



Alaska Marijuana Control Board

Marijuana Handler Permit

Form MJ-10: Education Course Provider Application

Alcohol and Marijuana Control Office

550 W 7th Avenue, Suite 1600

Anchorage, AK 99501

marijuana.licensing@alaska.gov

<https://www.commerce.alaska.gov/web/amco>

Phone: 907.269.0350

What is this form?

This marijuana handler permit education course provider application is required for all persons and entities seeking to have a marijuana handler permit education course approved by the Marijuana Control Board. Applicants should review **3 AAC 306.700**.

The course curriculum must cover at least the following topics:

- AS 17.37, AS17.38, and 3 AAC 306
- The effects of consumption of marijuana and marijuana products
- How to identify a person impaired by consumption of marijuana
- How to determine valid identification
- How to intervene to prevent unlawful marijuana consumption
- The penalty for an unlawful act by a licensee, an employee, or an agent of a marijuana establishment
- A written test, demonstrating that each student has learned the information correctly

This form must be submitted to AMCO's main office, along with a copy of the course curriculum, before any marijuana handler permit education course provider application will be considered by the board.

Applicant Information

Enter information for the business seeking to be an approved marijuana handler permit education course.

| | | | | | |
|------------------|--|--------|--------------------|------|-------|
| Applicant: | MM411, INC DBA MEDICAL MARIJUANA 411 | | | | |
| Course Name: | ADVANCED LEARNING MGMT SYSTEM BY MM411 ALASKA HANDLER PERMIT | | | | |
| Mailing Address: | 6515 159TH AVE NE | | | | |
| City: | REDMOND | State: | WA | ZIP: | 98052 |
| Email Address: | CHRIS@MEDICALMARIJUANA411.COM | Phone: | 844-411-8500 x 813 | | |

In-person ☐ Online ☒

Do you intend to provide this course in-person in a classroom-type setting, or online? Check all that apply.

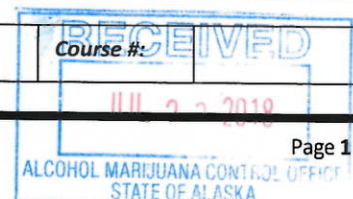
☐ ☒


Signature of Applicant

CHRISTINE NAZARENIUS
Printed Name

7/20/18
Date

| OFFICE USE ONLY | | | |
|---------------------|--|----------------|--|
| Board Meeting Date: | | Approved Y/N?: | |





Medical Marijuana 411
Advanced Learning Management System

STATE OF ALASKA

MARIJUANA HANDLER PERMIT

CERTIFICATION

Course Syllabus



MARIJUANA 411

COURSE SYLLABUS



The Alaska Marijuana Handler Permit Certification section modules:

- (1) Federal Law Overview;
- (2) Alaska State Marijuana Regulations;
- (3) History of Marijuana as Medicine;
- (4) The Discovery and Science of the Endocannabinoid System;
- (5) Effects of Consumption of Marijuana and Marijuana Products;
- (6) How to Identify a Person Impaired by Consumption of Marijuana;
- (7) How to Determine a Valid Identification;
- (8) How to Intervene to Prevent Unlawful Marijuana Consumption; and
- (9) The Penalty for an Unlawful Act by a Licensee, an Employee, or an Agent of a Marijuana Establishment

Upon completion of each section of the Alaska Marijuana Handler Permit Certification, a passing score of 70% on the section exam is required to move to the next section. If a score of 70% in a section is not achieved, the Advanced Learning Management System will not allow the student to move on to the next section module. The system has a wait time of 24 hours, so the student can review the section materials before they can re-take the section exam. Questions are pulled from a pool of questions, to ensure that a student cannot simply correct an incorrect response. The goal is to ensure competency of the course materials. An aggregate passing score of 70% is required to receive the Alaska Marijuana Handler Permit.



Module 1 Federal Legal Landscape

United States Federal Laws

- A. Overview of Cannabis Laws and Regulations
- B. Federal Primer/Outline

Module 2 Alaska State Marijuana Regulations

Alaska Marijuana Laws

- A. Who must obtain a marijuana handler permit card
 - i. Each licensee, employee, or agent of a marijuana establishment who sells, cultivates, manufactures, tests, or transports marijuana or marijuana product, or who checks identification of a consumer or visitor, must obtain a marijuana handler permit card from AMCO before being licensed or beginning employment at a marijuana establishment, per 3 AAC 306.700.
 - 1. Marijuana handler permits are valid for three years from the date of course completion.
 - 2. There are no Alaska residency restrictions for marijuana handler permits



STATE OF ALASKA MARIJUANA HANDLER PERMIT CERTIFICATION

Course Information

Alaska Marijuana Laws (cont)

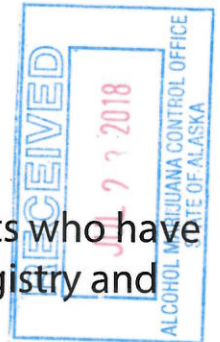
B. Medical Marijuana voter incentive AS 17.37

i. Registry of Patients and Listing of Caregivers AS 17.37.010

1. The department shall create and maintain a confidential registry of patients who have applied for and are entitled to receive a registry identification card. The registry and the information contained within it are not a public record.

ii. Privileged Medical Use of Marijuana AS 17.31.030

1. A patient, primary caregiver, or alternate caregiver registered with the department has an affirmative defense to a criminal prosecution related to marijuana
 - a. A person is not subject to arrest, prosecution, or penalty in any manner for applying to have the person's name placed on the confidential registry
 - b. A physician is not subject to any penalty, including arrest, prosecution, or disciplinary proceeding for advising a patient whom the physician has diagnosed as having a debilitating condition about the risks and benefits of medical use of marijuana



STATE OF ALASKA MARIJUANA HANDLER PERMIT CERTIFICATION

Course Information

Alaska Marijuana Laws (cont)

