



CANNABINOIDS

If you want to sound like a pro pothead, “cannabinoids,” a group of chemical compounds found in cannabis, is the first term you’re going to have to get familiar with. It’s a bit of a tongue twister, but trust me, the instant stoner cred you’ll get by dropping it in a conversation is so worth it.

Think of the cannabis plant like a giant orchestra. The instruments are coming together to create an overall impact while also each doing their own thing; sometimes working harmoniously, at other times contrasting or even counteracting one another. (At least, that’s what I imagine—I haven’t been to see an orchestra since I was a kid, if I’m totally honest.) Cannabinoids are like these instruments. They each have their own psychoactive or physical effects, but also combine to create what is called the “entourage effect.” There are over eighty-five known cannabinoids in weed (some put the number closer to a hundred), but since research is still pretty limited, we are going to focus on the two major ones, THC and CBD, along with some rising contenders that are increasingly getting more attention, like CBN and THCA.

The reason why weed works so well with our bodies is thanks to our natural endocannabinoid system. Cannabis receptors were first discovered in the human body in 1988 by Dr. Allyn Howlett and her graduate student William Devane. There are two types of cannabinoid receptors in the human body. CB_1 , found in the brain and nervous

system, is involved in regulating processes like memory, cognition, pain sensation, and even our perception of time. CB_2 receptors, on the other hand, are mostly located in the nervous and immune systems, and work to reduce inflammation throughout the body. CB_2 receptors are even found in our skin, which is how cannabis lotions and salves work their soothing magic.

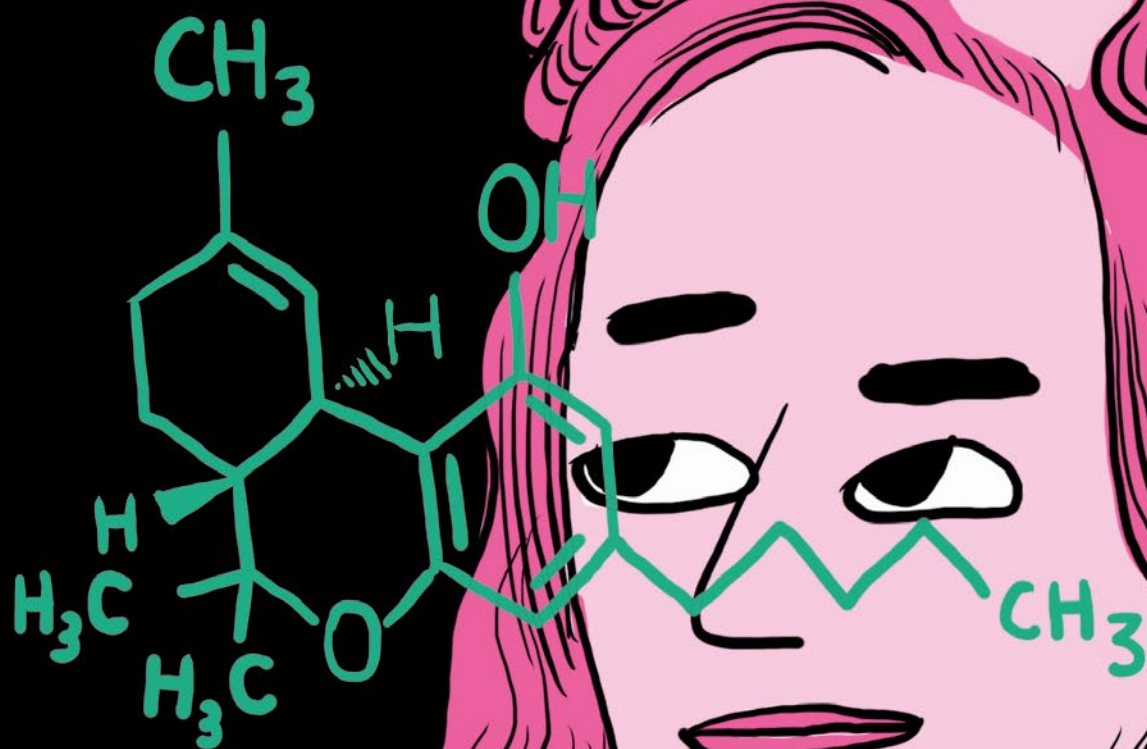
While these receptors interact with the body’s natural endocannabinoids—like anandamide, which gives you that euphoric feeling after you’ve hit the gym—they also work with THC and other cannabinoids. So in a way, our bodies are made for weed.

