

# THE CANNABIS ERA



# **The Cannabis Era: Finance, Medicine & Spirituality in a Transforming World**

*dott. Gianpaolo Marcucci*

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Photo by Michael Fischer

# 1. Investing in Cannabis

Cannabis has transitioned from counterculture to a dynamic global industry in just a few decades. Investors worldwide are eyeing opportunities in legal cannabis markets, from North America to emerging markets in Europe and Asia. This chapter provides a global overview (with a U.S. focus) of the current financial landscape of cannabis – including market size, investment flows, key companies, and the performance of cannabis-focused funds. We also highlight where cannabis investing is legally taking place and visualize the sector's growth trajectory.

## The Global Market: Rapid Growth and Big Numbers

The legal cannabis industry is experiencing **rapid growth**, driven by ongoing legalization and consumer demand. As of 2024, the **global cannabis market** (legal sales) is projected at roughly **\$38.2 billion**, and it is on track to more than **double by 2028**. In fact, forecasts indicate a worldwide market of about **\$102.9 billion by 2028**, implying a robust ~14% annual growth rate. To put this in perspective, the U.S. alone is expected to generate around **\$33.9 billion** of those revenues in 2023 – making it the single largest cannabis market. North America as a whole still accounts for the lion's share of legal cannabis spending (on the order of 70% in recent years), although reforms in Europe, Latin America, and Asia are gradually expanding the global footprint.

Such numbers underscore why cannabis is often dubbed an “*emerging industry*” to watch. Legalization for medical or adult-use in various jurisdictions has unlocked a wave of entrepreneurship and investment. New cannabis companies have sprouted in cultivation, retail (dispensaries), product manufacturing, and ancillary services (such as lighting technology, packaging, and testing labs). The result is a **burgeoning global sector** that, while still relatively small compared to mature industries, is experiencing **venture-capital-like growth** in revenues.

**Market Capitalization and Investment Flows:** Despite the surging sales, publicly traded cannabis companies have seen **volatile market capitalizations**. The total **market cap of cannabis companies** remains modest – roughly on the order of \$10-15 billion in 2025 for the major pure-play firms. (For comparison, that's smaller than many single Fortune 500 companies.) Many cannabis firms' valuations boomed in the late 2010s only to contract significantly in the following years. Investors who jumped in early on Canadian cannabis stocks or U.S. multi-state operators (MSOs) have learned that this industry's path is not a straight line upward. Capital has been pouring in, but also, in some cases, **pouring out** due to regulatory hurdles and slower-than-expected profit timelines.

- *Investment flow stats:* After a frenzy of investment around 2018-2019, cannabis financing has somewhat cooled. In 2022 and 2023, cannabis companies struggled to raise capital as freely as before, given stock declines and cautious lenders. For instance, U.S. cannabis businesses raised roughly **\$0.8 billion in equity capital** in 2024, a sharp drop from prior years. On the other hand, **debt**

**financing** became more common (over \$1 billion in 2024) as companies sought cash to expand or simply sustain operations. Deals still occur – both small private fundraising rounds and larger mergers – but at a more measured pace. The high cost of capital and lack of traditional bank loans (due to U.S. federal laws) mean many cannabis firms must get creative to fund growth.

## Key Financial Highlights:

- **Global Market Size:** ~\$38 billion in 2023, projected ~\$103 billion by 2028 (an almost 2x increase in five years). The U.S. accounts for about two-thirds of that revenue. Major growth drivers include new state markets legalizing, broader consumer acceptance, and introduction of new product categories (edibles, beverages, etc.).
- **North America Dominance:** The legal cannabis trade is still concentrated in North America. Canada and the U.S. (plus emerging adult-use markets like Uruguay) represent nearly all current legal sales. Europe's medical programs and recent moves (e.g. Germany's steps toward legalization) are poised to expand the pie. By the mid-2020s, dozens of countries have medical cannabis laws, but only a few have fully legalized recreational use.
- **Industry Market Cap:** Publicly-listed cannabis companies, taken together, have a combined market capitalization in the low tens of billions. **No cannabis company today is "large-cap"** by traditional definitions. For example, one of the largest U.S. operators, *Green Thumb Industries*, is valued around **\$1.5 billion**, and even the most famous Canadian producer, *Canopy Growth*, has seen its market value plummet to only a few hundred million (roughly **\$0.23 billion** as of 2025). In fact, most cannabis stocks are now considered small-cap or even micro-cap stocks, reflecting how far their prices fell from early peaks.
- **Major Investments:** Early optimism led to some headline-grabbing investments. In 2018, beverage giant **Constellation Brands** (maker of Corona beer) poured **\$3.8 billion into Canopy Growth** to take a large stake. Similarly, **Altria Group** (parent of Marlboro) invested **\$1.8 billion for 45% of Cronos Group** (a Canadian cannabis firm). These moves by alcohol and tobacco companies signaled a belief that cannabis would become a mainstream commodity, perhaps even a threat to their traditional industries. While those investments have yet to fully pay off (both Constellation and Altria later wrote down portions of the deals as cannabis stock prices sank), they underscore how *big business* viewed cannabis as a major opportunity. Pharmaceutical companies have also dabbled – for instance, Jazz Pharmaceuticals acquired cannabinoid drug maker GW Pharma for \$7.2 billion in 2021, integrating a cannabis-derived medicine into its portfolio.

## Cannabis ETFs and Stock Performance: Volatility on Display

For investors not picking individual stocks, **cannabis-focused exchange-traded funds (ETFs)** became a popular vehicle to gain exposure to the sector. There are several ETFs that bundle dozens of cannabis equities (from growers to biotech firms working on cannabinoid drugs). How have these funds performed? In a word: **wildly**. Cannabis ETFs have exhibited extreme volatility, mirroring the boom-and-bust cycles of the industry.

- The first U.S.-listed cannabis ETF, **ETFMG Alternative Harvest (Ticker: MJ)**, launched in late 2017. It gave global exposure to cannabis stocks. Notably, **MJ has not had a single positive calendar year of returns since 2017**, and it hit a nadir in 2022 when it lost about **60% of its value in that year alone**. In early 2023, MJ's share price was down nearly **90% from its all-time high**, illustrating how severely the hype deflated. This decline was due to a combination of factors: slower-than-expected U.S. federal reform, oversupply in Canada leading to weak earnings, and investor fatigue.
- Other ETFs tell similar stories. The **AdvisorShares Pure U.S. Cannabis ETF (MSOS)**, focused on American operators, saw huge swings. For example, on news in late 2023 that the U.S. government might ease federal restrictions, MSOS **soared 25% in a single day**. But such rallies were often short-lived, and steep pullbacks followed. By mid-2025, most cannabis ETFs were deeply in the red on a multi-year basis. One analysis in May 2025 pointed out that **only one cannabis-related ETF had a positive one-year return** (the fund was a niche "vice industries" ETF with a portion in cannabis, up ~13%) - whereas pure-play cannabis funds were still negative.
- **High volatility** is the norm. These funds experience big price swings on regulatory news, earnings reports, or even viral social media sentiment. The volatility (as measured by standard deviation of returns) is significantly higher than that of broad market indices. For investors, this means potential for outsized gains and outsized losses. It's not unusual for a cannabis stock or ETF to double in a few months and then give it all back. Risk management and long-term perspective are essential for anyone investing in this space.

Despite recent challenges, there have been glimmers of optimism in 2024-2025: U.S. federal reform talks (like the SAFE Banking Act and potential rescheduling of cannabis) periodically boost stock prices on hopes that cannabis companies will soon have better access to banking and broader markets. Such changes could reduce business costs and open the door for uplisting U.S. companies to major stock exchanges, potentially attracting institutional investors who have largely stayed on the sidelines.

