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CANNABIS NEWS AROUND THE WORLD



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# Quick Hits

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UN Commission on Narcotic Drugs delays vote on WHO cannabis recommendations

The proposal, made by the World Health Organization's Expert Committee on Drug Dependence, could have a significant impact on the global medical cannabis and hemp industry if adopted.

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The cannabis industry is begging the FDA for some CBD regulations as Gottlieb heads to the Hill

Businesses selling food and beverages infused with CBD have a message for the Food and Drug Administration: Regulate us, please.

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Lab testing reveals banned chemicals in multiple cannabis samples in Los Angeles

Before you make a purchase, make sure you're buying cannabis from a fully licensed and reputable dispensary.

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Germany reports healthy interest in home-grown tenders

Interest in Germany as a major European hub is not waning despite its botched licensing process, as 79 firms have bid to become growers.

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London law firm announces cannabis department open for business

A London law firm is looking to tap into the highly lucrative legal weed scene through the launch of what is understood to be the UK's first dedicated cannabis law department.

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While the compounds most commonly associated with cannabis -- THC and CBD -- showed little to no effect, 10 other compounds were effective at inhibiting cancer cell growth.

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EU resolution's medical cannabis definition too restrictive, experts say

While the resolution was well received by industry stakeholders, the business effects of the move may be less rosy for a rapidly evolving industry.

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Marijuana legalization bills are advancing in several states

Marijuana legalization advocates came into 2019 expecting it to be a huge year for cannabis, and lawmakers around the country are not disappointing them so far.

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Analysts predict Starbucks will be first major chain to offer CBD infused drinks

Survey says the cannabinoid is now used by 7 percent of US residents. That figure compares to 4.2 percent who said they use e-cigarettes, and 19.6 percent who identify as tobacco users.

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Peru lays groundwork for commercial medical cannabis production, sales

More than one year after Peru legalized medical cannabis, the South American country published a regulatory decree providing clarity about how the program will work.

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10 technological breakthroughs that could change how cannabis entrepreneurs do business

Technological advances are revolutionizing every sector of the marijuana industry, transforming a market that largely is seen as an agricultural industry.

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Study shows that bees like Hemp, and that's great news for the environment

According to a recent study, the crop also attracts a variety of bees—and that can help inform ecologically sustainable agriculture practices.

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# U.S. CANNABIS LAW IS HELPING CANADA MAKE HAY

REPOST: CAROL RYAN / WALL STREET JOURNAL / FEBRUARY 27, 2018

The longer a federal ban on pot is in place, the harder it will be for the U.S. to compete with Canadian marijuana companies

Pot is that rare industry where Canada has an edge over its more powerful neighbor. The longer a U.S. federal ban on the drug is in place, the harder it will be to catch up. U.S. pot companies are now being taken out by cash-rich Canadian rivals.

Last year, the Canadians bought 57 businesses south of the border, more than double the number in 2017.

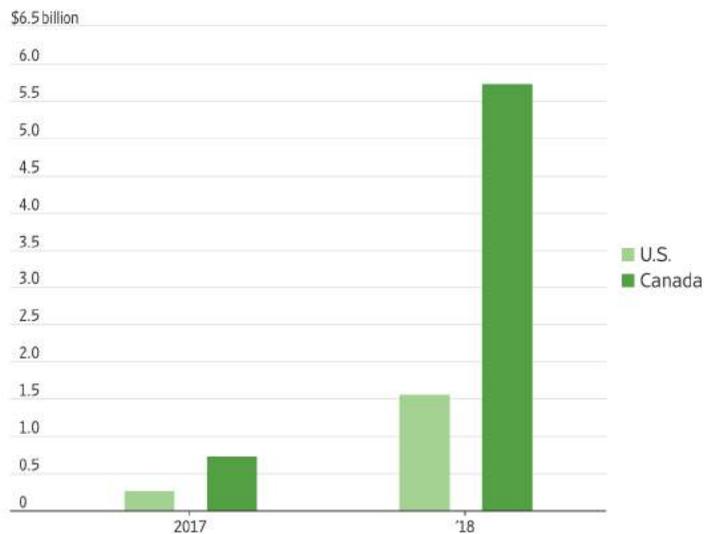
Deeper pockets are also helping them to dominate CBD products—derived from cannabis but without a high—that are of interest to some of the world’s biggest consumer companies, including Coca-Cola.

Last week Canada’s Tilray, which now has a market value of over \$7 billion, bought hemp food company Manitoba Harvest. That leaves U.S. weed companies on the back foot.

Access to capital is a major issue. Stock exchanges like the NYSE and Nasdaq won’t list the shares of any business that grows cannabis in the U.S., where the drug remains outlawed at the federal level.

## Deeper Pockets

Value of top-10 cannabis capital raises by location



But they do allow operators from Canada, where pot has been legal since last year, to tap the deep U.S. capital markets. Canadian companies like Cronos Group and Canopy Growth have also benefited from major investment by U.S. tobacco and beer giants Altria and Constellation, who want a piece of the rapidly growing cannabis business.