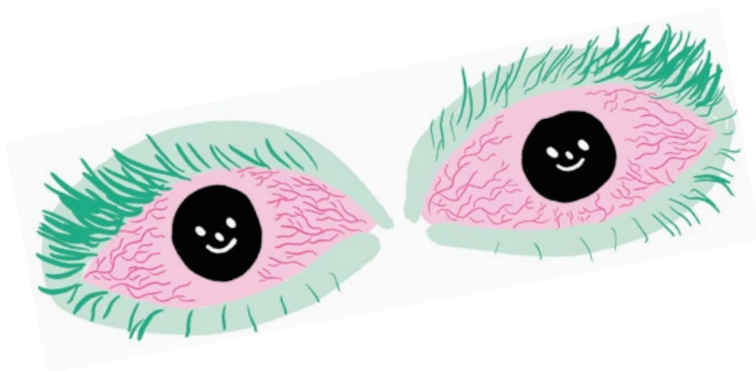
Both governments and pharmaceutical companies around the world are looking to cash in on the benefits of cannabis by creating synthetic cannabinoids. This has resulted in medications that mimic the effects of weed, like Syndros, which was recently approved, and Marinol, which has been prescribed since the 1980s.

Since a lot of flower strains and concentrates, like THCA crystals (more on that later), are tailored these days to specific cannabinoids, it’s definitely useful to know what you’re getting yourself into the next time you’re analyzing the label of a weed jar. “Ah yes, the cannabinoid content of these nugs is pure fire,” you’ll say to your impressed friend. Just kidding. Never say that.



THC =





The Notorious THC

The cannabis plant contains hundreds of different chemical elements. But, for decades, everyone has been obsessed with just one of them: THC, or tetrahydrocannabinol, the most abundant (and notorious) cannabinoid in weed. THC was discovered by a Bulgarian-born Israeli chemist named Raphael Mechoulam. In 1964, he isolated and synthesized THC from Lebanese hashish, leading some to call him the “father of cannabinoid research.” (Interesting side note: Israel has since become a leader in this field.)

This bad boy is what gets you stoned. It’s psychoactive, stimulating your brain to perceive the world a little differently and start asking some hard-hitting questions (high thought: if tomatoes are a fruit, is tomato ketchup a smoothie?!). The THC “high” is really complex and variable. It can make you feel euphoric, relaxed, anxious, energetic, or stupid, depending on all kinds of factors like the type of strain, how your body chemistry reacts to it, and your own personal preferences. It’s not all subjective, though—high levels of THC can increase the risk of paranoia and anxiety. Weed is also a lot more potent now than when the hippies were smoking it back in the day.

After decades of careful cultivation and improved technology, today’s flower strains often hit around 20 percent THC, compared to less than 10 percent in the 1970s. Thankfully, in recent years growers have also started paying more attention to other cannabinoids, like CBD, which can counter the negative side-effects of getting too high.

THC might have some fascinating effects on the brain that we don’t fully understand yet, too. Studies suggest that anandamide, an endocannabinoid known as the “bliss molecule” and which is sort of the human body’s natural version of THC, may have something to do with the brain’s ability to forget. This could be why THC has shown promise in clinical trials for treating trauma-related disorders like PTSD.

Finally, since it affects our bodies and immune systems, THC also has a ton of medical uses. It’s a potent anti-inflammatory and can also relieve nausea, chronic pain, and digestive disorders like Crohn’s disease. Certain strains, especially indicas, are particularly good at easing anxiety and relaxing your body so that you can drift off into a sweet, deep sleep.

An Old Stoner's Remedy

We've all been there. You're hanging out with your friends, hitting the L one more time even though you know you really shouldn't, or accidentally eating the whole weed brownie before someone says you were supposed to share. Suddenly you're sweating like rapper Trinidad James after popping a molly, your chest feels like a collapsible tent, and you're fighting the urge to call your mom (not that you could remember her number right now anyway—you've forgotten your own name). What do you do?

According to celebrated stoner Neil Young: chew some peppercorns. In October 2014, Young was a guest on Howard Stern's radio show, and the two were swapping stories when they landed on the topic of weed. "I do it every once in a while," Young told Stern, who replied that he stopped many years ago because he gets too paranoid. "Try black pepper balls," Young said. "Just chew two or three pieces. I just found this out myself. Try it."

Using black pepper to mellow out a too-intense high is an old stoner trick that actually dates all the way back to the Romans. It is mentioned in the ancient scholar Pliny the Elder's *Natural History*, from the first century CE, where he writes: "The gelotophyllis [literally 'leaves of laughter', or cannabis] grows in Bactria and along the Borysthenes. If this be taken in myrrh and wine all kinds of phantoms beset the mind, causing laughter which persists until the kernels of pine-nuts are taken with pepper and honey in palm wine."