## Key Players and Sectors: From Recreational to Hemp

The cannabis industry isn't monolithic - it comprises several **sectors and subsectors**. Here's a breakdown of the major segments and some key players in each:

- **Recreational (Adult-Use) Cannabis:** This is what most people think of as the cannabis industry - companies that grow, process, and sell marijuana for adult consumption. In Canada (where national legalization took effect in 2018), big names included *Canopy Growth*, *Tilray*, *Aurora Cannabis*, and *Cronos Group*. These firms once commanded multi-billion dollar valuations but have since shrunk (Canopy and Aurora, for example, each now trade under \$1 billion in market cap). In the U.S., multi-state operators like *Curaleaf*, *Green Thumb Industries*, *Trulieve*, and *Cresco Labs* dominate state-legal markets. Curaleaf, one of the largest distributors in the U.S., has annual revenue over \$1.2 billion, but its stock valuation is roughly \$0.7 billion in 2025 - highlighting the disconnect between sales and investor confidence. These companies span cultivation (farming cannabis at scale, often in high-tech greenhouses), branded products (manufacturing edibles, oils, pre-rolls), and retail via dispensary chains. They operate in markets where recreational use is legal (e.g., *California*, *Colorado*, *Illinois*, or *Canada's provinces*). The recreational sector gets a lot of attention due to its visibility and tax revenue generation (From 2014 to Q1 2024 the States collected over 20 billion \$; in 2022 the annual revenue was ~3 billion \$, exceeding the excise duties on alcohol in several States). It's also highly competitive - profit margins have been squeezed by oversupply in some areas and heavy taxation.
- **Medical Cannabis:** This sector focuses on cannabis used for **therapeutic purposes** with a doctor's supervision. It overlaps with recreational in terms of product (it's the same plant, after all), but often involves different distribution channels (medical dispensaries), different product standards (pharmaceutical-grade preparations), and patient-focused education. Countries like *Germany*, *Australia*, *Israel*, and dozens of others have medical cannabis programs even if recreational use remains illegal. Key players here include pharmaceutical companies and biotech startups developing cannabis-derived medicines. A landmark achievement in this space was the development of **CBD-based epilepsy medications**. For example, *GW Pharmaceuticals* (a UK-based biotech) created **Epidiolex**, a formulation of cannabidiol used to treat severe childhood epilepsy. Clinical trials showed significantly reduced seizure frequencies in conditions like Dravet syndrome, which led the FDA to approve Epidiolex - the first cannabis-derived prescription drug, in 2018. (GW was later acquired by Jazz Pharma, indicating big pharma's interest in cannabinoid medicine.) Another product, **Sativex** (nabiximols), a mouth spray with THC and CBD, is approved in many countries for multiple sclerosis spasticity. In the U.S., medical cannabis is also distributed as flower and oils through state programs (with **~39 states** having legalized medical use). Companies specializing in medical cannabis may

cultivate specific strains for ailments (e.g., high-CBD strains for epilepsy) and work closely with researchers. *Israel* is a notable leader in medical cannabis research and patient programs – by 2017 it had **over 110 clinical trials** involving cannabis, more than any country at the time. In the U.S., institutions like the University of California's Center for Medicinal Cannabis Research have been studying cannabis for pain, PTSD, and other conditions for over two decades. Medical cannabis sales are a significant part of the industry; for instance, U.S. medical marijuana retail sales are expected to reach **\$15.6 billion by 2026**.

- **Industrial Hemp and CBD Wellness:** Hemp is the low-THC variety of cannabis (legally defined in the U.S. as <0.3% THC). It was federally legalized in the U.S. in 2018, opening a new market for **hemp-derived products**. Key uses of hemp include: **CBD products** (oils, tinctures, topicals that don't cause a high), **fiber and textiles** (hemp fibers for clothing, rope, even carbon-neutral building materials), **food products** (hemp seeds and protein), and more. This sector often operates separately from the psychoactive cannabis market. Notable companies in the CBD space include those like *Charlotte's Web* (known for CBD oils), as well as large consumer packaged goods firms launching CBD lines. The hemp industry has its own growth story – one report valued the global **industrial hemp market at ~\$9.5 billion in 2024, projected to reach ~\$47.8 billion by 2032**, reflecting rapid expansion as new applications and export markets open up. Big agriculture and materials companies are also experimenting with hemp (for example, car manufacturers investigating hemp bioplastics). Hemp cultivation acreage skyrocketed after legalization, though a CBD glut in 2019-2020 caused prices for hemp biomass to crash, demonstrating that this sector, too, has volatility. Still, hemp is attractive for its **diverse uses and legal status** – you can invest in hemp companies even in places where marijuana remains outlawed.
- **Ancillary Sectors:** In addition to the plant-touching businesses, there's a whole ecosystem of **ancillary companies** that serve the cannabis industry without handling the plant itself. These include **technology firms** (software for dispensary point-of-sale and compliance tracking, such as *LeafLogix* or *Metric*), **real estate and REITs** (e.g., *Innovative Industrial Properties*, a publicly traded REIT that owns cannabis cultivation facilities, and notably one of the few cannabis-related stocks with a >\$1 billion market cap), **packaging and equipment manufacturers** (lights, hydroponic systems, extraction machines). There are also consulting firms, testing labs (ensuring products meet safety standards), and security companies. Ancillary companies often have an easier time accessing traditional finance since they aren't selling a federally controlled substance directly. Some have done quite well – IIPR, for instance, generated steady rental income from cannabis tenants and even paid dividends (a rarity in this sector).

## Legal Markets and Global Outlook

**Where is investing in cannabis possible?** The short answer: primarily in jurisdictions that have a legal framework for cannabis, and via stock exchanges (or private markets) that list companies from those jurisdictions. Here are the key arenas:

- **United States:** The U.S. presents a paradox. Dozens of state markets are legal (either medically or adult-use), making the U.S. the world's largest cannabis economy - yet *federal illegality* (cannabis is still a Schedule I controlled substance as of this writing) creates barriers. U.S.-based cannabis companies (plant-touching MSOs) cannot list on the major U.S. stock exchanges (NYSE/Nasdaq) and often trade on OTC markets or Canadian exchanges instead. Still, many U.S. cannabis firms are investable for those with access to OTC trading or Canadian securities. Additionally, ancillary U.S. companies and Canadian companies operating in the U.S. (in hemp or ancillary services) can list on U.S. exchanges. Recent developments suggest change is on the horizon: in late 2023, the U.S. Department of Health and Human Services recommended moving cannabis to a lower legal classification (Schedule III), and Congress passed the Medical Marijuana Research Act to facilitate research. Federal banking reform (the **SAFE Banking Act**) has been debated, which would allow banks to serve cannabis businesses without penalty. Should federal prohibition lift or ease (even to Schedule III), we could see a flood of institutional investment into U.S. cannabis and potentially uplisting of major companies to the NASDAQ/NYSE, a game-changer for liquidity. **Bottom line:** Investing in U.S. cannabis is currently done through workarounds - buying Canadian-listed stocks of U.S. operators (like *CURLF* for Curaleaf) or investing in ETFs that hold those stocks. It's a bit complex, but the U.S. market growth (24 states now allow adult-use sales, and 38+ states have medical programs) makes it a focal point for investors willing to navigate the regulatory maze.
- **Canada:** Canada is straightforward - cannabis is federally legal for adult use nationwide. Canadian companies can list openly on stock exchanges. Indeed, companies like Canopy Growth (CGC) and Tilray (TLRY) have been traded on major exchanges (NYSE or NASDAQ), attracting global investors. Canada's market, however, is relatively small population-wise (~38 million people) and became quickly saturated. Canadian firms initially had lofty valuations and global ambitions (exporting medical cannabis to Europe, for example), but intense competition and regulatory oversupply led to shrinking market share and consolidation. From an investment perspective, Canadian stocks were the earliest "pure play" cannabis equities and thus were heavily traded by retail investors around the world. Many early cannabis ETFs held mostly Canadian producers. Today, Canadian cannabis stock indexes are down sharply from peaks, but the country remains a hub for **legal cross-border investment** since money can flow without legal issue. Canadian firms also often partner with U.S. firms (via contingent deals ready to activate upon U.S. legalization).

- **Europe and International:** While Europe hasn't broadly legalized recreational cannabis (aside from countries like the Netherlands with tolerated sales, and Malta which recently legalized personal cultivation and use), **medical cannabis is legal in much of Europe.** This has spurred a growing industry in countries like *Germany, Italy, the UK, Denmark*, and others – mostly focused on importing or domestically cultivating medical-grade cannabis for patients. Several European cannabis companies have gone public on exchanges in London, Frankfurt, or Toronto. For example, *STENOCARE* in Denmark and *EMMAC Life Sciences* (now part of Curaleaf's international division) raised investor funds to build out cultivation for European patients. **Germany** is especially important: it has one of the largest medical patient populations and in 2023-2024 was moving toward partial legalization for adult use (plans to allow adult clubs to distribute cannabis). Should Germany fully legalize, it could kick off a domino effect in the EU. Investors are watching European legislation closely, and some are positioning by investing in Canadian or U.S. firms that could expand to Europe, or in domestic European startups. **Other regions** with investable markets include *Australia* (medical use federally legal; several Aussie cannabis companies are listed on the ASX), *Latin America* (Uruguay was the first country to legalize recreational cannabis in 2013, and Colombia, Mexico, and others have sizable cannabis industries mainly for export or medical use), and *Asia* (still largely restrictive, but Thailand made headlines by legalizing cannabis in 2022, creating Southeast Asia's first regulated market – a few Thai companies now trade on their local exchange, and international investors are taking note).