B. Medical Marijuana voter incentive AS 17.37 (cont)

iii. Restrictions on Medical Use of Marijuana AS 17.37.040

1. A patient, primary caregiver, or alternate caregiver may not
 - a. Engage in the medical use of marijuana in a way that endangers the health or wellbeing of any person
 - b. Engage in the medical use of marijuana in plain view of, or in a place open to, the general public
 - i. Or within 500 feet of school grounds, recreation or youth center
 - ii. Or on a school bus
 - c. Sell or distribute to any person
 - d. Possess in the aggregate more than one ounce or six plants
- iv. Definitions AS 17.37.070

1. <http://touchngo.com/lglcntr/akstats/Statutes/Title17/Chapter37.htm>

C. Recreational Marijuana voter incentive AS 17.38

i. Sec 17.38.010 Purpose and findings

1. In the interest of allowing law enforcement to focus on violent and property crimes, and to enhance individual freedom, the people of the state of Alaska find and declare that the use of marijuana should be legal for persons 21 years of age or older.
 - a. Individuals will have to show proof of age before purchasing marijuana
 - b. Legitimate, taxpaying business people, and not criminal actors, will conduct sales of marijuana
 - c. Marijuana sold by regulated businesses will be labeled and subject to additional regulations to ensure that consumers are informed and protected



STATE OF ALASKA MARIJUANA HANDLER PERMIT CERTIFICATION

Course Information

Alaska Marijuana Laws (cont)

C. Recreational Marijuana voter incentive AS 17.38 (cont)

- ii. Sec 17.38.020 Personal use of marijuana
 - 1. The following acts, by persons 21 years of age or older, are lawful and are not criminal or civil offenses under Alaska law
 - a. Possessing, using, displaying, purchasing, or transporting marijuana accessories or one ounce or less of marijuana
 - b. Possessing, growing, processing, or transporting not more than six marijuana plants, with three or fewer being mature, flowering plants, and possession of the marijuana produced by the plants on the premises where the plants were grown, except that not more than 12 marijuana plants, with six or fewer being mature, flowering plants, may be present in a single dwelling regardless of the number of person 21 years of age or older residing in the dwelling
- iii. Sec 17.38.030 Restrictions or personal cultivation, penalty
 - 1. The personal cultivation of marijuana is subject to the following terms
 - a. Marijuana plants shall be cultivated in a location where the plants are not subject to public view without the use of binoculars, aircraft, or other optical aids
 - 2. A person who violates this section is guilty of a violation punishable by a fine of up to \$750
- iv. Sec 17.38.040 Public consumption banned, penalty
 - 1. It is unlawful to consume marijuana in public. A person who violates this section is guilty of a violation punishable by a fine of up to \$100



STATE OF ALASKA MARIJUANA HANDLER PERMIT CERTIFICATION

Course Information

Alaska Marijuana Laws (cont)

C. Recreational Marijuana voter incentive AS 17.38 (cont)

- v. Sec 17.38.070 Lawful operation of marijuana-related facilities
 - 1. Retail marijuana store
 - a. Possessing, displaying, storing, or transporting marijuana or marijuana products, except that marijuana and marijuana products may not be displayed in a manner that is visible to the general public from a public right-of-way
 - 2. Marijuana cultivation facility
 - a. Cultivating, manufacturing, harvesting, processing, packaging, transporting, displaying, storing or possessing marijuana
 - 3. Marijuana product manufacturing facility
 - a. Packaging, processing, transporting, manufacturing, displaying, or possessing marijuana or marijuana products
 - 4. Marijuana testing facility
 - a. Possessing, cultivating, processing, repackaging, storing, transporting, displaying, transferring, or delivering marijuana
- vi. <https://www.commerce.alaska.gov/web/Portals/9/pub/MCB/StatutesAndRegulations/AS17.38.pdf>



STATE OF ALASKA MARIJUANA HANDLER PERMIT CERTIFICATION

Course Information

Alaska Marijuana Laws (cont)



D. Recreational Marijuana Regulations 3 AAC 306

i. License requirements

1. A marijuana establishment may not operate in the state unless it has obtained the applicable marijuana establishment license
2. The board will not issue a marijuana establishment license if;
 - a. the licensed premises will be located within 500 feet of school grounds, a recreation or youth center, a building in which religious services are regularly conducted, or a correctional facility.
 - b. a person has been found guilty of selling alcohol without a license, misdemeanor crime involving a controlled substance, or conviction of a felony.
 - c. An individual or a sole proprietorship is not a resident of the state of Alaska.
3. A marijuana establishment must file a renewal application no later than June 30th of the current year.

ii. Licensed Marijuana Establishments

1. A licensed retail marijuana store is authorized to sell and store marijuana purchased from a licensed marijuana cultivation or product manufacturing facility.
 - a. Product must be packaged and labeled as required in a quantity not exceeding the limits set out.
 - b. Product must be consumed off the licensed premises
2. Each licensee, employee, or agent who is required to be physically present on the licensed premises must obtain a Marijuana Handler Permit before being licensed or employed at a marijuana retail store, cultivation facility, product manufacturing facility, testing facility or establishment.



STATE OF ALASKA MARIJUANA HANDLER PERMIT CERTIFICATION

Course Information

Alaska Marijuana Laws (cont)



D. Recreational Marijuana Regulations 3 AAC 306 (cont)

3. A licensed retail marijuana may not sell, give, distribute, deliver or offer to sell marijuana to;
 - a. A person under the age of 21 years
 - b. To a person that is under the influence of an alcoholic beverage, inhalant, or controlled substance
4. A marijuana retail store may not;
 - a. sell over the internet and may only sell marijuana to a consumer who is physically present on the licensed premises
 - b. sell after the expiration date shown on the label of the product
 - c. conduct business or allow consumer access to premises between the hours of 5:00am and 8:00am each day
 - d. offer free marijuana or marijuana products including samples
 - e. offer alcoholic beverages for free or for compensation
5. A retail marijuana store may not sell in a single transaction;
 - a. More than one ounce of usable marijuana
 - b. More than seven grams of marijuana concentrate for inhalation, or
 - c. Marijuana or marijuana products if the total amount sold contains more than 5,600 milligrams of THC.