If Silicon Valley is the world’s tech hub, Toronto is emerging as its cannabis cluster. The city’s main stock exchange hosted eight cannabis companies by the end of January, its junior exchange a further 41.

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A network of dedicated professional services including investment banks and legal firms now have the expertise to handle a frenzy of marijuana IPOs and deals.

The U.S. pot scene is more dispersed and burdened by higher costs. Companies can't legally transport cannabis between states, so growers with plants in multiple locations have to duplicate their operations, in some cases making them highly inefficient.

And because U.S. federal law prevents companies that sell controlled substances like pot from deducting costs such as rent or wages in their tax filings, some marijuana companies pay an effective tax rate of 85%, according to cannabis law firm Hoban Law Group.

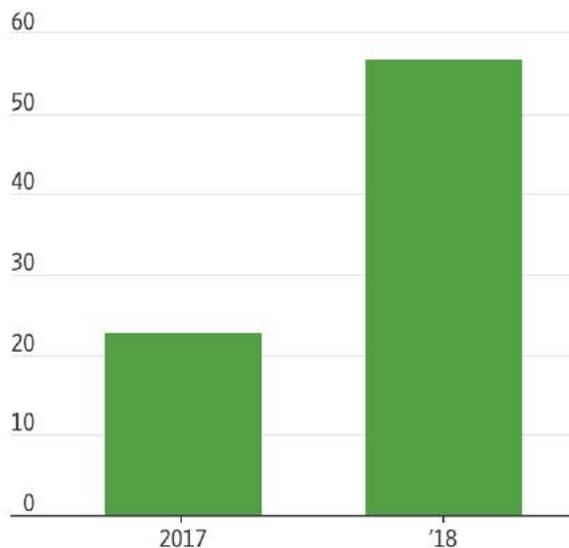
The valuable global market for medical cannabis is also off-limits until it is legal for U.S. cannabis companies to export. The Canadians aren't hanging around: "They are locking up international contracts for years that the U.S. is missing out on", says Debra Borchardt, author of the Green Market Report.

Tilray, for example, is busy inking contracts with pharma distributors in countries like Germany, Portugal and New Zealand. Even if the federal ban on pot lifted tomorrow, it would take time for the U.S. to develop national standards and supply chains to rival Canada.

And many of the best targets may be gone, or fetch even higher valuations by the time U.S. cannabis businesses can get access to more cash. Catching up with Canada's big drug push will be expensive. 🌿

### Big Spenders

Number of acquisitions of U.S. cannabis companies by Canadian companies



Source: Viridian Cannabis Deal Tracker

# Will 2019 Be the 'Year of Stability' in California?

REPOST: JOHN SCHROYER / MJBIZ MAGAZINE / FEBRUARY 2019

Despite rough 2018, California's cannabis industry might have reason for optimism

## "The year of stability."

That's what the California Cannabis Industry Association is hoping 2019 will become, according to the group's executive director, Lindsay Robinson.

And it very well could play out that way—especially compared to the roller-coaster turbulence the Golden State's marijuana market experienced in 2018.

But I know a lot of folks who would scoff at that kind of optimism.

The first full year of California's regulated marijuana market was as much about survival as anything else—especially for existing companies that were transitioning into new modes of operation, with hundreds of pages of new rules (and multiple drafts of those rules) to comply with and comprehend.

There was massive upheaval right from the get-go in January 2018, with sales not reaching their full potential because state and local taxes were much higher than many consumers were willing to pay.

That led straight to the ongoing fight between legal operators and illegal ones—though many of the latter have been trying for months to obtain licenses and run their companies in a fully legal manner. But the underground market is still alive and well.

I hear about it on a regular basis from retailers statewide who are having a hard time competing on price with unlicensed shops and delivery businesses.

The illicit market is only one reason Robinson's hopes of stability maybe for naught. I've also heard from plenty of others who don't expect any real market stability for several more years—or until regulations are set in stone, wholesale cannabis prices stop fluctuating madly, testing processes become well-established and the supply chain in general settles down.

That's not to say that 2019 won't be easier than 2018. It probably will be for many members of the cannabis industry. But it still won't be a cakewalk. Here's why.

## Anticipated Lawmaker Action

There are as many as 50 or more bills already being drafted at the state capitol in Sacramento to further regulate marijuana. Those will probably require further pivots and costs for companies that will have to adjust their operations to comply.

Many of those are likely to be positive shifts, such as a probable renewed attempt to open up banking in California for cannabis businesses, or to streamline existing regulations. But some could also be related to packaging, advertising or other logistics that will cost money and time to manage.

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### Licensing Changes

Speaking of compliance, another ongoing process that began months ago is the transition from temporary business permits to full annual licenses for anyone on the plant-touching side of California's MJ supply chain.

Throughout 2018, almost every company was operating on temporary business permits issued by state officials. But those permits, which were fairly easy to obtain compared to the annual licenses, are being phased out.