In summary, **legal markets where investing is possible** span the globe, but each with its own caveats. North America (U.S./Canada) offers the most direct opportunities, albeit the U.S. requires navigating federal conflict. Europe's nascent markets are more of a future play, with investment currently smaller scale and often through private equity or Canadian intermediaries. The **optimistic view** is that as more jurisdictions legalize, cannabis companies will mature, consolidate, and become regular members of the global business community – and investors will be able to participate just as easily as they would in alcohol, tobacco, or pharma stocks. Until then, the cannabis sector remains a bit of a frontier: high growth potential, high volatility, and a regulatory overlay that makes due diligence absolutely critical.

### **Investing in Cannabis - Key Takeaways:**

- The cannabis industry is growing fast, with global legal sales expected to double from ~\$50B in 2023 to over \$100B in 2028. The U.S. leads in consumption and sales, though federal law lags behind state legalization.
- Public cannabis companies have experienced a rollercoaster ride. Early exuberance gave way to sobering losses – e.g., the major cannabis ETF fell 60% in 2022 and is down ~90% from its peak. This volatility reflects both regulatory uncertainty and the difficulty of building profitable businesses in a newly legal industry.

- Despite setbacks, institutional interest is growing. Billion-dollar investments by companies like Constellation Brands and Altria reveal an expectation that cannabis will become a mainstream commodity (be it for intoxication, medicine, or wellness). Many of these big players are playing the long game, anticipating future federal legalization and global expansion.
- Key sectors include recreational (adult-use) cannabis, medical cannabis, and industrial hemp/CBD. Each has distinct market dynamics. Recreational is often taxed and regulated like alcohol, medical must integrate with healthcare, and hemp/CBD straddles wellness and industrial markets.
- **Legal market accessibility:** You can invest in Canadian cannabis stocks on major exchanges today. You can invest in U.S. cannabis companies through alternative markets and anticipate broader access if U.S. laws change. And globally, as countries liberalize policies, new investment avenues (IPOs, ETFs, etc.) are opening. Always be mindful of the legal context – cannabis investing is uniquely tied to political developments.

Up next, we shift from finance to science: in **Chapter 2**, we'll review the latest in medical cannabis research – what modern medicine has discovered about cannabis and how it's being used to heal.

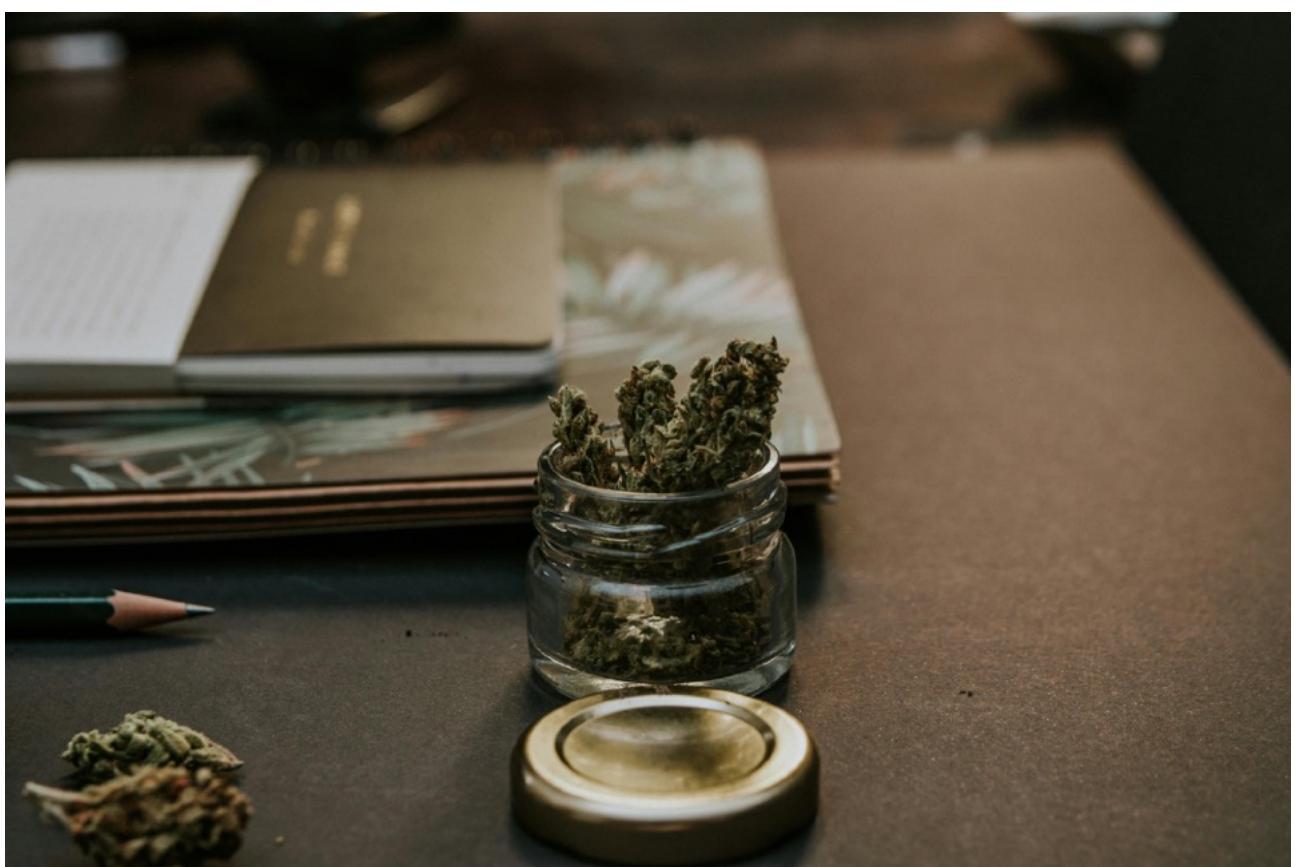


Photo by Yash Lucid

## 2. Medical Cannabis Research

Cannabis isn't just a commercial product or a recreational substance – it's also a **remarkable plant with significant medical potential**. For centuries, people have used cannabis to alleviate various ailments, but only in recent years has rigorous scientific research begun to catch up and provide evidence for these medical applications. In this chapter, we provide a roundup of the most recent scientific and medical findings on cannabis as medicine, with an emphasis on U.S. and global research. We'll discuss the health conditions for which cannabis (or cannabinoids) is now recognized as an effective or promising treatment, highlight notable clinical trial results and approved **cannabis-based pharmaceuticals**, and acknowledge the leading institutions and countries driving this research renaissance.

*An indoor cultivation of medical cannabis. Researchers and growers use controlled environments like this to study the plant's properties and produce consistent, therapeutic-grade cannabis.*

### Recognized Medical Uses of Cannabis

A sweeping 2017 report by the U.S. National Academies of Sciences examined decades of studies and concluded that **cannabis and cannabinoids have therapeutic effects for certain conditions** – a finding that has only been reinforced by subsequent research. Here are some of the conditions where medical consensus or high-quality evidence suggests cannabis can be beneficial:

- **Chronic Pain:** Perhaps the most common reason patients turn to medical cannabis. There is *substantial evidence* that cannabis can help manage chronic pain, especially **neuropathic pain** (nerve-related pain) and pain associated with illnesses like cancer. Clinical guidelines (e.g., a 2022 BMJ review) found that **non-inhaled cannabinoids slightly improve chronic pain and physical functioning** in patients who don't get relief from standard care. In practical terms, many chronic pain sufferers report that cannabis (or high-CBD products) reduce their pain enough to improve sleep and quality of life. It's not a magic cure – the pain reduction is often moderate – but for some it's comparable to opioid analgesics, **with fewer side effects** in certain cases. As opioid abuse remains a crisis, some research even suggests cannabis might serve as an *opioid-sparing* therapy (allowing lower opioid doses) for pain. Conditions like **arthritis, fibromyalgia, neuropathy, and migraines** are being managed by patients with cannabis where conventional medicines fall short.
- **Chemotherapy-Induced Nausea and Appetite Loss:** Long before "medical marijuana" was formally recognized, oncology doctors would sometimes winkingly recommend cannabis to patients. That's because it's well-established that **THC can reduce nausea and vomiting** in cancer patients undergoing chemo. In fact, **dronabinol** (brand name Marinol), a synthetic THC pill, was approved by the FDA way back in 1985 for this purpose. It helps patients keep

food down and maintain appetite. Cannabis (smoked or ingested) can work even faster for acute nausea. It's also used to **stimulate appetite** in patients with cancer or HIV/AIDS ("the munchies" effect is harnessed therapeutically to combat wasting syndrome). Nowadays, with more targeted antiemetic drugs available, cannabinoids are often a *second-line* or adjunct treatment, but remain invaluable for some patients who don't respond to first-line meds.