Several scientific reviews in more recent years have also lent some credence to this theory, which is based on the fact that pepper contains beta-caryophyllene, a type of terpene (see p. 28) that

binds to the same cannabinoid receptors as THC but produces a counteractive, calming reaction. So the next time you find yourself spiraling on the verge of a weed freakout, grind up some fresh pepper and stick your nose in it like you're Kate Moss visiting Pete Doherty's recording studio. Take a big breath in. Sneeze. Immediately feel better.

THC Dosage Guide (for Smoking Buds)

Less than 8% = "I don't think this is working ..."

8 to 16% = "I feel pretty great!"

16 to 25% = "I'm baked"

25% or higher = "I can read minds"





CBD, a Love Story

CBD, or cannabidiol, is the second most abundant chemical compound in weed after THC, and it can help to combat anxiety, inflammation, and pain. Research done over the last ten years suggests that CBD can also be used to treat a wide range of medical conditions; for example, cancer patients are given both THC and CBD to help with a range of ailments, including chemotherapy-induced nausea.

For the past few decades, cannabis plants have been bred to produce high levels of THC, a side effect being that levels of other cannabinoids in those plants has declined. Thus, CBD has been hidden in the shadow of its flashier, more popular older sister. THC and CBD are like Paris and Nicky Hilton—one is notorious for its limitless capacity for fun, while the other is more low-key and responsible, but just as cool in its own way.

Now that we're starting to understand the plant better, CBD is having a resurgence. You can even find it spiked in smoothies at music festivals and stocked in little bottles at the local natural foods store. It's non-psychoactive, which means you won't actually get "stoned"—useful when you're in a situation where you need to think straight. Basically, it's the perfect thing to take when you want to relax and feel better, like if you have really bad period cramps at school, or just want to go to bed. It's also ideal for people who don't usually smoke weed because they think it makes them super-paranoid. In fact, a 2006 study found that CBD actually counteracts the effects of THC, so it's a useful remedy if you accidentally get too stoned.



So You Want to Get Into CBD

Think of anything you can put in your mouth or on your body, and there is probably a CBD-infused version of it sold somewhere on the internet.

While CBD exists in a legal gray zone in most countries, it's sold online and at health food stores all over the world. Even Amazon has gotten in on the action, so you really don't need to worry about cops busting down your door for ordering some CBD shampoo (seriously, that exists). Here's how to figure out the best product for you:

If you're about that vape life

CBD vapes are definitely the way to go. The Select brand's disposable CBD vapes are great because you don't have to worry about charging them up with a USB port. They come in delicious flavors like cinnamon, lavender, and grapefruit. CBD vapes are also one of the fastest ways to feel good.

If you want a good massage

Muscle-soothing CBD balms and lotions guarantee a next-level rubdown. Look for the ones infused with herbs like eucalyptus and peppermint for that full spa experience and satisfying tingly feeling. Apothecanna's creams are highly recommended as the stoner masseuse's go-to.

If you need quick pain relief

CBD tinctures and pills are the medical-grade solution for body ailments like aches and nausea. If you don't like puffing on vapes, popping these down your throat or on your tongue is the easiest way to feel good.

If you're looking for a beauty fix

There are a ton of deeply moisturizing and inflammation-fighting CBD face creams, eye rollers, soaps, and other beauty products on the market. Kana Skincare's CBD Korean sleeping mask is light enough to use every night and is

formulated by a grandma in Seoul who makes high-end beauty creams.

If you're craving a delicious treat

CBD chocolate, gummies, granola bars, and even cotton candy are the perfect snack that you can justify as (somewhat) "healthy" for you.

If your pet wants a treat too

CBD pet tinctures are often infused with good stuff like cod liver oil and omega-3 fatty acids to keep your pooch's fur shiny—because they deserve to look as good as they feel. If you have an anxious feline friend, a drop of hemp oil made for cats should help to get it purring in no time.





The Next Generation

While THC and CBD are currently hogging the limelight, a weed plant contains at least eighty-five known cannabinoids (some people say closer to a hundred), and a bunch of others are now on the up. Research into these cannabinoids is still pretty limited but there have been exciting signs in terms of their possible medical uses, including potentially helping to fight cancer, diabetes, and depression. You can't really buy these cannabinoids in flower form yet, but you might be able to find them in dab oil (see p. 56) or vape cartridge form if you look hard enough.

Delta-8-THC

Good for: Getting stoned but not *too* stoned

A close cousin to the THC everyone knows (which is technically delta-9-THC), delta-8 is found in very small amounts in the cannabis plant. You'll still get stoned, but the high will be a little more subtle and mellow, and it tastes a bit sweeter.