It could take officials months to process applications for the new annual permits. That means we probably won't have a clear picture in 2019 of just what the California cannabis business landscape looks like, or who exactly is part of it, until the current backlog of annual permits is relieved.

### Track-and-Trace Questions

The onset of annual licensing in California brings with it a mandatory cannabis track-and-trace system, which has its own set of challenges, stakeholders say. Since only annual licensees are required to use the system, few companies were actually using it by the end of 2018, meaning the system has yet to bear the full brunt of the largest MJ market in the world.

It's yet to be seen if the system—Metrc, the same software program used by Colorado marijuana regulators, among others—will prove to be useful and bug-free, or if just getting thousands of companies to use the program will present big hurdles.

### Supply Chain Shakeout

As annual licensing progresses, there's also likely to be a good number of companies that won't make the cut, even though they obtained temporary licenses, operated in 2018 and even got products to market. There are any number of potentially fatal pitfalls: problems complying with environmental regulations, zoning or premises issues that cause an application to fail.

One thing I've heard consistently is that there will be winners and losers in the licensing arena, with some surviving and some falling by the wayside. It's a question of numbers and how much market share will be won by those who survive.

### More Markets Opening

In a positive business note, one of the developments expected in 2019 is the opening of new, fully legal markets in California.

The biggest and most obvious is Los Angeles, which is expected to open its third round of cannabis licensing in the spring. That will allow members of the general public to apply for business permits for the first time (the first two rounds were reserved for existing companies that proved they had been operating for years).

The change could mean hundreds of new license opportunities in that city alone. And there will probably be others, scattered across the state, where the market is expanding and allowing more companies to enter the cannabis sector.

One thing time has shown in more mature marijuana markets: Municipal and county officials tend to relax their anti-MJ attitudes over time as they realize the sky hasn't fallen with legalization. And that realization often morphs into the desire for more tax revenue, which, in turn, leads to more business licensing opportunities.

All of this adds up to one clear message: more big changes for California in 2019. Whether they're for good or ill has yet to be seen, but change is coming, while stability may be a few years away.





# A PATIENT'S GUIDE TO USING CANNABIS FOR CANCER

REPOST: DAVID BIENENSTOCK / LEAFLY / FEBRUARY 6, 2019

Cannabis can also elevate your mood at critical moments, and even help you psychologically come to grips with the difficult times ahead. This is no small thing.

The cannabis plant contains a number of compounds with research-backed benefits for cancer patients. The science-based case that it is a safe and effective medicine will be made below, with plenty of links to double-blind studies, authoritative sources, and leading experts. The takeaway being that the plant and preparations derived from it can provide relief of cancer-related symptoms like pain, nausea, and inflammation. Some research has even shown that some cannabis compounds may slow cancer growth and shrink tumors.

Cannabis can also elevate your mood at critical moments, and even help you psychologically come to grips with the difficult times ahead. This is no small thing. Many of the medicines you will be prescribed, and procedures you will undergo—helpful as they may be—will leave you feeling depleted (to say the least).

Cannabis is restorative—to body and soul.

To laugh, to escape from pain and anxiety, to step outside one's self and experience a moment of peace, or bliss, or both—what could be more healing? Now, I don't have any studies to back up this particular claim, but I have seen it firsthand countless times in my 15 years of meeting cancer patients and writing about their relationship with medical cannabis.

And that includes both people who had a lot of experience with cannabis before they got cancer and those who'd never even considered trying it before.

Now, it's perfectly understandable if, after a century of anti-cannabis government propaganda, you're skeptical about such anecdotal claims. But please don't let that prevent you from further researching the subject. I believe any cancer patient who takes the time to review the breadth of evidence with an open mind will conclude that cannabis is an option worth trying, whether you're undergoing chemotherapy or not.

## **The Case for Medical Cannabis**

Let's start with the bad news: Cannabis remains illegal even for medicinal use in many places around the world. This forces countless cancer patients every year to resort to the underground market, where they risk arrest for simply possessing a small amount of plant matter. Beyond that, it's also important to understand that cannabis itself is not harmless.

But neither is water, if you drink too much. So when we talk about the potential risks of cannabis, we need to talk not about it being "safe" or "dangerous," but in terms of "relative harm."

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(Gillian Levine for Leafly)

When it comes to cancer specifically, there's been a number of landmark studies proving the safety and efficacy of cannabis. The first ever study to show that cannabis exhibits anti-tumor properties was originally designed to demonstrate the plant's dangers, specifically harm to the immune system.

Funded by a grant from the American Cancer Society, research published in 1974 in *The Journal of the National Cancer Institute* showed that mice who had tumors surgically implanted and were then "treated for 20 consecutive days with THC" had reduced primary tumor size.

The government immediately pushed the offending study down the memory hole, and pushed on with the War on Cannabis, but three decades later, Dr. Manuel Guzman, professor of biochemistry at the University of Madrid, managed to follow up on the original 1974 experiments, with similar results.

In the March 2000 issue of the journal *Nature Medicine*, Guzman reported that cannabinoids (like THC) not only shrink cancerous tumors in mice, they do so without damaging surrounding tissues.