STATE OF ALASKA MARIJUANA HANDLER PERMIT CERTIFICATION

Course Information

Alaska Marijuana Laws (cont)



D. Recreational Marijuana Regulations 3 AAC 306 (cont)

6. All packaging and advertising for marijuana must contain the following warnings;
 - a. "Marijuana has intoxicating effects and may be habit forming and addictive"
 - b. "Marijuana impairs concentration, coordination, and judgment. Do not operate a vehicle or machinery under its influence"
 - c. "There are health risks associated with consumption of marijuana"
 - d. "For use only by adults twenty-one and older. Keep out of reach of children"
 - e. "Marijuana should not be used by women who are pregnant or breast feeding"
7. A marijuana retail stores, cultivation facilities, product manufacturing facilities, testing facilities or establishments must use a marijuana inventory tracking system to ensure;
 - a. All marijuana product is identified and tracked from receipt of any batch through sale, transfer or disposal
 - b. That no marijuana or marijuana product is not received without a valid transport manifest
 - c. Transactions are reconciled each day from the store's point of sale system and current inventory at the close of each business day.



Module 3

An Ancient Plant for Modern Illnesses: A Short Version of the Long History of Cannabis as Medicine

- History

- Early History of Marijuana Use
- Marijuana in the West
- U.S. Prohibition
- The Medical Implications of U.S. Prohibition
- Medical Marijuana Today
- Hemp vs Marijuana

Module 4

The Discovery of the Endocannabinoid System: The Largest Receptor System in the Human Body

- Discovering the Endocannabinoid System
- The Endocannabinoid System:
The Body's Supercomputer
- Endocannabinoids and Human Thriving Behavior
- Why the Endocannabinoid System isn't Taught in Medical Schools



Module 5

Effects of Consumption of Marijuana and Marijuana Products

- Effects of Consumption of Marijuana and Marijuana Products
- Health Effects of Marijuana Abuse
 - Cannabinoid Hyperemesis Syndrom
 - Down Regulation
- Dependency
- Cannabis Effects and Warnings – Important Information/What to Avoid



Module 6

How to Identify a Person Impaired by Consumption of Marijuana

- Is Marijuana Addictive?
 - Symptoms of Overuse, Abuse and Addiction
 - Recognizing Marijuana Abuse in Families
- The Risks and Warning Signs of Overuse and Abuse
- How to Identify a Person Impaired by the Consumption of Marijuana

STATE OF ALASKA MARIJUANA HANDLER'S PERMIT CERTIFICATION

Course Information

Module 7

How to Determine a Valid Identification

- A. Sec 17.38.050 False identification, penalty
- i. A person who is under 21 years of age may not present or offer to a marijuana establishment or the marijuana establishment's agent or employee any written or oral evidence of age that is false, fraudulent, or not actually the person's own, for purpose of
 1. Purchasing, attempting to purchase, or otherwise procuring or attempting to procure marijuana or marijuana products
 2. Gaining access to a marijuana establishment
 - ii. A person who violates this section is guilty of a violation punishable by a fine of up to \$400



Module 8

How to Intervene to Prevent Unlawful Marijuana Consumption

- Recreational Marijuana
- Controlled Substances Act
- Marijuana and Driving
- Safe Storage
- Safe Packaging



Module 9

The Penalty for an Unlawful Act by a Licensee, an Employee, or an Agent of a Marijuana Establishment

- A. Suspension or revocation of license
 - i. The board will suspend or revoke a marijuana establishment license issued under this chapter if any licensee is convicted of a felony, or a crime listed in 3 AAC 306.010.
 - ii. The board may suspend or revoke a license if the licensee
 - 1. misrepresented a material fact on an application,
 - 2. is following any practice or procedure that is contrary to the best interest of the public,
 - 3. using any process not approved by the board for extracting or manufacturing marijuana concentrate or products
 - 4. Selling or distributing any marijuana concentrate or product that has not been approved by the board
 - 5. Knowingly allowed an employee or agent to violate AS 17.38
 - 6. Failed to comply with any applicable public health, fire, safety, or tax law or regulation in the state
 - 7. Used the licensed premises for any illegal purpose including gambling, possession or use of narcotics other than marijuana, prostitution or sex trafficking

STATE OF ALASKA MARIJUANA HANDLER'S PERMIT CERTIFICATION

Course Information

Module 9 (cont)

The Penalty for an Unlawful Act by a Licensee, an Employee, or an Agent of a Marijuana Establishment



B. Seizure of marijuana or marijuana product

- i. The director, an enforcement agent, an employee of the board, or a peace officer acting in an official capacity, may seize marijuana if the marijuana establishment has
 - 1. Any marijuana or marijuana product not properly logged into the marijuana establishment's marijuana inventory tracking system
 - 2. Any adulterated marijuana food or drink product forbidden under 3 AAC 306.510
 - 3. Any marijuana or marijuana product that is not properly packaged and labeled
 - 4. Not renewed its license

C. Civil fines

- i. The board may impose a civil fine, not to exceed the greater of
 - 1. An amount that is three times the monetary gain realized by the marijuana establishment
 - 2. \$10,000 for the first violation;
 - 3. \$30, for the second violation; or
 - 4. \$50,000 for the third or subsequent violation