- **Epilepsy (Seizure Disorders):** One of the most groundbreaking medical cannabis success stories involves severe childhood epilepsies. Parents of children with **Dravet syndrome** and **Lennox-Gastaut syndrome** (rare, debilitating seizure disorders) advocated for years based on anecdotal success with CBD-rich cannabis extracts. This led to formal studies, and ultimately to the development of **Epidiolex**, a nearly pure cannabidiol (CBD) solution. In gold-standard clinical trials, **CBD significantly reduced seizure frequency** in these conditions – for example, one trial showed the **median number of convulsive seizures per month dropped by ~39% with CBD, vs ~13% with placebo**. Some children who had dozens of seizures daily became nearly seizure-free. The evidence was strong enough that the **U.S. FDA approved Epidiolex in 2018** for Dravet and Lennox-Gastaut, making it the first-ever plant-derived cannabis medicine to gain approval in the U.S.. This legitimized cannabis in the eyes of many physicians. Around the world, CBD is now an accepted treatment for certain refractory epilepsies. It's important to note that **CBD does not produce a "high"** and has a good safety profile, which made it more palatable for regulators. Research is ongoing into other forms of epilepsy and how exactly CBD controls seizures (hint: it may involve modulation of calcium channels and other non-cannabinoid receptor pathways).
- **Multiple Sclerosis (MS) and Spasticity:** MS patients have long reported that cannabis eases the painful muscle spasms and stiffness (spasticity) that come with the disease. Clinical trials have confirmed that cannabinoids, particularly a balanced THC/CBD combination, can reduce **muscle spasticity and related pain** in MS. A mouth spray called **Sativex (nabiximols)**, containing a 1:1 ratio of THC to CBD, is approved in over 25 countries (including much of Europe, the UK, Canada, and elsewhere) for treating MS-related spasticity. Patients using Sativex have reported improved mobility and relief from muscle cramps. In the U.S., Sativex is still awaiting FDA approval, but doctors sometimes recommend off-label use of medical cannabis for MS symptoms. Beyond spasticity, some MS sufferers find cannabis helps with **sleep disturbance, tremors, and bladder dysfunction** related to the disease, though data on those aspects are less robust. Importantly, MS was one of the first conditions (besides pain and nausea) to be widely accepted in state medical marijuana programs, due to this emerging evidence.
- **Anxiety and PTSD:** This area is a bit more complicated – while many people use cannabis to relieve anxiety or post-traumatic stress disorder (PTSD) symptoms, the scientific evidence is mixed and still emerging. Low doses of THC and CBD

can have anxiolytic (anxiety-reducing) effects, but higher doses of THC might worsen anxiety in some individuals (paradoxically causing paranoia or panic). That said, **CBD** in particular has shown promise for anxiety disorders. Preliminary studies indicate CBD can reduce social anxiety and improve symptoms of PTSD, possibly by affecting serotonin receptors. PTSD has become a qualifying condition for medical cannabis in numerous U.S. states, largely due to advocacy by veterans' groups. Ongoing clinical trials, including a major study in Canada and another in the U.S., are testing whether smoked or oral cannabis can alleviate PTSD nightmares, flashbacks, and hyperarousal. Early results have been cautious: one controlled trial in veterans with PTSD showed **no significant difference between smoked cannabis and placebo in overall PTSD symptom reduction** (all groups improved somewhat), highlighting a strong placebo effect and the need for more research. Nonetheless, many PTSD patients swear by cannabis for improving sleep and mood, and researchers are refining studies to find optimal cannabinoid ratios (for example, a bit of THC combined with CBD, versus CBD alone). It's an active area of investigation, especially as the military and VA explore alternatives to traditional antidepressants and sedatives.

- **Other Conditions:** Medical cannabis is being explored (with varying degrees of evidence) for **Parkinson's disease** (to reduce tremors or pain), **Alzheimer's and dementia** (some studies look at agitation in dementia), **Tourette syndrome** (to reduce tics – small trials of THC showed some benefit), **autism spectrum disorder** (particularly CBD for severe behavioral issues – Israel is running clinical trials on this), **Inflammatory bowel diseases** like Crohn's (patients report symptom relief, and some trials showed improved quality of life, though not clear reduction in inflammation), **glaucoma** (THC does lower intraocular pressure, but only for a short duration – not practical as a sole treatment, yet some patients use it adjunctively), and **insomnia**. Indeed, better sleep is one of the most commonly reported benefits of medical cannabis across many conditions, likely because pain or anxiety are reduced. Researchers are also examining cannabis or cannabinoids for potential roles in treating **opioid addiction** (as substitution therapy or to ease withdrawal), **cancer** (certain cannabinoids in test tubes show tumor-inhibiting properties – early phase trials are underway for glioblastoma, etc., but it's too soon to claim a cancer cure), and even **psychiatric disorders** like depression (this is contentious and not yet conclusive).

It's worth noting that **not all uses are proven** – for some conditions, evidence is currently insufficient or conflicting. For example, while *cannabis may alleviate short-term anxiety*, heavy use could be detrimental to mental health for some (like increasing risk of psychosis in predisposed individuals). Thus, medical guidance is crucial. Doctors increasingly differentiate between **THC-dominant** products (more effective for pain, muscle spasms, appetite stimulation, but with psychoactive side effects) and **CBD-dominant** or balanced products (often preferred for anxiety, pediatric uses, or situations where mental impairment must be minimized). The personalization of cannabinoid therapy – finding the right strain or product for the right patient – is a growing practice, sometimes called "*cannabis medicine*" or *cannabinology*.

## Notable Cannabis-Based Medicines and Clinical Trials

The acceptance of cannabis in medicine has been significantly advanced by the development of **standardized pharmaceuticals** and high-quality clinical trials. We've already mentioned some, like Epidiolex (CBD) and Sativex (THC/CBD), which are approved medicines derived from the cannabis plant. Let's list the key **approved cannabis-related medications** and highlight what clinical trials have recently achieved:

- **Epidiolex (cannabidiol oral solution):** Approved in the U.S., EU, and other regions for severe epilepsy (Dravet syndrome, Lennox-Gastaut syndrome, and Tuberous Sclerosis Complex). **Trial highlights:** In a pivotal trial published in *New England Journal of Medicine*, children with Dravet syndrome on Epidiolex had a **39% decrease in seizure frequency** on average, versus 13% on placebo. Some patients became seizure-free. Side effects included sleepiness and diarrhea in some cases, but importantly no intoxicating effects. Epidiolex's success has spurred interest in CBD for other neurological conditions. Ongoing trials are examining CBD for neonatal epilepsy and even epilepsy in adults with focal seizures.
- **Sativex (nabiximols):** Approved in Canada, UK, much of Europe, and elsewhere (but *not yet* in the U.S.) for **multiple sclerosis spasticity** and in some places for cancer pain. It's a mouth spray that delivers a balanced dose of THC and CBD. **Trial highlights:** In a Phase III trial for MS spasticity, ~75% of patients on Sativex achieved  $\geq 20\%$  improvement in spasticity scores vs ~50% on placebo over 12 weeks. Many patients also reported improved sleep. For cancer pain, trials have shown mixed results; one study found a THC:CBD extract like Sativex provided significant pain relief as an add-on for patients not fully relieved by opioids. Because Sativex includes THC, side effects can include dizziness or dry mouth, but its spray format allows patients to carefully titrate doses.
- **Dronabinol (Marinol) and Nabilone (Cesamet):** These are older synthetic cannabinoids. Dronabinol is basically **THC in a pill** (approved for chemo nausea and AIDS-related anorexia), and nabilone is a synthetic analog of THC with similar uses. They've been around since the 1980s. While effective for some patients, they are less popular now in medical practice than they once were, partly because onset is slow (especially for dronabinol) and side effects like dysphoria can be pronounced without the balancing presence of other cannabinoids. Many doctors and patients prefer actual cannabis or newer extracts over these synthetics. However, they paved the way for recognizing cannabinoids as legitimate medicine.
- **Cannabidiol (over-the-counter or supplemental):** Outside of the context of Epidiolex, **CBD** has become widely available and used for health purposes, from anxiety to arthritis. While not "approved" as a drug (if sold as a supplement it's in a legal gray zone in the U.S.), people are effectively self-medicating with CBD products. Researchers are studying OTC CBD's effects - for instance, a large study

in 2020 on **CBD for anxiety** found significant self-reported improvements in anxiety levels and sleep quality in a majority of participants over a few months. The challenge is ensuring product quality and consistency, which is why pharmaceutical-grade CBD like Epidiolex is still needed for clinical certainty.