A year later, a study published in the *New England Journal of Medicine* for the first time demonstrated the efficacy of THC for nausea and vomiting associated with chemotherapy. "A day doesn't go by where I don't see a cancer patient who has nausea, vomiting, loss of appetite, pain, depression, and insomnia," Dr. Donald Abrams, chief of hematology-oncology at San Francisco General Hospital and a professor of clinical medicine at the University of California, San Francisco told *Newsweek* for a 2013 article headlined *Marijuana Is a Wonder Drug When It Comes to the Horrors of Chemo*.

"Cannabis is the only anti-nausea medicine that increases appetite."

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More recently, in 2017, the International Journal of Oncology published a report showing that cannabinoids produced naturally in a cannabis plant possess anti-cancer activity whether used alone or in conjunction with chemotherapy. While according to research by Yale Cancer Center, a majority of pediatric cancer providers now endorse the use of medical cannabis for children with advanced cancer.

### **Talking with Your Doctor**

Many physicians and medical professionals (including cancer specialists) remain wholly unaware of the many ways cannabis can support those going through cancer treatments, so it's important to show up to every appointment armed with as much information as possible. But you should be cautious as well, particularly if you live in a place where medical cannabis is not legal, and admitting to using cannabis could potentially lead to legal trouble, refusal of medical care, or problems with your insurance coverage.

So research thoroughly and choose your words carefully until you determine if you feel safe broaching the subject with your primary care physician and/or oncologist. Also, consider seeking out a cancer specialist who publicly embraces medical cannabis for a more thorough consultation on your particular needs.

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## How to Obtain Medical Cannabis

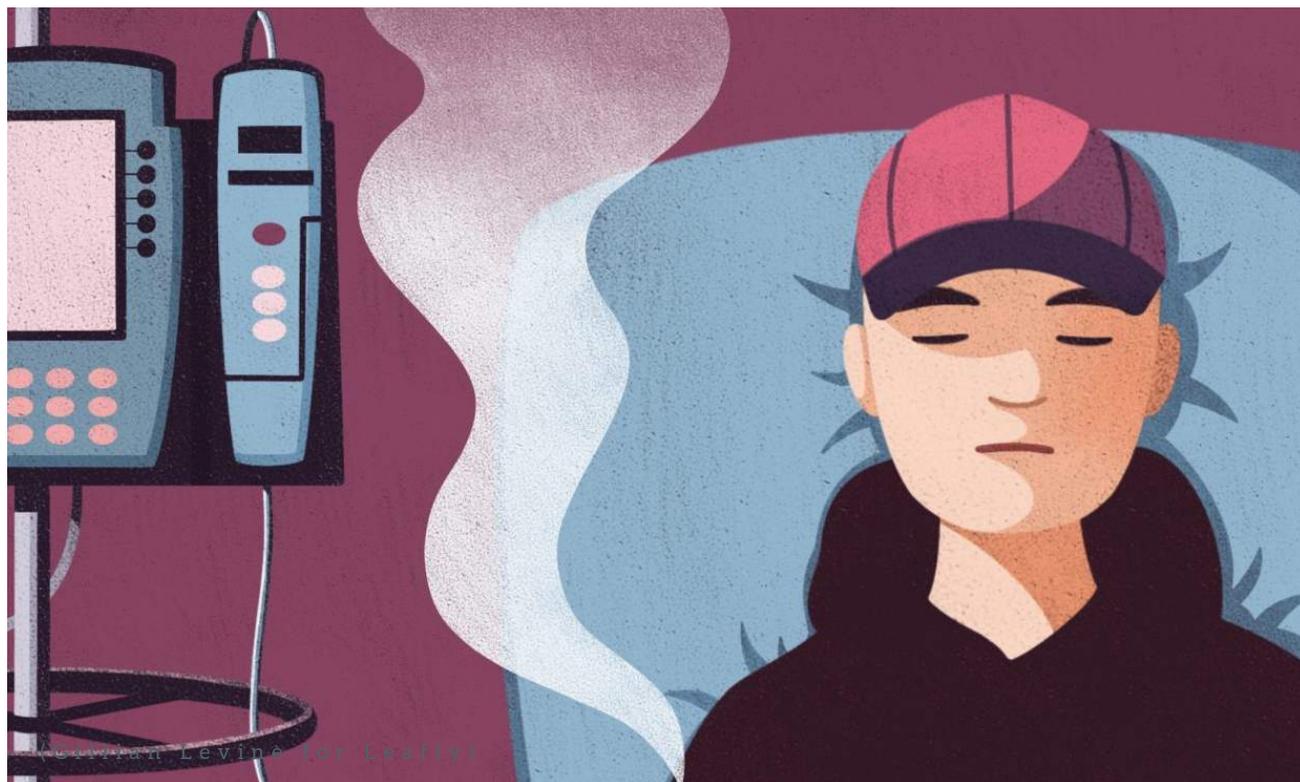
If you live in a place with either legal cannabis or legal medical cannabis, you should have no problem accessing what you need through a dispensary. There may be some legal hoops to jump through to sign up for your state's medical cannabis program, but as a cancer patient you most certainly qualify.