STATE OF ALASKA MARIJUANA HANDLER'S PERMIT CERTIFICATION

Course Information

Module 10

How to Apply for a Alaska Marijuana Handler Permit

- A. Complete an Alaska Marijuana Control Board approved Marijuana Handler Permit Education Course
- B. Complete the Marijuana Handler Permit online application (link to application or downloadable PDF of application)
- C. For applicants who live near Anchorage or Fairbanks bring the following documents and items:
 - i. Standard Cover Page from completed online application
 - ii. Marijuana handler permit education course completion certificate (copy)
 - iii. \$50 payment via check, money order or cashier check payable to "State of Alaska"
 - iv. Valid Government issued ID

Anchorage:

550 West 7th Ave, Suite 1600

Tuesdays, Wednesdays and Thursdays from 9:30am to 11am

Fairbanks:

1648 Cushman St, Suite 203

Wednesdays from 9:00 am to 12:00pm

- D. For applicants submitting application via mail, also include:
 - i. Clear photo copy of Valid Government issued ID
 - ii. 2"x2" passport size full color photo



STATE OF ALASKA MARIJUANA HANDLER'S PERMIT CERTIFICATION

Course Information

Module 10 (cont)

How to Apply for a Alaska Marijuana Handler Permit

AMCO

Attn: Handler Permit

550 West 7th Ave, Suite 1600

Anchorage, AK 99501



1. Detailed instructions
 - a. <https://www.commerce.alaska.gov/web/Portals/9/pub/MCB/MJHandlerPermit/Marijuana%20Handler%20Permit%20Application%20Instructions.pdf>

Note: PDF attached after this syllabus





STATE OF ALASKA MARIJUANA HANDLER PERMIT CERTIFICATION

General Information and Instructions

GENERAL INFORMATION AND INSTRUCTIONS

Medical Marijuana 411 provides an online education solution with a comprehensive, medical marijuana curriculum on a variety of topics. Medical Marijuana 411 is certified in various states (and countries) to provide consultant and medical professional certification. For a full list of all approved states and certifications, please click on this link <https://www.medicalmarijuanalearning.com/> or refer to our website at: www.medicalmarijuana411.com.



The Medical Marijuana 411 Alaska Marijuana Handler Permit Certification includes the state required instruction on the following subjects plus several sections added about the science of marijuana to help those working within Alaska, a better understanding of the plant. All research is cited and is available within the coursework via clickable, endnote citations.

The Alaska Marijuana Handler Permit Certification section modules in sequential order:

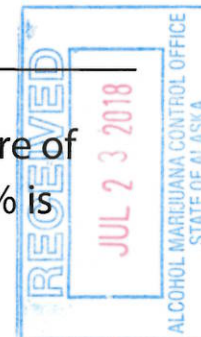
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- 2) Alaska State Marijuana Regulations;
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- 4) The Discovery and Science of the Endocannabinoid System;
- 5) Effects of Consumption of Marijuana and Marijuana Products;
- 6) How to Identify a Person Impaired by Consumption of Marijuana;
- 7) How to Determine a Valid Identification;
- 8) How to Intervene to Prevent Unlawful Marijuana Consumption; and
- 9) The Penalty for an Unlawful Act by a Licensee, an Employee, or an Agent of a Marijuana Establishment



STATE OF ALASKA MARIJUANA HANDLER PERMIT CERTIFICATION

General Information and Instructions

Upon completion of each section of the Alaska Marijuana Handler Permit Certification, a passing score of 70% on the section exam, is required to move to the next section. An aggregate passing score of 70% is required to receive your Alaska Marijuana Handler Permit Certification.



As states allow patients access to medical marijuana, additional state mandated and approved certifications will be added to our coursework.

As part of the Medical Marijuana 411 adult on line education, enrollees may start and stop at any time. Any student completing our certifications and/or coursework will have a permanent student dashboard to review materials at any time. If in the future, you want to review any information, simply log-on to your dashboard to re-visit the content. All coursework and graphics can be downloaded for future re-use with customers, clients and patients.

Additional resources of lengthier, pertinent PDFs are available in the resource folders.

With over 800+ current, peer reviewed citations, Medical Marijuana 411 is proud to be the leader in online Marijuana Education for Patients, Medical Professionals and Marijuana Certified Consultants.



STATE OF ALASKA MARIJUANA HANDLER PERMIT CERTIFICATON

General Information and Instructions



Medical Marijuana 411

Connecting you to a better day™





LEGAL LANDSCAPE

Overview of Cannabis Laws and Regulations

OBJECTIVE:

This module is intended to enable Alaska Handler's Permit Certified Card Holders to better understand the legal terrain of medical marijuana. It provides Certified Card Holders with an overview from a legal perspective of relevant medical marijuana regulations.



INTRODUCTION

The module provides a legal framework for the topics that will be discussed throughout this course. Further modules will dive deeper into many of the topics touched on in this legal overview including: Alaska State Marijuana Laws, the history of medical marijuana use, legalization and regulation, the science behind the Endocannabinoid System, and so much more.



FEDERAL LEGAL OVERVIEW

Cannabis, also commonly referred to as marijuana or hemp, is a genus of flowering plants in the family *Cannabaceae* that includes at least three species, *Cannabis sativa* L., *Cannabis indica*, and *Cannabis ruderalis* as determined by plant phenotypes and secondary metabolite profiles (terpene profiles).¹ In practice, cannabis nomenclature is often used interchangeably or seemingly arbitrarily. Legally however, hemp and marijuana are distinguished by their respective concentrations of the cannabinoid delta-9 tetrahydrocannabinol (THC) found in the flowering tops and leaves. According to federal law, cannabis with 0.3% or less concentration of THC is not marijuana; it is industrial hemp.²³ In 2009, Senators Ron Paul and Barney Frank introduced the Industrial Hemp Farming Act to amend the definition of "marihuana" [marijuana] in the Controlled Substances Act to clarify the difference between hemp and marijuana.⁴ Unfortunately, the Industrial Hemp Farming Act has yet to pass, leaving the distinction between hemp and marijuana ambiguous.