THCV

Good for: Curbing munchie cravings

One of the most annoying side effects of weed is waking up in a pile of junk-food wrappers. THCV is the anti-munchies savior—it actually kills your appetite, while giving you a boost of energy and a nice stoned buzz. THCV is most abundant in sativas, especially strains from Africa like Durban Poison. Many cannabis brands and pharmaceutical companies have already latched on to this cannabinoid; research suggests it could help fight panic attacks, prevent seizures, stimulate bone growth, and treat diet-related conditions like type 2 diabetes.

CBN

Good for: Beauty sleep

You know how you get sleepy after smoking stale weed? That's because of CBN, or cannabinol, which is what THCA breaks down into over time and exposure to oxygen. For a long time CBN was seen as "the enemy" because it's a sign that weed has gone bad. But it might help to soothe muscles, reduce pain, and fight signs of aging, making it a popular contender for use in weed beauty products.

THCA

Good for: "Wellness"

The cannabis plant actually doesn't contain THC—it contains THCA, or tetrahydrocannabinolic acid, an inactive compound that won't get you stoned. Through a process called "decarboxylation," usually achieved through heating up weed with a lighter, vape, or oven (see p. 68), THCA gets converted into THC. Thus THCA is a good way to absorb the physical benefits of pot without any psychoactive effects, sort of similar to CBD. It can help to regulate your immune and hormone systems and might even help to prevent the spread of cancer. You can find THCA sold as patches or other topicals that you apply to your skin, as well as in capsules that you swallow. If you're growing your own cannabis plants at home, you can juice the leaves to drink up this good stuff.

CBG

Good for: Low mood; high blood pressure

CBG, or cannabigerol, is known as the "mother" of cannabinoids, since the plant produces a lot of it and then converts it into all the others. It may be useful as an antidepressant, muscle relaxant, antibiotic, and antifungal agent. It may also help reduce blood pressure.



TERPENES

Have you ever wondered why Sour Diesel tastes different from Lemon Haze? Or why you prefer one strain over another, even if they have similar names or the same THC levels? Maybe you've never thought about it that much, or just assumed that's how the ganja gods meant for it to be. But the answer—at least partly—is terpenes.

Terpenes are the essential oils of the cannabis plant. There are over a hundred known cannabis terpenes, and each strain has a unique combination of them, giving it a distinctive smell and flavor. But it's not just about aromatics. Like cannabinoids, terpenes are stored in the trichome glands of the cannabis plant, and they help to mediate how our bodies interact with weed. Some terpenes relieve stress, while others increase focus or elevate mood. Certain terpenes might even reduce the harm caused to your lungs by inhaling cannabis smoke—a fact that low-key blew my mind when I first found out about it.

Recently, as the average stoner has become more aware of what terpenes do, public interest has spiked. The word “terpene” is now Googled about

five times more regularly than it was two or three years ago. Weed strains and concentrates high in naturally derived terpenes are now extremely popular. When you see a cannabis product advertised as “full spectrum,” that usually means that the grower or extractor made an effort to maximize its terpenes and cannabinoids in order to create a well-rounded high that feels as good as it tastes.

Thus, knowing which terpenes you like (or want to avoid) will really help you in choosing the right strains for you. Though, if you're ever in doubt, just take a deep whiff and trust your nose, because chances are that your subconscious instincts will guide you to what your body needs the most.

Popular Terpenes



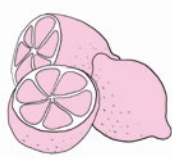
Myrcene

Aroma: Musky and earthy, with a hint of floral
Effects: That relaxed feeling of not wanting to get off your butt, also known as “couch lock”
Strains: Pure Kush; White Widow



Pinene

Aroma: Pine and fir
Effects: Keeping you alert; fighting germs; helping your lungs stay clear
Strains: Jack Herer; Durban Poison



Limonene

Aroma: Lemon and orange
Effects: Uplifting your mood; giving you a burst of energy; curbing your appetite
Strains: Super Lemon Haze; Lemon Skunk



Terpeneol

Aroma: Pine and clove
Effects: Antioxidant
Strains: OG Kush; Girl Scout Cookies



Borneol

Aroma: Menthol
Effects: Chilling you out and helping you de-stress
Strains: K13; Sour Diesel



Delta-3-Carene

Aroma: Sweet and musky
Effects: Cottonmouth and red eyes
Strains: Super Silver Haze; Skunk #1



Linalool

Aroma: Floral and lavender
Effects: Soothes anxiety
Strains: G-13; Amnesia Haze