- **Ongoing Clinical Trials:** The landscape of cannabis research is vibrant. A few exciting examples:
  - A **U.S. PTSD trial** in veterans is testing different ratios of THC and CBD in smoked form to see which best alleviates PTSD symptoms (results are pending, after a prior study showed all groups improved similarly, implying a need to parse placebo effect).
  - **Cancer therapy adjunct** – researchers are adding cannabinoids to standard cancer treatments in trials to see if pain is reduced or if there are direct anti-tumor effects. For example, an ongoing Israeli trial is using high-dose CBD alongside chemotherapy in **pancreatic cancer** patients to see if it improves outcomes.
  - **Autism** – Israeli physicians have been studying high-CBD oil in children with autism who have severe behavioral issues. Early case studies reported improvements in agitation and communication in some children, and formal trials are underway.
  - **Chronic pain alternatives** – multiple trials globally are comparing cannabis to opioids or other pain meds. A recent Canadian study found that patients given access to cannabis **significantly reduced their opioid intake** for chronic pain, hinting cannabis could be part of addressing the opioid crisis. Another U.S. trial is examining an **THC-rich ointment** for localized neuropathic pain.
  - **Psychiatric disorders** – There's cautious exploration of cannabinoids for conditions like schizophrenia (mostly focusing on CBD, since CBD might have antipsychotic properties, in contrast to THC which can be psychotomimetic). The field of **psychedelic medicine** has also increased interest in cannabis as a potential facilitator of psychotherapy or as a mild psychedelic in its own right for things like end-of-life anxiety (some hospice programs permit its use for existential distress relief).

It's important to highlight that **while cannabis can help with symptoms, it is not a panacea**. It treats certain symptoms (pain, nausea, spasms, etc.) rather than curing underlying diseases (it won't cure cancer or MS, for instance). Thus, in medical contexts, cannabis is usually one component of a broader treatment plan. Researchers are also working on **understanding risks**: long-term effects of medical cannabis (on lungs if smoked, on cognition if started young, etc.), potential for dependency (cannabis use disorder can occur, though typically milder than other substance dependencies), and drug interactions (cannabinoids can interact with certain medications metabolically).

## Leading Research Institutions and Countries

The **modern renaissance in cannabis research** is a global effort, but a few countries stand out for their contributions and progressive stance:

- **Israel:** Often dubbed the “*Holy Land of medical marijuana research*,” Israel was home to pioneering scientist **Dr. Raphael Mechoulam**, who first isolated THC in 1964 and later discovered the endocannabinoid anandamide. Israeli researchers have remained at the forefront since. The country established a national medical cannabis program in the 1990s, and its Ministry of Health supports research. As of a few years ago, Israel had **over 110 active clinical trials on cannabis** – the most of any nation. Universities like Hebrew University (which has a Multidisciplinary Center for Cannabinoid Research) and Tel Aviv University, plus hospitals like Sheba Medical Center, are conducting studies ranging from cannabis for Crohn’s disease to PTSD to autism. Israel’s relatively permissive regulations around research (doctors can prescribe medical cannabis and modify treatment easily within the program) make it a living lab for studying efficacy and safety. Israeli companies have also innovated in cannabis tech (advanced vaporizers, metered dosing inhalers, etc.). Many of the data driving global understandings – like long-term patient outcomes – come from Israeli cohorts.
- **Canada:** With federal legalization and robust healthcare institutions, Canada is producing valuable research, especially in public health and epidemiology of cannabis use. Health Canada requires cannabis companies to contribute to research and surveillance. Canadian universities (University of Toronto, UBC, McGill, etc.) have numerous cannabis science labs investigating everything from cancer to mental health. Canada’s advantage is the ability to do large population studies – e.g., examining trends in opioid prescriptions in provinces before and after cannabis legalization (some studies observed a correlation between legal cannabis access and lower opioid prescription rates). The Canadian Institutes of Health Research (CIHR) funds many projects on medical cannabis. Also, Canadian physicians have accumulated extensive clinical experience under the medical program that existed since 2001, giving them a head start in understanding dosing and patient responses.
- **United States:** The U.S., ironically, has been a bit behind due to federal restrictions, but this is rapidly changing. Historically, the only legal source of research cannabis was a farm at University of Mississippi under NIDA contract – and researchers had to go through onerous DEA approval to study it. This hindered research for decades. However, things improved recently: the **Medical Marijuana and Cannabidiol Research Expansion Act** (signed in 2022) now streamlines the process for scientists to get approval and cannabis supply for studies. The DEA has licensed additional growers to produce research-grade cannabis, increasing variety and quality. As a result, we’re seeing a surge of U.S. trials. Universities like UC San Diego (Center for Medicinal Cannabis Research), University of Colorado, Harvard/Mass General (which opened a Cannabis

Research Program), and Johns Hopkins are all conducting notable studies. The U.S. research is often focused on areas of pressing need like opioid alternative therapies, PTSD in veterans, and the impact of legalization on public health. The National Institutes of Health (NIH) have started granting more funds – for example, in 2020 NIH granted \$30 million for research on pain and cannabis. Another burgeoning field in the U.S. is **endocannabinoid system research** – understanding how our body's natural cannabinoids (like anandamide and 2-AG) modulate health and how we might target that system with new drugs.

- **Europe:** Several European countries punch above their weight in cannabis science. The **Netherlands** has had a government-approved medical cannabis program for a long time and facilitated research (the Dutch company Bedrocan provides standardized cannabis for research across Europe). The **UK** has some leading researchers – for instance, at University College London and King's College London – studying cannabinoids for psychosis and for dementia. **Spain** has a strong scientific community researching cannabinoids in oncology (the Complutense University of Madrid, led by Dr. Manuel Guzmán, has done groundbreaking work showing THC killing brain tumor cells in lab and helping some cancer patients in early trials). **Italy** and **Germany** have state-run research initiatives as well; Germany's move towards broader legalization is expected to come with significant research funding on public health outcomes. Overall in Europe, much research has been preclinical (lab or animal studies), but clinical research is ramping up now that legal avenues for patient recruitment exist.
- **Australia and New Zealand:** They have embraced medical cannabis research in recent years. Australia's National Institute of Complimentary Medicine has been studying cannabis for pain and symptom management. New Zealand, after legalizing medical use in 2018, set up trials on chronic pain and MS with local products. Both countries also examine **driving under the influence of cannabis** and other safety aspects, given public policy needs.
- **Latin America:** Countries like **Brazil and Colombia** are supporting research, sometimes in partnership with Canadian or Israeli firms. For example, Brazil's ANVISA (health regulatory agency) has approved cannabis-based medicines and is encouraging local trials. Colombia, with its equatorial growing conditions, aims to be a hub for medical cannabis cultivation and R&D for the region.

It's also worth mentioning the role of **advocacy and patient organizations** in driving research. Groups of parents (for epilepsy), veterans (for PTSD), athletes (for chronic traumatic encephalopathy and pain) have often partnered with scientists to initiate studies. Non-profits like MAPS (Multidisciplinary Association for Psychedelic Studies) helped fund the first U.S. PTSD cannabis trial. As stigma decreases, more young scientists enter the field of cannabinoid research. The endocannabinoid system – the network of receptors (CB1, CB2) and endogenous cannabinoids in our bodies – is now recognized as crucial in physiology, and understanding it could unlock new treatments beyond the cannabis plant itself (e.g., drugs that boost our natural endocannabinoids).