Everything you find on a dispensary shelf should be lab tested for purity and potency, but it's still a good idea to seek out cannabis grown without the use of chemical pesticides and fertilizers. Federal law prohibits using the word "organic" when it comes to cannabis, but there are third party certifications that mean the same thing, and certain companies only work with growers using organic methods. If you live in a place without legal medical cannabis, you'll have to first carefully weigh the potential benefits of having this medicine in your life against the risk of legal consequences.

The medical cannabis movement has been built on civil disobedience, and the foundational belief that any law preventing the seriously ill from accessing a proven medicinal plant should be actively subverted. So feel no shame, and don't be afraid to ask for help. Think of a person in your life whom you trust, and who already has access to cannabis, and let them in on your situation.

## Dosing with Medical Cannabis

When it comes to identifying your ideal dosage, the most important thing to know is that you should start with very small amounts of cannabis and slowly increase them until you find what works best for you, without going overboard. This detailed dosage guide from Project CBD offers thorough information on how to optimize the benefits of medicinal cannabis. It's also vital to understand that different delivery methods will produce vastly different effects, including how quickly they onset and how long they last.



(Illustration by Levina for Leafly)

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Inhalation will have you feeling relief in less than a minute. Just start with a puff or two, see what happens in a couple of minutes, and then inhale more as needed. Meanwhile, edibles can take up to 90 minutes to onset, and last for up to eight hours. That makes them ideal for long-term relief, but you run the risk of eating too much before you start to feel the effects. So until you get the hang of it, stick to low-dose edibles (five or ten milligrams of THC) and then slowly up your dose as needed—always waiting at least 2 hours between doses to account for the lag time.

Incorporating CBD-rich cannabis products into your regiment gives you access to another therapeutic cannabinoid, one that is also shown to reduce anxiety induced by larger doses of THC. (Note: small doses of CBD can enhance THC's intoxicating properties, but large doses appear to counteract unwanted side effects.)

Be sure to remain well hydrated at all times, and ideally share the experience with a friend. Definitely stay home the first few times you use cannabis, particularly as you get used to the experience and while experimenting to find your optimal dose. Mixing cannabis with alcohol is not a good idea. Mixing it with your favorite music and a game of stoned Scrabble, however, is really fun.

### **Choosing a Delivery Method**

#### **Pharmaceutical cannabinoids**

Several pharmaceutical drugs have been developed using either synthetic cannabinoids (like the THC drug Marinol), or plant derived blends of THC and CBD (like Sativex from GW Pharmaceuticals). What these products all have in common is that they're inferior to whole plant cannabis (and whole plant cannabis derived products) in terms of efficacy and price.

#### **Cannabis Flowers**

Also known as "buds," the dried flowering tops of female cannabis plants are ideal for smoking and vaporizing. If possible, get yourself a high quality portable vaporizer.

Vaporizing is a lot less work for your lungs than smoking and you're much less likely to have a painful coughing fit.

If you're sourcing dispensary cannabis, the label should tell you its levels of THC and CBD. Ideally, you want a range of strains at your disposal, including one that you find pleasantly uplifting (like Sour Diesel, Jack Herer, and Super Lemon Haze); one you find pleasantly sedating (like Blueberry, Purple Kush, and LA Confidential), and one that's rich in CBD (like ACDC, Cannatonic, and Harlequin).

#### **Concentrates**

When dealing with extreme pain or nausea, it's reassuring to have a way to quickly inhale a high dose of cannabis. Depending on how concentrates are made, they can have levels of purity from around 50% THC all the way up to 95%.

If you're new to cannabis, a vape pen is a good option for exploring concentrates, as you can inhale small amounts of cannabis oil with ease, and they're very discreet to use when out of the house.

But make sure you research a reputable brand, as the quality of vape pens varies widely. Dabs are definitely the most efficient way to inhale the most cannabinoids all at once, but they should wait until you're fairly experienced with cannabis, as it's a lot to take in.

### Cannabis Oil or RSO

Some cannabis patients ingest large doses of cannabis oil in an attempt to not only control symptoms, but to destroy existing cancer cells and prevent the disease's spread.

As mentioned before, research is beginning to show the specific ways cannabis may help control cancer growth. But it's also led to a rash of overblown claims and "snake oil sales pushes" that target vulnerable patients, so be careful what you buy and who you believe.

### Edibles

Again, edibles take up to 90 minutes to onset, and can potentially get you way higher than smoking or vaping because of a chemical conversion that takes place when THC is processed in the liver instead of the lungs. So it's way easier to overdo it on edibles. But edibles also have some big advantages: They provide relief for many hours, they're discreet to carry and consume, you don't have to inhale smoke, and they can really help you stretch your cannabis budget, particularly if you're making your own edibles at home. Just follow proper safety protocols.

### Tinctures

Prior to the Age of Pharmaceuticals, many prescriptions were delivered to patients via tinctures, a medicinal preparation where an active ingredient is dissolved into a solvent, typically alcohol.