111TH CONGRESS
1ST SESSION

H. R. 1866

To amend the Controlled Substances Act to exclude industrial hemp from the definition of marihuana, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

APRIL 2, 2009

Mr. PAUL (for himself, Mr. BALDWIN, Mr. CLAY, Mr. FRANK of Massachusetts, Mr. GELJALYA, Mr. HINGHEY, Mr. MCCLINTOCK, Mr. GEORGE MILLER of California, Mr. ROHRBACHER, Mr. STARK, and Ms. WOOLSEY) introduced the following bill; which was referred to the Committee on Energy and Commerce, and in addition to the Committee on the Judiciary, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

A BILL

To amend the Controlled Substances Act to exclude industrial hemp from the definition of marihuana, and for

Industrial Hemp Farming Act of 2009 - Amends the Controlled Substances Act to exclude industrial hemp from the definition of "marihuana." Defines "industrial hemp" to mean the plant Cannabis sativa L. and any part of such plant, whether growing or not, with a delta-nine tetrahydrocannabinol concentration that does not exceed 0.3 percent on a dry weight basis.



OVERVIEW OF CANNABIS LAWS AND REGULATIONS

Since 1972, cannabis has been classified as a Schedule I drug under the U.S. Controlled Substances Act because the U.S. Drug Enforcement Agency considers it to have "no accepted medical use."⁵ In stark contrast to this position, 29 of the 50 U.S. states and the District of Columbia have recognized the medical benefits of cannabis and have decriminalized its medical use.⁶ The approved list of conditions/diseases, and the other laws/rules regarding the possession and cultivation of medical marijuana generally differ by state. In addition, 8 of the 50 U.S. states and the District of Columbia legalized recreational cannabis use for adults 21 years of age and over, with varying rules and regulations.



Former President Barack Obama

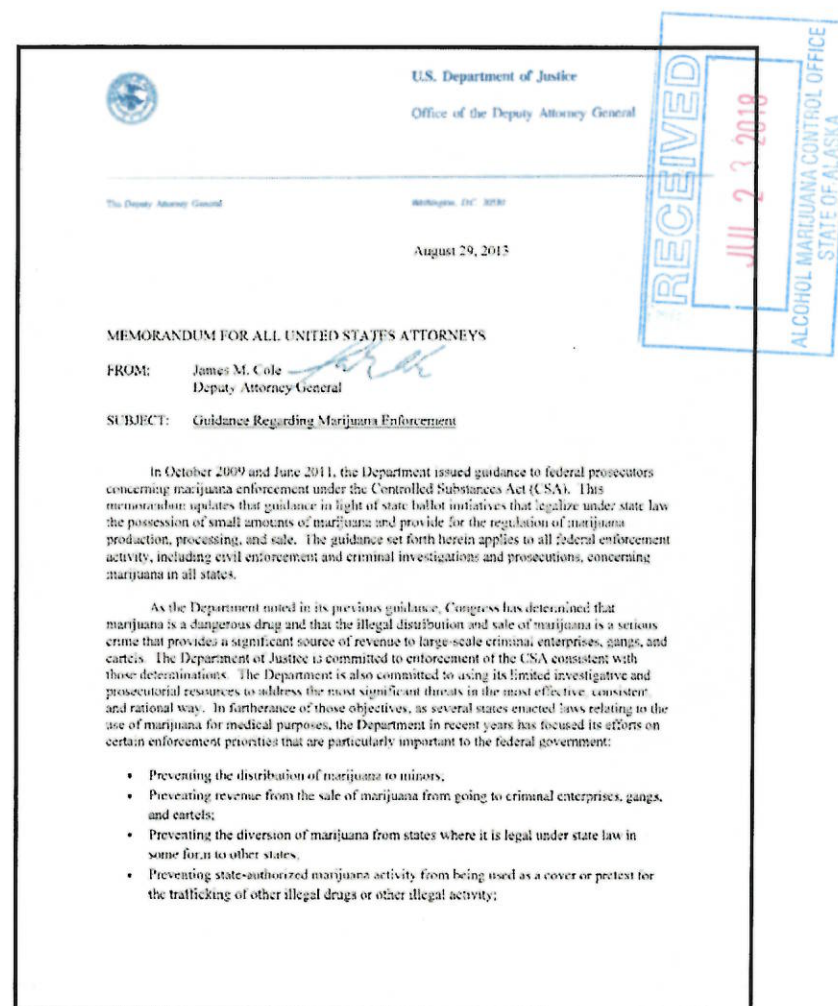
In 2014, President Obama publicly commented on the recreational legalization of cannabis in Colorado and Washington stating that "it's important for it to go forward because it's important for society not to have a situation in which a large portion of people have at one time or another broken the law and only a select few get punished." President Obama further remarked, "I don't think it's more dangerous than alcohol. In fact, it is less dangerous than alcohol in terms of its impact on the individual consumer."⁷

In line with the President's comments, the U.S. Attorney General Eric Holder announced that the federal government would allow states to create a regime that would regulate and implement the legalization of cannabis, including loosening banking restrictions for cannabis dispensaries and growers.⁸

OVERVIEW OF CANNABIS LAWS AND REGULATIONS

The Cole Memo⁹ and the FinCEN (Financial Crimes Enforcement Network) guidance¹⁰ were published and provided states with some comfort in their respective legalization experiments. Unfortunately, enforcement priority decisions by the Attorney General are not in themselves changes in law and may change with each Administration.

Since the 2016 presidential election and the appointment of Jeffery Beauregard Sessions III as the 84th Attorney General, the future of the Cole Memo is unknown. In May of 2017, Sessions sent a letter asking Congress to repeal the Rohrabacher-Farr amendment.¹¹ In the letter Sessions wrote, "I believe it would be unwise for Congress to restrict the discretion of the Department to fund particular prosecutions, particularly in the midst of an historic drug epidemic and potentially long-term uptick in violent crime." In the past Sessions has gone as far as advocating for the death penalty for a second drug trafficking offense.¹²



The Cole Memo states that jurisdictions that have legalized marijuana in some form are less likely to be a threat to the federal priorities under the Controlled Substances Act if they have implemented strong and effective regulatory and enforcement systems to control marijuana growth and distribution.