## Medical Cannabis - Key Takeaways:

- Modern research validates several **medical benefits of cannabis**, particularly for symptom relief. Chronic pain, chemotherapy side effects, certain epilepsy syndromes, and multiple sclerosis symptoms are among conditions where cannabis or cannabinoids are now either an approved or a scientifically supported treatment.
- Cannabis is not a single medicine but a *portfolio* of compounds (THC, CBD, and many others) that can have different effects. This has led to a range of medical products: pharmaceuticals like Epidiolex, herbal preparations available in dispensaries, and purified extracts. Patients and doctors are learning to tailor cannabinoid profiles to conditions (e.g., high-CBD for epilepsy/anxiety, THC for pain/appetite, balanced THC-CBD for spasticity).
- The **safety profile** of medical cannabis is generally favorable when used appropriately – there is no risk of fatal overdose (unlike opioids), and dependency risk is moderate. However, side effects like dizziness, cognitive impairment, or nausea **can occur**, and smoking cannabis carries respiratory risks if done long-term. Thus, the trend is toward safer delivery methods (tinctures, capsules, vaporizers rather than smoking).
- Research is accelerating fast. Governments are loosening restrictions, and funding is increasing. This will likely yield more concrete answers in the next 5-10 years about where cannabis works best and where it does not. We may also see **new cannabinoid drugs** (for example, scientists are investigating **CBG (cannabigerol)** and **THCV (tetrahydrocannabivarin)**, lesser-known cannabinoids, for potential benefits like anti-inflammatory or weight loss effects).
- Leading countries in research include **Israel** (with a long history and over a hundred trials ongoing), **Canada** (leveraging legalization to study impacts), and increasingly the **United States** (as federal barriers lift). Collaboration is global – international conferences on cannabinoid research are now held annually, and journals like *Cannabis and Cannabinoid Research* disseminate findings rapidly.

The evolving science is helping to reduce stigma and inform physicians. As one commentator quipped, we are **“moving from anecdotes to evidence”** in medical cannabis – and patients stand to benefit as this rich area of research unfolds.

Having explored the medical realm of cannabis, we now turn to a very different aspect: the cultural and spiritual significance of this plant. In **Chapter 3**, we journey through history and around the world to see how cannabis has been used in spiritual contexts, from ancient rituals to modern mindfulness practices.



Photo by RDNE

### 3. Cannabis and Spirituality

Cannabis has a long and storied relationship with human spirituality. Across different cultures and epochs, this plant has been used as a **sacrament, a meditation aid, and a tool for seeking transcendence**. In this chapter, we explore the cultural and spiritual uses of cannabis throughout history and in contemporary times. We'll look at historical practices - for example, among ascetic Hindu monks in India and Nepal - as well as modern spiritual retreats and rituals that incorporate cannabis. How does cannabis influence meditation, introspection, or "peak experiences"? Why did so many disparate spiritual traditions find value in this herb? We'll shed light on these questions, illustrating that beyond the economics and the pharmacology, cannabis carries deep meaning in the realm of spirit and culture.

#### A Historical Sacred Plant

Cannabis has been revered as a **sacred plant** in various religions for millennia. Its psychoactive properties often led people to believe it could facilitate communication with the divine or unlock inner realms of consciousness. Here are a few notable historical intersections of cannabis and spirituality:

- **Ancient India:** Perhaps the richest spiritual association with cannabis comes from the Indian subcontinent. The earliest Hindu scriptures, the Vedas, include the plant in their lore. The **Atharva Veda (circa 1500 BCE)** mentions cannabis (called *bhanga* in Sanskrit) as one of the "five sacred plants...which release us from anxiety". It is referred to as a source of happiness, a "joy-giver," and is linked to the god **Shiva**, who is often called the *Lord of Bhang*. According to legend, Shiva discovered the transcendent properties of the cannabis leaf and is frequently depicted with it. Cannabis in India has traditionally been consumed as **bhang** (a drink made from ground cannabis leaves, milk, and spices), **ganja** (dried flower tops smoked), or **charas** (handmade hashish). These were (and still are) used especially during religious festivals. For example, during **Mahashivratri** - a festival in honor of Lord Shiva - devotees consume bhang to honor Shiva and induce a state of spiritual intoxication considered pleasing to the deity. Similarly, during **Holi** (the festival of colors), bhang is often taken as part of the celebrations. The idea is that cannabis can lower inhibitions and foster unity and joy, fitting the spirit of the occasion.
- **Hindu Sadhus and Yogis:** In India and Nepal, **Sadhus** (Hindu holy men or ascetics) have a long tradition of using cannabis as part of their spiritual practice. These wandering monks renounce conventional life to seek enlightenment, often meditating in caves or remote areas. Many sadhus, particularly those who worship Shiva, smoke cannabis in clay pipes called **chillum**s as a form of devotional ritual. They often accompany their smoke sessions with prayers or chants, such as the mantra "Bom Shiva Shankar" (Hail Lord Shiva). The cannabis is seen as a means to **aid meditation, detach from earthly distractions, and achieve a state of**

**transcendence or unity with Shiva.** At large spiritual gatherings like the **Kumbh Mela** (a mass Hindu pilgrimage), foreign visitors are often astonished to see groups of **Naga Sadhus** – naked, ash-smeared ascetics – openly smoking marijuana as a sacred rite. In fact, reports from the 2019 Kumbh Mela describe thousands of Naga Sadhus as “*cannabis-smoking Hindu warriors*” carrying on a centuries-old tradition. The sadhus believe cannabis helps them stay in meditation longer, numbs the pain of austerities, and banishes mundane thoughts, thereby deepening their spiritual focus.

- **Ancient Scythians and Others:** Cannabis burning has been identified archaeologically in ancient ceremonial contexts. The Greek historian **Herodotus** (5th century BCE) wrote about the **Scythians** (a nomadic people of Central Eurasia) throwing hemp seeds on hot stones inside tents to create a vapor bath that the participants would inhale, “howling with joy” as a result. This has been interpreted as a cleansing ritual or a way to induce trance states during funerals or spiritual rites. Indeed, recent archaeological finds in China’s Xinjiang region uncovered braziers with burnt cannabis at a 2,500-year-old burial site, suggesting ritual use likely to commune with spirits or the afterlife. Cannabis was often used in shamanistic contexts in Central Asia and Siberia – it may have been one of the ingredients in ancient Persian **haoma** or the **Soma** of the early Indo-Iranians (though Soma’s identity is still debated, some scholars propose it could have been cannabis or a mixture including it).
- **Middle East and Sufi traditions:** While Islam generally prohibits intoxicants (including cannabis), historical records show that **certain Sufi orders** and mystics did use cannabis (often as **hashish**) in esoteric practices. For instance, in medieval times, a group known as the **Qalandars** – wandering Sufi dervishes – were famous (or infamous) for their use of hashish as part of their ecstatic rituals. They believed it could help them achieve a state of divine **dhikr** (remembrance of God). There are colorful (though likely embellished) tales of the so-called *Hashashin* (Assassins) fed hashish to experience visions of paradise – while these accounts are not fully reliable, they illustrate the lore around hashish in the Islamic Golden Age. In modern times, mainstream Islamic practice does not endorse cannabis use spiritually, but some fringe mystical sects historically saw it as a tool for contemplating the divine, in private away from orthodox censure.
- **China and Taoism:** Cannabis (known as “ma” in ancient China) was used ritually in some ancient Chinese practices as well. There is some evidence that **Taoist shamans** in the first millennium BCE burned cannabis incense in temples to induce spiritual visions (often combined with **ginseng** and other herbs). The Taoist encyclopedia **Wuzangjing** mentions that cannabis was used by necromancers to set forward time and reveal future events. It never became as mainstream in Chinese spirituality as it did in India, perhaps due to later cultural shifts, but it was present in the spiritual toolkit of early Chinese shamans and monks seeking immortality elixirs.