Tinctures give you a smoke-free, vape-free option that still takes effect quickly, since the medicine can be absorbed under the tongue rather than in the stomach. They're discreet and easy to dose, and you can either make your own at home or find a high quality tincture at a dispensary, including ones that offer a range of different cannabinoid ratios, and even blend in other medicinal herbs along with cannabis.

### Topicals

Topicals can be applied directly to the skin wherever you're feeling pain, so it's a great way to get targeted all-natural relief of soreness and inflammation without getting high. At a quality dispensary, you can find a wide range of lotions, balms, bath soaks and massage oils, including lines that also blend in other therapeutic herbs. 

### Resources:

International Journal of Oncology Report on Anticancer effects of phytocannabinoids used with chemotherapy

Yale School of Medicine - Pediatric Cancer Providers Give Medical Marijuana a Cautious Thumbs-Up



# How Quickly Does Cannabis Enter Your System and How Long Does It Stay There?

REPOST: CALVIN HUGHES / CIVILIZED / FEBRUARY 23, 2019

For all the newcomers to cannabis culture out there, here's everything you wanted to know about how quickly weed takes effect, how long the high will last and how long cannabis can be detected on a drug test.

## HOW QUICKLY DOES CANNABIS ENTER YOUR SYSTEM?

The answer to that question largely depends upon how you choose to consume cannabis. Dr. Robert Mann - a senior scientist at the University of Toronto's Centre for Addiction and Mental Health - says smoking or vaping cannabis is a "very efficient way to get the drug into your bloodstream." He says that according to his research most people will reach the peak of their high about five minutes after they've smoked a joint.

Things are quite a bit different for marijuana-infused edibles however. If you prefer to eat cannabis-infused snacks as opposed to smoking or vaping you should plan for the effects to start setting in up to two hours after you ate it.

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### HOW LONG WILL WEED STAY IN YOUR SYSTEM?

After you hit that peak level of intoxication, it'll take a few hours for the THC—the chemical in marijuana largely responsible for giving you that high—in your body to come back down, according to Dr. Mann. "THC levels will decline over the next couple of hours very rapidly, then that decline slows off for a while, and then after several hours, I think the levels in the blood are quite low," Mann told Global News.

He suggests that after about six hours you should be ok to drive, though you shouldn't be afraid to wait longer if you don't think the effects have worn off yet. And if you do decide to consume cannabis edibles, waiting for about eight hours or so after you start feeling intoxicated before driving is probably best. Of course the method of consuming cannabis isn't the only thing that dictates how long your high lasts and how intense it will be, says M-J Milloy - the Canopy Growth professor of cannabis science at the University of British Columbia. How much you take and how strong your cannabis is will play a part in that as well.

"Cannabis' effect on individuals as well as its detectability really varies by what people are using," he said. "And if they are, for example, smoking high-THC joints, that's a different thing than if they are taking gel caps of high-CBD cannabis."

Even simple things like "how deeply you might inhale, how long you hold the inhalation for" contribute to what your cannabis experience will be like says Mann.

### HOW LONG CAN CANNABIS BE DETECTED BY A DRUG TEST?

Because of the way that cannabis interacts with the body you could test positive for the stuff on a drug test long after the last time you consumed. Different studies have detected cannabis in urine samples up to a month after the last time a person consumed marijuana.

"When you use cannabis, the THC gets absorbed into the fat in your body, and so there's kind of a reservoir there that keeps getting released fairly slowly, so that you will find trace amounts of THC in the blood for a longer period of time, but at very low levels," Mann said.

And the more often you consume cannabis, the more likely it is that THC can be detected in your blood or urine for extended periods of time, where as the occasional consumer will flush it out much more quickly.

"If you're a frequent user, there are people who use daily or several times a day, it builds up in your system. It's in your body at higher levels for a longer period of time just because it's building up in the body."

So, if you're hoping to become a pilot or enter some other safety-critical occupation you'll want to make sure you lay off the marijuana at least 30 days before you go for your drug testing. 🌿



# Why CBD Works Better With a Little THC

## (Even If You Don't Want to Get High)

REPOST: DAVID BIENENSTOCK / LEAFLY / FEBRUARY 12, 2019

GRAV/UNSPLASH PHOTO

Way back in 2014, I wrote an article called *Desperately Seeking CBD* that profiled several families who either broke the law or moved clear across the country to access cannabidiol (CBD)—a non-intoxicating compound found in the cannabis plant that's proven effective in treating pediatric seizure disorders that don't respond to more conventional therapies. At the time, the father of a two-year old epilepsy patient explained that they'd uprooted their entire existence and moved to Colorado just to try the treatment.

Five years later, you can buy CBD ice cream in Texas. Cannabidiol is officially "trendy." Capsules, tinctures, ointments, and oils containing the compound can be readily purchased online (as well as at gas stations and hair salons nationwide), and the legalization of hemp farming this December via the most recent US Farm Bill means that this rapidly growing market segment will likely expand exponentially over the next five years.