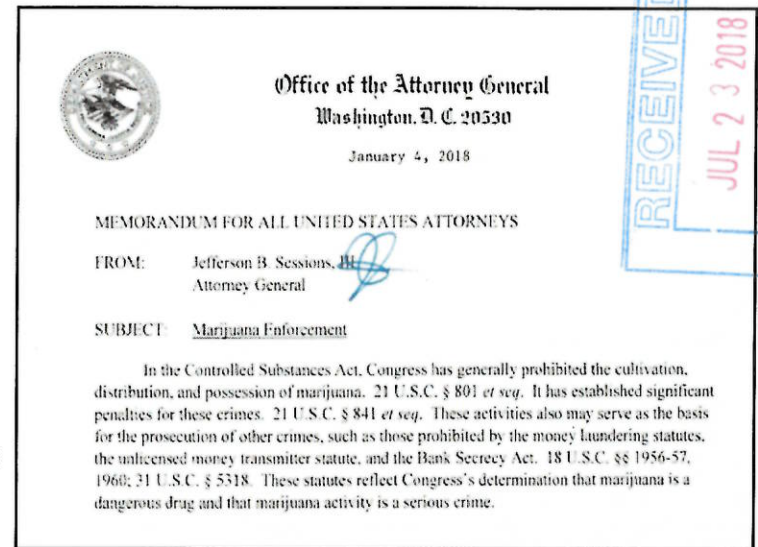


OVERVIEW OF CANNABIS LAWS AND REGULATIONS

On January 4, 2018, the Department of Justice issued a memo on federal marijuana enforcement policy announcing a return to the rule of law and the rescission of previous guidance documents.

In the memorandum, Attorney General Jeff Sessions directs all U.S. Attorneys to enforce the laws enacted by Congress and to follow well-established principles when pursuing prosecutions related to marijuana activities. This return to the rule of law is also a return of trust and local control to federal prosecutors who know where and how to deploy Justice Department resources most effectively to reduce violent crime, stem the tide of the drug crisis, and dismantle criminal gangs.

"It is the mission of the Department of Justice to enforce the laws of the United States, and the previous issuance of guidance undermines the rule of law and the ability of our local, state, tribal, and federal law enforcement partners to carry out this mission," said Attorney General Jeff Sessions. "Therefore, today's memo on federal marijuana enforcement simply directs all U.S. Attorneys to use previously established prosecutorial principles that provide them all the necessary tools to disrupt criminal organizations, tackle the growing drug crisis, and thwart violent crime across our country."¹³



The Sessions memo essentially shifts federal policy from the hands-off approach adopted under the previous administration to unleashing federal prosecutors across the country to decide individually how to prioritize resources to crack down on pot possession, distribution and cultivation of the drug in states where it is legal.



OVERVIEW OF CANNABIS LAWS AND REGULATIONS

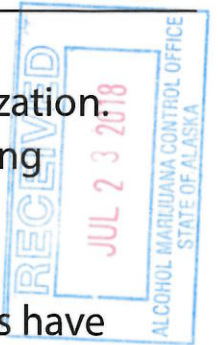
An October 2017 Gallup poll found an all-time high of 64 percent of Americans support full legalization. The same poll was also the first time Gallup recorded a majority of Republicans, 51 percent, favoring full legalization.¹⁴

Legal cannabis became one of the fastest-growing industries in the U.S. and states representatives have found that none of the problems predicted with legalization occurred. Sales jumped from \$1.5 billion in 2013 (U.S.) to an estimated \$10 billion (for North America) in 2017, according to Arcview Market Research. The industry now employs more than 150,000 Americans and has become more deeply entrenched in every quantifiable way.¹⁵



*Colorado Republican Senator
Cory Gardner*

If Sessions thought killing the Cole memo would be easy, the response from state representatives proves positive, in favor of marijuana. Colorado Republican Sen. Cory Gardner, who has a robust marijuana industry in his state to worry about, tweeted that ending the Cole memo “directly contradicts what Attorney General Sessions told me prior to his confirmation.” Gardner threatened to hold up Justice Department nominees “until the Attorney General lives up to the commitment he made to me.”¹⁶




OVERVIEW OF CANNABIS LAWS AND REGULATIONS

By killing the Cole memo, Sessions may have accidentally underscored that the industry no longer needs the protections the document offered. As of January 22, 2018, it appears that virtually no politician or entity in Washington shares Sessions' fixation on marijuana. At the time of this edit, many U.S. attorneys even made statements saying the end of the Cole memo would have little to no effect on deciding which cases to prosecute.¹⁷



State representatives have already proven that they will be fighting the Sessions memo and work toward full legalization and de-scheduling marijuana, but time will tell as to the full impact of this recent development.

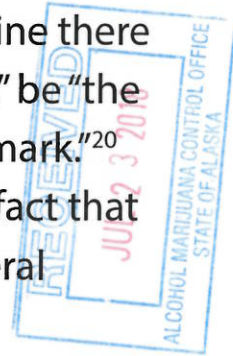
In addition to these recent developments, the U.S. government has set a precedent for patenting cannabis, and cannabis-related inventions. For example, U.S. Pat. No. 6,630,507¹⁸ issued on Oct. 7, 2003 and assigned to The United States of America, is directed to methods of treating diseases caused by oxidative stress by administering therapeutically effective amounts of a cannabidiol (CBD) cannabinoid from cannabis that has substantially no binding to the N-methyl-D-aspartate (NMDA) receptor, wherein the CBD acts as an antioxidant and neuroprotectant. US Patent and Trademark Office confirmed that officials are now accepting and processing patent applications for individual varieties of cannabis, along with innovative medical uses for the plant and other associated inventions.