- **Africa:** Various tribes in Africa have traditional uses of cannabis in spiritual or healing ceremonies. For example, in parts of **North Africa and the Red Sea region**, Sufi-oriented groups like the **Gnawa** of Morocco incorporate kif (cannabis) into trance music ceremonies aimed at healing and spirit communication. In **South Africa**, some indigenous healers (traditional herbalists) use cannabis, known as *dagga*, in rituals - the plant is considered to have protective and purifying properties. Notably, the Xhosa of South Africa have used cannabis in initiation rites for young males entering adulthood.
- **Europe (pre-prohibition):** In medieval Europe, cannabis was mostly used for fiber (hemp) and medicine, not explicitly spiritual purposes as far as recorded history indicates. However, there is speculation that certain occult or ceremonial groups may have experimented with it, given its presence in pharmacopoeias. Fast forward to the 19th and early 20th century, European artists and intellectuals - e.g., members of the **Club des Hashischins** in France (which included literary figures like Baudelaire) - explored hashish for "mind expansion," which for some took on a quasi-spiritual significance, feeding into the symbolism and mystique in their art. This was more a proto-psychonaut movement than a religious one, but it set the stage for viewing cannabis as a doorway to the subconscious or the sublime.

## Contemporary Spiritual and Ritual Use

In modern times, as cannabis re-emerges from prohibition, there's been a renaissance of **spiritual exploration with cannabis**. While not as formalized as in ancient religions, many contemporary users purposefully integrate cannabis into spiritual, meditative, or creative practices. Let's survey a few notable examples:

- **Rastafarianism:** No discussion of cannabis and spirituality is complete without mentioning the **Rastafari** movement. Originating in Jamaica in the 1930s, Rastafarianism is a religious and social movement that venerates the late Emperor Haile Selassie of Ethiopia and draws upon Afrocentric and Old Testament themes. For Rastas, **cannabis (ganja)** is a holy sacrament, often referred to as the "holy herb" or "wisdom weed." They cite biblical passages like Psalm 104:14 ("...He causeth the grass to grow for the cattle, and herb for the service of man...") as endorsement of its use. In Rastafari, smoking ganja in communal gatherings called **"reasoning" sessions** is a central practice. During these sessions, participants pass a chalice (a specialized water pipe) or smoke joints, and engage in discussions about life, spirituality, and social justice. They believe that cannabis **opens the mind to the truth**, facilitates deeper unity among brethren, and brings them closer to **Jah** (God). It is not used frivolously, but reverently - a tool to aid in achieving **"I-tal" livity** (a natural, righteous way of life). Rastas also credit the herb with helping them meditate on scriptures and achieve a peaceful, reflective state. It's essentially considered a sacrament akin to wine in Christian Eucharist, even described as the Rastafarian form of communion. The **Ethiopian Zion Coptic Church**, a Rasta-related group, even regarded cannabis as their Eucharist and

claimed it was used in early Christian times. Rastafarian spirituality, with reggae music as its vehicle (think of Bob Marley's songs like "Kaya" or "Meditation" explicitly praising the herb's spiritual virtues), has globally popularized the image of cannabis as a enlightenment tool.

- **Neo-Pagan and New Age practices:** In Western countries today, some individuals in the **New Age, neo-pagan, or spiritual-but-not-religious communities** incorporate cannabis into rituals much like incense or as a ceremonial entheogen. For instance, at certain alternative spirituality festivals or retreats, there may be **"cannabis circles"** where participants sit in meditation after sharing cannabis, using the altered state to facilitate visualization, chanting, or energy work. Cannabis yoga sessions have also emerged – sometimes dubbed "Ganja Yoga" – where practitioners consume a small amount of cannabis before engaging in a yoga practice, aiming for heightened mind-body awareness and relaxation. Some modern spiritual retreats, especially in places where it's legal (like retreats in California, Colorado, or Amsterdam), offer guided meditations with optional cannabis use, or even **sound baths and breathwork** paired with cannabis to deepen the experience. Facilitators of these sessions often say that cannabis can quiet the ego and help participants enter a more heart-centered or present state, making it easier to connect with their inner self or with others empathetically.
- **"Cannabis Churches" and Spiritual Organizations:** Interestingly, the loosening of cannabis laws has even given rise to a few new organizations that label themselves as religious or spiritual movements centered around cannabis. For example, the **International Church of Cannabis** in Denver (opened in 2017) uses cannabis as a sacrament and calls its philosophy "Elevationism" – though some might argue it's more of an art venue and social club, it underscores cannabis's role in communal spiritual experience. Other groups, such as the **THC Ministry** (founded in Hawaii) or the **First Church of Cannabis** (Indiana), explicitly claim religious protection for cannabis use. These groups vary in seriousness and recognition; some are mainly acts of civil disobedience or legal test cases, but others truly espouse a spiritual doctrine wherein cannabis is the central sacrament that "brings one closer to enlightenment." While these haven't been tested deeply in courts, they speak to the perceived spiritual value of cannabis among adherents.
- **Meditation and Mindfulness:** A subset of meditators explore the intersection of **cannabis and mindfulness**. Traditionally, schools of meditation (like Buddhism) recommend sobriety because intoxicants can cloud mindfulness. However, some modern practitioners report that a **small dose of cannabis before meditation** helps them "get out of their head" – quieting the constant chatter – and sink more easily into a meditative state. They describe an increased sensory awareness of breathing and bodily sensations, and occasionally deeper emotional insights during their session. A *Psychology Today* article by a meditation teacher even described how meditating with cannabis was like "guided realization" for him.

That said, this is personal and not universal; some meditators find it counterproductive. There are now guided meditation recordings specifically designed to be used “post-smoke,” acknowledging this niche practice. It’s essentially a DIY approach to **use cannabis as a meditation aid**, albeit outside any formal religious context.

- **Visionary and Creative Pursuits:** Many artists, writers, and musicians have used cannabis for inspiration - while not “spiritual” in a strict sense, for some the creative process is a deeply spiritual or flow experience. Cannabis has been noted to induce a state of hyper-associative thinking, which can feel like tapping into a greater flow of consciousness. Some users frame this as a spiritual communion with the muse or the universe’s creativity. For example, jazz musicians in the mid-20th century often spoke of cannabis enhancing their connection to the music (leading them to nickname it “the sacred herb” in some jazz circles). In these contexts, spirituality overlaps with artistic expression and cannabis is the catalyst.

What is happening, in a more introspective sense, when cannabis is used spiritually? Users frequently report feelings of **euphoria, a sense of unity, introspection, and altered perception of time**. In spiritual terms, euphoria can translate to feelings of bliss or gratitude; unity can manifest as feeling at one with others or with nature (breaking down the ego’s sense of separateness, which is a goal in many mystical traditions); introspection can lead to personal insights or emotional processing (some describe it as a psychotherapy session in the mind, where thoughts and feelings surface more freely); and time dilation can make a ritual feel deeper or longer than it actually is, perhaps allowing one to savor the present moment more. Cannabis can also enhance sensory perception - colors may seem more vivid, music more profound - which in a ritual context (like listening to devotional music or experiencing nature) can indeed feel like a **heightened spiritual awareness** of the beauty around one.

Of course, **cannabis is not universally positive in spiritual settings**. Set and setting matter. When used carelessly or to excess, it can cause anxiety, confusion, or lethargy - the opposite of enlightenment. Thus, traditional spiritual use often had guidelines: moderate doses, ritual context, experienced guidance, and combining with prayer or meditation to channel the experience constructively.

## Cannabis and the Quest for Transcendence

Throughout history and into the present, cannabis has been for some a **tool in the quest for transcendence** - that ineffable state of going beyond ordinary reality to touch something sacred, whether that’s God, cosmic consciousness, or the depths of one’s own mind. While cannabis is milder than classic psychedelics like psilocybin or ayahuasca, it still qualifies as an **entheogen** (a substance that “generates the divine within,” when used in a spiritual context) for those who intentionally wield it as such.

- People have reported **“peak experiences”** on cannabis - moments of intense awe and clarity where they feel deeply connected to the universe. This could be triggered by being in nature after consuming cannabis: for instance, standing under a starry sky or at the edge of the ocean, one might feel an overwhelming sense of unity with creation, sometimes described as a spiritual awakening. Psychologists like Abraham Maslow might call that a self-actualization or peak experience, and cannabis seems to *increase the probability* of such an experience by relaxing mental barriers and amplifying awe.
- Cannabis can also deepen practices like **contemplation or prayer** for some. A person might smoke a little, then sit in their garden quietly contemplating life or praying - they might find that their mind settles into a reflective groove more readily, and sometimes **creative solutions or revelations** emerge (e.g., a new perspective on a personal problem, or a sudden intuitive understanding of a spiritual teaching). Users often attribute these insights to an “expanded consciousness” that cannabis allows – a state where the usual linear logic softens and more holistic or intuitive thought can surface.
- In group spiritual settings, cannabis can foster a **sense of community and empathy**. Sharing a pipe in a circle has a communal bonding effect (akin to sharing wine in some religious services). Participants may feel their interpersonal boundaries lessen; empathy and listening improve. This can make group chanting, drumming, or simply sharing experiences feel more profound. It’s as if the group “vibrations” harmonize under the herb’s influence, a phenomenon noted in Rastafarian reasoning circles as well as modern wellness retreats.
- There is also an element of **healing** in spiritual use – not just physical, but emotional and spiritual healing. Some modern ceremonies explicitly use cannabis as a healing sacrament: for example, certain facilitators lead “cannabis-assisted trauma release ceremonies,” where participants, under the calming effect of cannabis, are guided to confront and release emotional pains or past trauma in a safe setting. They report that cannabis helps them face feelings without overwhelming anxiety, almost like a gentle therapeutic lubricant.

