as troublesome despite my pretty limited neuro-chemical knowledge...most importantly that gaba, in addition to being an enormously broad term, is the group of things that inhibit the nervous system, and are thought by many to curb anxiety, not the other way around as is written. It's possible they mean "re-uptake" inhibitors(not sure these even exist), in which case that would increase "gaba", although as in the wiki says that term generally needs a prefix to be of use since that group of proteins does so much.

https://en.m.wikipedia.org/wiki/Gamma-Aminobutyric_acid

"Although in chemical terms it is an amino acid, GABA is rarely referred to as such in the scientific or medical communities, because the term "amino acid," used without a qualifier, by convention refers to the alpha amino acids, which GABA is not, nor is it considered to be incorporated into proteins."(not sure i totally understand this for the record but do know about this stuff from elsewhere)

Helpful 1

Not Helpful 0

Flag

Reply

Leslie

Posted 3 months ago

I was on a medication called gabapentin for fibromyalgia the drug never really did much for me as for towards pain but that's probably because it's a chemical-based i.e. man-made. I'm sure that if it was in some other form like smoking in the plant which is always been an easier way to administer medication for me it might do the same trick and help with fibromyalgia

Helpful 0

Not Helpful 0

Flag

Reply

Foolish Girl

Posted 8 months ago

Does anyone know of a grower in So Cal who knows how to consistently get high cbg in a cbd predominant strain?

Helpful 0

Not Helpful 0

Flag

Reply

SKUNTK33084

Posted 9 months ago

So. I may get a lot of upset people who think they know somethin about medicinal plants because they smoke weed. Yet they only smoke to get high. That same person is a sociopathic greedy SOB that makes millions off others suffering. True stoners have to much heart to make it big in this industry because they spend their time properly researching by dedicating their life to understanding more about the original marijuana strains. Before destroying them genetically in a lab like some montsanto wannabe who PRODUCES mass amounts of DNA Mutated, internally molested plants. I GROW plants and treat them like the living energy that they are. Experience, coupled very closely with a passion and love that drives a level of observation and creativity only rivaled by the eyes, pineal gland, and pure intuitiveness of a child; add a personality that is most rewarded by the happiness and positive/healthy energy of a person in need all while striving for perfection enough to drive a non toker to insane. That's my definition of a true legend of this world renowned hobby turned industry. It bloomed regardless of prior laws because real Americans live free and do what they know and feel is right. Listening to what brainwashed, ignorant assbags whose only goal in life is to keep power out of the publics hands and gain more for themselves is beyond asinine. So to the guy who spent 5 min with the new TGA FOLKS. WELL TGA STARTED RIGHT HERE IN THE LOVELY WASHINGTON STATE. THE STRAINS QUERKLE, JACK THE RIPPER, CHERNOBYL, DEEP PURPLE, VORTEX, AGENT ORANGE AND MANY MORE. AND THE SEEDS WERE GREAT THE PLANTS TURNED OUT JUST LIKE THEY SAID. MORE SO THAN ALL THESE DOUCHEY OVERSEAS OR CANADIAN SEED COMPANIES BY FAR. BUT

THEN WEIRD THINGS STARTED HAPPENING. THE CATELOGUES CHANGED SEVERAL TIMES VERY QUICKLY. AND ONE OF WHICH NO LONGER HAD THE AGENT ORANGE. WHICH LIKE ALMOST ALL THE TGA STRAINS WAS PATENTED BY THEM. HERES A POSSIBLE THEORY: agent orange was made originally by montsanto and was used only for destruction of life. And it did its job very well. Monsanto and the U.S. Govt. go hand in hand especially the military branches and don't matter how old or if they EVER even had rights to the name. The military is not gonna let an opportunity to break into the game of SUPPLYING AND CONTROLLING the plants you grow. So as any stoner would do after much govt hassling, The real TGA CREATORS behind the best variety and quality of strains ever from a single source got bullied into walking away. And now you got an ODIE???? Or somethin in Colorado now who prob works for the military industrial complex or big 5 pharma and is Eliminating the cancer eradicating properties as well as any ability to research further, the capabilities of a plant (that anyone who truly needs it) can grow. And at the front of the THC Race for the highest percent reported while creating seeds that cannot reproduce or will produce seeds that don't resemble a single phenotype of the parents looking like a different plant altogether. The genius's that made reefer madness are at it again!!!!