| | |
|---|--|
|  US006630507B1 | |
| (12) United States Patent Hampson et al. | (10) Patent No.: US 6,630,507 B1 (45) Date of Patent: Oct. 7, 2003 |
| (54) CANNABINOIDS AS ANTIOXIDANTS AND NEUROPROTECTANTS | OTHER PUBLICATIONS |
| (75) Inventors: Aidan J. Hampson , Irvine, CA (US); Julius Axelrod , Rockville, MD (US); Maurizio Grimaldi , Bethesda, MD (US) | Windholz et al., <i>The Merck Index</i> , Tenth Edition (1983) p. 241, abstract No. 1723. Mechoulam et al., "A Total Synthesis of δ^1 -Tetrahydrocannabinol, the Active Constituent of Hashish ¹ ," <i>Journal of the American Chemical Society</i> , 87:14:3273-3275 (1965). Mechoulam et al., "Chemical Basis of Hashish Activity," <i>Science</i> , 18:611-612 (1970). Ottensen et al., "The Crystal and Molecular Structure of Cannabidiol," <i>Acta Chem. Scand. B</i> 31, 9:807-812 (1977). Cunha et al., "Chronic Administration of Cannabidiol to Healthy Volunteers and Epileptic Patients ¹ ," <i>Pharmacology</i> , 82:2:105-112 (2001). |
| (73) Assignee: The United States of America as represented by the Department of Health and Human Services , Washington, DC (US) | |
| (*) Notice: Subject to any disclaimer, the term of this | |



OVERVIEW OF CANNABIS LAWS AND REGULATIONS

In contrast, the Office of Trademarks at USPTO often rejects cannabis trademarks when they determine there is no legal “use in commerce.”¹⁹ The Office of Trademarks further requires that the “use in commerce,” be “the bona fide use of a mark in the ordinary course of trade, and not made merely to reserve a right in a mark.”²⁰ In a recent decision from the Trademark Trial and Appeal Board (TTAB), the Board affirmed that “the fact that the provision of a product or service may be lawful within a state is irrelevant to the question of federal registration when it is unlawful under federal law.”²¹



Despite the conflicting official positions within the Federal Government, many states have recognized that cannabis provides substantial benefits for medical and recreational uses. Cannabis is regularly used by a wide cross-section of society to treat a variety of maladies, conditions, and symptoms including, but not limited to, the following: nausea, glaucoma, lack of appetite, Crohn’s disease, epilepsy, post-traumatic stress disorder, intractable pain, fever, obesity, asthma, urinary tract infections, coughing, anorexia associated with weight loss in AIDS patients, pain, and multiple sclerosis. Many of these conditions will be discussed in relation to cannabis throughout this course, with a special focus on clinical applications in Module 9.

With the number of people depending on Cannabis to treat a myriad of medical conditions, and the increase in tax revenue in the states that have decriminalized both medical and recreational Cannabis, it is unlikely that a reversal in policy by Federal Government will take immediate effect. There will be significant legal challenges and a call for a delisting of Cannabis as a Schedule I controlled substance. At this time, the legal future of Cannabis is uncertain.



OVERVIEW OF CANNABIS LAWS AND REGULATIONS

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OVERVIEW OF CANNABIS LAWS AND REGULATIONS

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LEGAL LANDSCAPE

Federal Law Primer/Outline

OBJECTIVE:

This module is intended to enable Alaska Handler's Permit Certified Card Holders to better understand the legal terrain of medical marijuana. It provides Certified Card Holders with an overview from a legal perspective of relevant medical marijuana regulations.



FEDERAL LAW OUTLINE

This outline list provides an introductory overview of relevant federal cannabis regulations. Many sections included here may not be relevant to medical application, but are important for patients to consider before deciding to use medical cannabis.



Controlled Substances Act (CSA)(21 USC 801, et seq.)

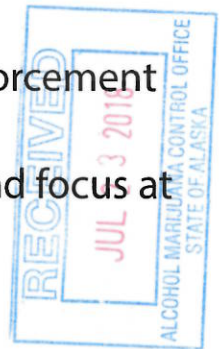
- Marijuana is a Schedule I drug.²² Schedule I drugs are defined as:
 - (A) The drug or other substance has a high potential for abuse.
 - (B) The drug or other substance has no currently accepted medical use in treatment in the United States.
 - (C) There is a lack of accepted safety for use of the drug or other substance under medical supervision.
- Federal preemption²³ of state laws is in “direct conflict” with the CSA
- Current Federal “Green Light” Policies – Political Calculation²⁴

OVERVIEW OF CANNABIS LAWS AND REGULATIONS

Ogden Memo, Cole Memos, Wilkinson Memo & Sessions Memos

Guidance for prosecutorial discretion – not federal legalization

- **Ogden Memo**²⁵ – First guidance from the Department of Justice on medical marijuana enforcement
- **Cole Memos**²⁶ – Established the 8 Department of Justice priorities on drug enforcement and focus at the federal level.
 1. Distribution of marijuana to minors;
 2. Revenue from the sale of marijuana from going to criminal enterprises, gangs, and cartels;
 3. Diversion of marijuana from states where it is legal under state law in some form to other states;
 4. State-authorized marijuana activity from being used as a cover or pretext for the trafficking of other illegal drugs or other illegal activity;
 5. Violence and the use of firearms in the cultivation and distribution of marijuana;
 6. Drugged driving and the exacerbation of other adverse public health consequences associated with marijuana use;
 7. Growing of marijuana on public lands and the attendant public safety and environmental dangers posed by marijuana production on public lands; and
 8. Marijuana possession or use on federal property.



OVERVIEW OF CANNABIS LAWS AND REGULATIONS

- **Wilkinson Memo**²⁷ – Extended Department of Justice enforcement priorities to tribal lands.
- **Sessions Memo**²⁸ – Memorandum for all United States Attorneys - Marijuana Enforcement.