It's important to keep in mind that mainstream religions today have varying stances on cannabis. Most conservative branches of major religions (Christianity, Islam, Judaism, etc.) do not sanction it religiously, often viewing intoxication as contrary to spiritual living. However, there are increasing interfaith discussions about natural psychedelics and cannabis. For instance, some clergy and rabbis have spoken about the need to reconsider cannabis in light of its healing potential and relative harmlessness compared to other legal vices. And as noted, new religious movements have sprung up centered on cannabis. So, we are in a time of **spiritual re-evaluation of cannabis**. What was once demonized is being reexamined: some ask, might cannabis be a God-given plant to help humanity (as many ancient cultures believed)?

One fascinating intersection is with the rise of interest in **psychedelic therapy** (using psilocybin, ayahuasca, etc. in quasi-spiritual therapeutic ways) – cannabis, being more accessible, is sometimes called “the people’s psychedelic.” It can produce, at high doses, mild psychedelic effects: changes in thought pattern, visual or auditory enhancements, and a sense of novel mental territory. While it’s gentler, in a skilled context cannabis sessions can mirror some of the introspective benefits of those more intense substances. Some facilitators refer to high-dose edible cannabis sessions as “cannabis journeys,” where the participant lies down with an eye mask and music (similar set and setting as an ayahuasca ceremony), and often they report meaningful experiences or personal insights. This is a new development, blending modern therapeutic structure with cannabis use, effectively treating cannabis as a tool for **psychospiritual growth**.

### **Cannabis and Spirituality - Key Takeaways:**

- Cannabis has been used in spiritual contexts for **thousands of years**. From ancient Hindu rituals to Scythian funerary rites, it has earned a place as a sacred plant in multiple traditions. The Atharva Veda calling it a “sacred liberator” and the frequent association of cannabis with Lord Shiva illustrate its deep roots in South Asian spirituality.
- In modern religions like **Rastafarianism**, cannabis is unequivocally revered as a holy sacrament. Rastas use it during reasoning sessions to **enhance unity and understanding**, seeing it as a catalyst to perceive divine truth and foster love among people. This has arguably been the most visible modern spiritual use, contributing greatly to the cultural image of cannabis as something more than a recreational drug.
- Many **contemporary spiritual seekers** incorporate cannabis in personal ways – for meditation, yoga, creative exploration, or small group ceremonies. While not universally accepted in traditional spiritual practice, these users often report that cannabis helps **quiet the ego and open the heart**, enabling states of mindfulness, empathy, or even euphoria that they interpret in spiritual terms (e.g., feeling closer to nature or sensing the presence of the divine in their life).
- The effect of cannabis on spirituality largely depends on **intention and context**. Used with intention (sacred setting, proper dose, clarity of purpose), it can be a powerful entheogen, facilitating experiences of insight or connection. Used carelessly or to simply escape reality, it might offer only a dull high or even anxiety. Thus, many spiritual users treat it with respect, often starting a session by voicing an intention or prayer, effectively “sanctifying” the use.
- **Cultural resurgence:** As legalization spreads, we see a resurgence of old traditions and the birth of new ones around cannabis spirituality. Festivals celebrating the spiritual side of cannabis (like certain 4/20 events that focus on meditation and music rather than just partying) are more common. People are openly discussing how cannabis helps them **find peace, heal from trauma, or**

**feel creativity as a form of spiritual expression.** In a way, society is rediscovering what many ancestors knew – that this plant can play multiple roles: medicinal, recreational, and yes, spiritual.

In conclusion, cannabis's role in spirituality is a testament to the plant's multifaceted impact on human consciousness. It has been a **"plant teacher"** and companion on the mystical path for many cultures. Whether used by a sadhu on the banks of the Ganges, a Rasta in a yard in Kingston, or a modern yogi in California, the common thread is the belief that cannabis, when used with respect, can help elevate the mind and nourish the soul – providing, as one might say, *"food for thought"* in the most profound sense.

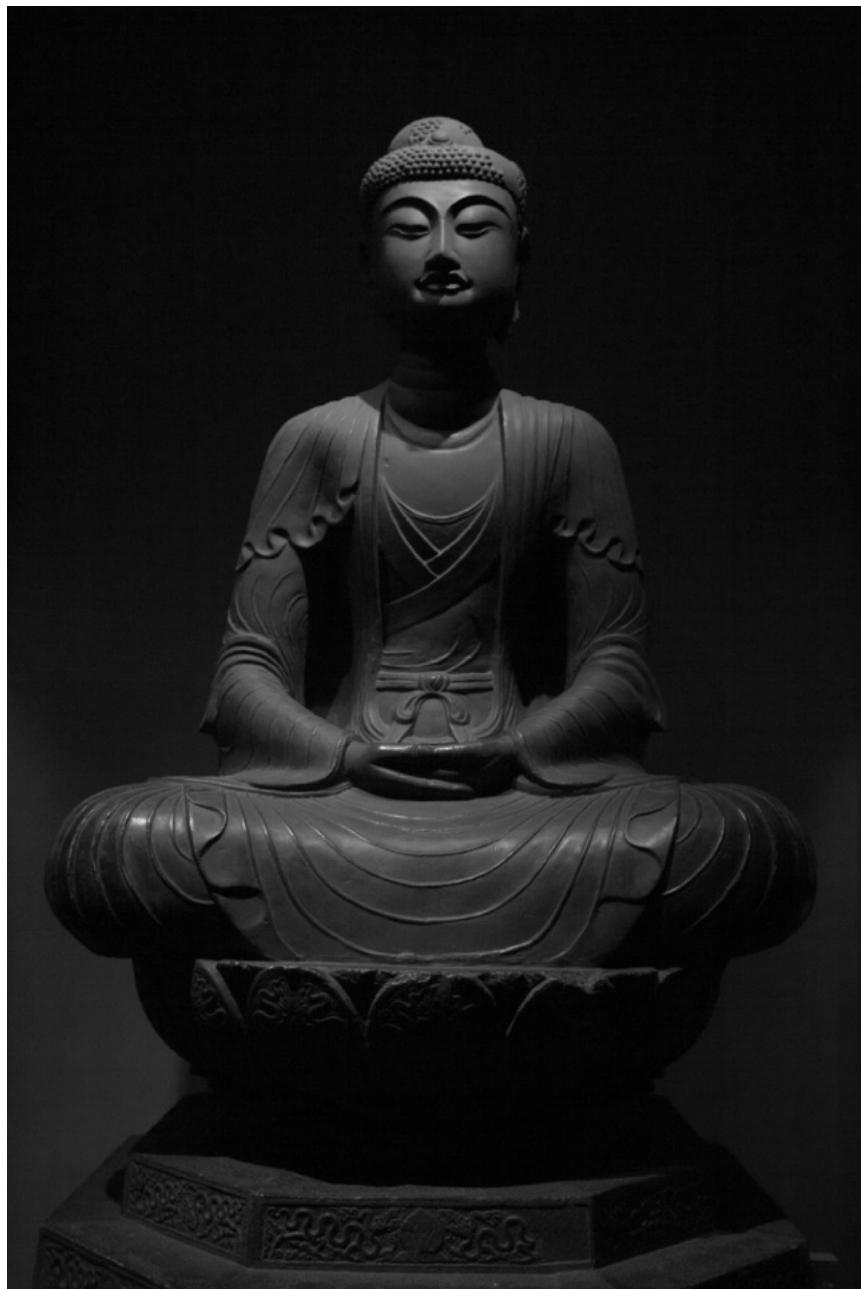


Photo by Simon Nguyen

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