All good news, even if the recent media focus on shiny objects like CBD-infused cocktails has threatened to crowd out significant research showing cannabidiol has tremendous promise in treating cancer, diabetes, head trauma, chronic pain, neurodegenerative disease, depression, anxiety, and addiction.

But unfortunately, along the way, there's been a lot of shady operators selling CBD in a largely unregulated grey market, and as a result, a ton of misinformation has attached itself to this potentially life-saving cannabinoid.

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In fact, Project CBD—a non-profit dedicated to boosting science-based understanding of cannabidiol—has compiled an extensive list of pervasive misconceptions, one of which is “CBD is medical, THC is recreational.”

On the contrary, even small doses of THC combined with CBD can improve the efficacy of your cannabis medicine.

Originally, cannabis contained far less THC than it typically does now, and a lot more CBD. But over time, breeders have created ever more potent strains, as that’s what fetches the best price in the underground market. These breeders certainly understood that selecting for greater potency meant maximizing THC output, but just ten years ago few had even heard of CBD, never mind realized it was steadily getting bred out of existence.

Project CBD was founded in 2009, a time when CBD had almost entirely vanished from the cannabis gene pool. The organization’s founders recognized that while there’s long been evidence of CBD’s medical efficacy, unlike THC, it wasn’t reaching actual medical cannabis patients in appreciable amounts. So they worked directly with cannabis labs in California (then a new phenomenon) to identify the few remaining CBD-rich strains in circulation and make them available to growers, researchers and patients.

Which means you can put them down as big fans of CBD. Just don’t put down THC while you’re doing it.

Project CBD receives many inquiries from around the world and oftentimes people say they are seeking “CBD, the medical part” of the plant, “not THC, the recreational part” that gets you high. Actually, THC, “The High Causer,” has awesome therapeutic properties... [but] diehard marijuana prohibitionists are exploiting the good news about CBD to further stigmatize high-THC cannabis, casting tetrahydrocannabinol as the bad cannabinoid, whereas CBD is framed as the good cannabinoid. Why? Because CBD doesn’t make you feel high like THC does.

The best available science makes clear that whole-plant cannabis preparations are quantifiably superior to single compounds because the plant’s complex mix of cannabinoids, terpenes, and flavonoids interact synergistically to create an “entourage effect” that enhances each other’s therapeutic effects.

- A study conducted at the California Pacific Medical Center in San Francisco found that combining THC and CBD produces more potent anti-tumor effects when tested on brain cancer and breast cancer cell lines than either compound alone.
- A 2010 study found that patients with intractable cancer-related pain tolerated medicines that combined THC and CBD notably better than a pure THC extract.
- A 2012 study in the Journal of Psychopharmacology found that CBD “inhibits THC-elicited paranoid symptoms and hippocampal-dependent memory impairment”

Lots of people (like yours truly) enjoy the psychoactivity of cannabis and find it mood elevating and healing in and of itself, but rest assured that you don't need to get high AF to reap the benefits of THC.

However, finding your optimal dose will involve some trial and error.

According to Project CBD:

The successful use of cannabis as a medicine depends to a great extent on managing its psychoactive properties. The goal is to administer consistent, measurable doses of a CBD-rich cannabis remedy with as much THC as a person is comfortable with... Preclinical science lends credence to the notion that a small amount of THC can confer health benefits. Oral administration of a low dose of THC (1 mg/day) resulted in "significant inhibition of disease progression" in an animal model of atherosclerosis (hardening of the arteries), according to a 2005 report in *Nature*, which noted: "This effective dose is lower than the dose usually associated with psychotropic effects of THC."

In a feature called *We Asked a Scientist: What's the Right Dose of CBD?*, Nick Jikomes, Leafly's in-house neuroscientist, explored the complicated process involved in optimizing the benefits of cannabis without going one toké over the line, including managing the complex interplay between THC and CBD. CBD is essentially getting in the way of THC's ability to bind the CB1 receptor, which is why the presence of CBD has a significant impact on the psychoactivity of THC-containing products, [and] why the ratio of the two compounds is important for anticipating the effects of cannabis products... While THC and CBD have different pharmacological properties, they can both have similar physiological effects, probably acting through different mechanisms. For instance, both compounds can have analgesic and anti-inflammatory effects; they may act through different mechanisms, so having THC and CBD could potentially enhance an outcome surrounding pain relief.

If you're fortunate enough to have access to a legally operating cannabis dispensary, you should have no problem finding flowers, concentrates, topicals, and edibles with a wide range of THC-to-CBD ratios. But patients and consumers still sourcing their cannabis from the underground market will encounter more difficulty. One suggestion is to try combining whatever form of CBD you can access locally with the best whole-plant cannabis you can lay your hands on. Perhaps this means swallowing a CBD capsule and then taking a few puffs off a joint an hour later.