Helpful 1

Not Helpful 0

Flag

Reply

katpissflowers

Posted 4 months ago

Cannabis could very likely be lowered drastically or removed from the drug schedule in the next year, all of the idiots who can't see medicinal benefits of cannabis in senate and even local meetings are being silenced. Don't be so negative! Also one of the most popular strains in LA and Southern California right now wifi og, bred for high THC and shit and is a "cannabis cup winner" blah blah blah has a very high ratio of CBG and mycrene along with CBD. There are a lot of us trying to give cannabis a good name but this is not a good way man!

Helpful 0

Not Helpful 0

Flag

Reply

Ben

Posted 10 months ago

That clears it up!

Helpful 0

Not Helpful 0

Flag

Reply

brokenlungz

Posted a year ago

We recently tested some samples at my work and they came back with lower THC numbers than we were hoping for, but many of them had a fair amount of CBG (way more than what we are used to seeing at least). Does this indicate that we didn't grow the plants long enough? I only think this because CBG is the primary Cannabinoid and turns in to THC, CBD, or CBC. Some insight on this would be great, thanks!

Helpful 2

Not Helpful 0

Flag

Reply

SKUNTK33084

Posted 9 months ago

Exactly what I would expect. Thank you brokenlungz!!! All the evidence and science explains in great detail the balancing act that the plant does. Think of a graph of stats like video games have for options to customize whatever it is. You gain one but lose another. And vice versa. So you tell me how TGA created a strain super high in CBG WHEN THEY CROSSED A KUSH WITH JACK THE RIPPER AND GOT AN EXTRA 2-4 % increase in THC at the same time. Only one way around that in the video games AND ITS CALLED CHEATING. The only drugs that cause a real problem are those we created in a lab and now I guess it's gonna be different. No thanks I'm going the other direction

Helpful 1

Not Helpful 0

Flag

Reply

RiknSticks

Posted a year ago

Does anyone one know for sure if it is legal to be in possession of lab grade CBGA for research purposes ? I wouldn't want to order it and have it come to my door delivered along with the police.

Thanks

Rich

Helpful 0

Not Helpful 1

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Reply

mathew gordon

Posted 2 years ago

my name is mathewgordon,ive been breeding a strain of cannabis called old toby that is a world known medical strain with unique antiinflammatory properties(and all of the other medical benifits listed in this artacle) and has a sugnificant ammount of cbg at 9 weeks of flower,i have given seeds to all the major breeders and odie diesel will undoubtedly improve this amazing strain in a generation or two, thank you for the most informative and entertaining artacle ive read ever,,on weed!!!

Helpful 0

Not Helpful 0

Flag

Reply

boblgumm

Posted 2 years ago

Mathew Gordon can you provide a name of a mmj dispensary in Puget sound area that carries Old Toby? A pal has liver cancer and strains high in cbg are reputed to be helpful.

Helpful 0

Not Helpful 0

Flag

Reply

Angie LupusLife

Posted 2 years ago

Wonderful information. I love learning more about the plant that does so much for me.

Helpful 0

Not Helpful 0

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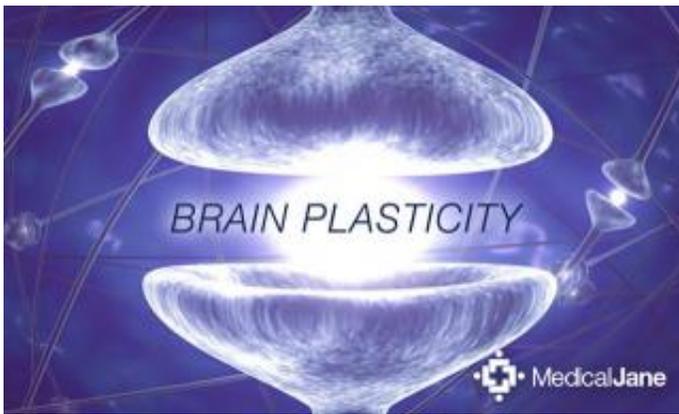
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[THC May Slow Vision Loss From Retinitis Pigmentosa](#)

A Spanish study has shown that a synthetic form of tetrahydrocannabinol (THC) may be used to inhibit vision loss caused by retinitis pigmentosa.

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