As always with cannabis, start with small doses and work your way up until you find the sweet spot. 🌿

# Shopping Stressing You Out? Simon Malls to Sell Hemp Products to Relieve Anxiety

REPOST: ESTHER FUNG / WALL STREET JOURNAL / FEBRUARY 26, 2019

**Green Growth Brands opened first Seventh Sense Botanical Therapy store this month with plans to open more**

THE SEVENTH SENSE BOTANICAL THERAPY STORE AT FAYETTE MALL IN LEXINGTON, KY. THE SHOP SELLS TOPICAL PRODUCTS SUCH AS FACE OILS AND HAND CREAMS INFUSED WITH CBD. PHOTO: GREEN GROWTH BRANDS

Shopping center owners have tried pop-up stores, water parks, even an indoor ski run to attract shoppers. Now, a large mall landlord is turning to the cannabis plant.

Simon Property Group reached an agreement this month with Green Growth Brands Inc., a Columbus, Ohio-based company that plans to open stores in as many as 108 locations owned by the upscale shopping center owner.

Green Growth's Seventh Sense Botanical Therapy shops will be selling products infused with cannabidiol, or CBD, a chemical found in the hemp plant.

The stores aren't dealing pot. Marijuana and hemp are separate species in the cannabis plant family, and produce different effects on the user. CBD sellers say its use can alleviate stress or reduce pain without getting the user high.

"We believe these legal products are consistent with our family-friendly positioning, while meeting the needs of our shoppers who seek new health and wellness options," said a Simon Property spokesman.

Green Growth plans to expand across 300 U.S. shopping centers by year-end, said Chief Executive Officer Peter Horvath. The Toronto-listed company's stores sell CBD topical products such as cannabis-infused face oils and body lotions priced around \$10 to \$39, Mr. Horvath said.

Its first kiosk opened in Fayette Mall in Lexington, Ky., this month. The first with Simon Property will be at Castleton Square Mall in Indianapolis, located in a prime spot, next to Sephora, Apple and Tesla stores. Some mall owners, especially in more conservative communities, are unlikely to follow Simon's lead.

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“You don’t want to alienate huge swaths of the population,” said Nick Egelanian, founder and president of Site Works Retail, a retail consulting firm. He noted that communities in the Bible Belt region are still against marijuana and CBD products.

Even though most states require that a customer be at least 21 years old to purchase CBD, some parents also worry that public displays of hemp in malls will send a message to children that these are now mainstream products.

Kevin Sabet, president of Smart Approaches to Marijuana, an organization against the legalization and commercialization of marijuana, said that some tests of CBD products in retail stores found contaminants like mold, heavy metal and pesticides.

“You won’t let these things into a smoothie let alone a whole store,” he said. “I think it’s incredibly risky for Simon and other landlords to be opening themselves to a ton of liability.” A Simon Property spokesman said: “Green Growth Brands does not market misleading products and is prohibited by our lease from selling anything illegal.”

A Green Growth spokesman said its raw materials are tested by third-party facilities for mold, heavy metal, pesticides and tetrahydrocannabinol (THC) levels. Some landlords say CBD is an acceptable alternative when traditional mall staples such as apparel retailers continue to close stores. CBD shop El Canamo Botanicals last year opened a kiosk at Willow Grove Park Mall north of Philadelphia. CBD’s image could also improve with the farm bill President Trump signed in December, which removed hemp from a list of federally controlled substances.

“We have worked to understand the products and ensure their sale is tasteful and meets the interests of this select shopper base,” said Joseph Coradino, chief executive officer of Pennsylvania Real Estate Investment Trust, which owns Willow Grove Park Mall.

While more states are legalizing marijuana for medical or recreational purposes, many cannabis products, especially food, remain restricted and subject to evaluation by the U.S. Food and Drug Administration.

CBD-infused products such as gummy bears, chocolate bars and beverages are already on store shelves in cafes and health food stores, but their legal status is murky.

In recent weeks, health inspectors from New York and Maine have ordered restaurants and bakeries to stop selling CBD-infused pastries, saying that they aren’t federally approved food additives.

The FDA stated in December that it is unlawful to introduce food containing CBD or THC, the chemical in marijuana that gives people the “high” feeling, into interstate commerce.

Mr. Horvath said his company’s topical products are safe for a child to put on his or her skin. But he is currently avoiding areas where state and federal laws are different, and added that these Seventh Sense stores won’t be carrying edibles, tablets or tinctures.

“We’re playing as clean and straight-up as possible,” said Mr. Horvath, adding that he is signing five-year leases. 



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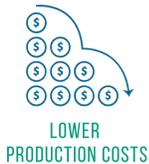
## WHO WE ARE

FCM Global is a Colombian-based producer/supplier of medical grade cannabis extracts, oils, isolates, and microemulsions to pharmaceutical, nutritional, and cosmetic companies, research organizations, product distributors, and wholesalers in legal markets worldwide.

We are proud to serve these critical sectors and to help support our clients as they create new cannabis-based medicines and wellness products that meet the highest international standards for quality at accessible prices.



FCM Global's 'Co-Sourced' Colombia model translates Colombia's unique comparative advantages in medical cannabis into sustainable competitive edges for each of our clients, enabling them to:



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