January 4, 2018, the Department of Justice issued a memo on federal marijuana enforcement policy announcing a return to the rule of law and the rescission of previous guidance documents.



In the memorandum, Attorney General Jeff Sessions directs all U.S. Attorneys to enforce the laws enacted by Congress and to follow well-established principles when pursuing prosecutions related to marijuana activities. This return to the rule of law is also a return of trust and local control to federal prosecutors who know where and how to deploy Justice Department resources most effectively to reduce violent crime, stem the tide of the drug crisis, and dismantle criminal gangs.

"It is the mission of the Department of Justice to enforce the laws of the United States, and the previous issuance of guidance undermines the rule of law and the ability of our local, state, tribal, and federal law enforcement partners to carry out this mission," said Attorney General Jeff Sessions. "Therefore, today's memo on federal marijuana enforcement simply directs all U.S. Attorneys to use previously established prosecutorial principles that provide them all the necessary tools to disrupt criminal organizations, tackle the growing drug crisis, and thwart violent crime across our country."

At this time, this reversal by Attorney General Jeff Sessions of the previous policy, creates legal uncertainty for the future of marijuana producers, patients and medical professionals.

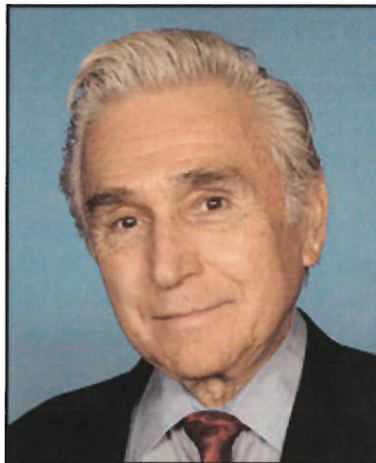


OVERVIEW OF CANNABIS LAWS AND REGULATIONS

The Rohrabacher–Farr Amendment²⁹

(more recently known as the Rohrabacher–Blumenauer Amendment)

- Legislation first introduced by U.S. Reps. Maurice Hinchey, Dana Rohrabacher, and Sam Farr in 2003, prohibiting the Justice Department from spending funds to interfere with the implementation of state medical cannabis laws. The amendment does not change the legal status of cannabis however, and must be renewed each fiscal year in order to remain in effect.
- There is one unpublished case in California where the federal court extended the protection to recreational cannabis.³⁰
- Recreational Marijuana is currently legal in 8 states plus D.C. and Medical Marijuana is legal in 29 states.³¹



US Representative
Maurice Hinchey



US Representative
Dana Rohrabacher



US Representative
Sam Farr



Conant v. Walters – Healthcare Provider Recommendations³²



- After California and Arizona decriminalized medical marijuana in 1996, the Federal Department of Justice and Department Health and Human Services sent a policy to federal, state, and local practitioner associations cautioning physicians who “intentionally provide their patients with oral or written statements in order to enable them to obtain controlled substances in violation of federal law risk revocation of their DEA prescription authority.”
- In 2002, the 9th Circuit affirmed an order permanently enjoining the federal government from either:
 - 1) revoking a physician's license to prescribe controlled substances; or,
 - 2) conducting an investigation of a physician that might lead to such revocation, where the basis for the government action would be solely the physician's "recommendation" of the use of medical marijuana, on First Amendment grounds.
- After 2002 a provider may discuss the pros and cons of medical marijuana with his or her patient, and issue a written or oral recommendation to use marijuana within a bona fide provider-patient relationship without fear of legal reprisal.
- And this is so, regardless of whether s/he anticipates that the patient will, in turn, use this recommendation to obtain marijuana in violation of federal law.
- On the other hand, the physician may not actually prescribe or dispense marijuana to a patient, or recommend it with the specific intent that the patient will use the recommendation like a prescription to obtain marijuana.
- However, despite the First Amendment protections affirmed by the 9th Circuit, most healthcare providers are reluctant to recommend medical marijuana due to a claimed lack of scientific evidence or because the organization the provider works for has a policy against such recommendations.



OVERVIEW OF CANNABIS LAWS AND REGULATIONS



Taxes

- IRS Section 280(e)—Calculation of taxable income
 - May discount the cost of goods sold from gross revenues³³
 - May not discount ordinary business expenses

*No deduction or credit shall be allowed for any amount paid or incurred during the taxable year in carrying on any trade or business if such trade or business (or the activities which comprise such trade or business) consists of trafficking in controlled substances (within the meaning of schedule I and II of the Controlled Substances Act) which is prohibited by Federal law or the law of any State in which such trade or business is conducted.*³⁴

No bankruptcy protection for cannabis businesses³⁵

- 10th Circuit Bankruptcy Appellate Panel held:
 - “Impossible for the Chapter 7 Trustee to administer the Arenases’ estate because selling and distributing the proceeds of the marijuana assets would constitute federal offenses.”
 - “If the Trustee abandoned the Assets, the debtors would retain their business after exposing the Trustee to grave risk, provide the creditors with little or no recovery, and receive a discharge, protected all the while from their creditors’ collection efforts by the automatic stay and then the discharge injunction. That is the epitome of prejudicial delay.”
- Marijuana businesses are not eligible for Chapter 7, nor are they eligible for Chapter 13 bankruptcy protection.



OVERVIEW OF CANNABIS LAWS AND REGULATIONS

Employment Law

- Drug testing still permitted because it is still a federal crime
- Employees can be fired for having THC in their blood/urine, even if smoking has nothing to do with their job and had no effect on their job performance.
- Cannabis smokers are not a protected class; employers are free to discriminate.
- Rightful termination may depend on whether the employment contract contains a provision with the requirement of following all federal laws, refraining from partaking illegal drugs, etc.³⁶



Access to Banking

- The Financial Crimes Enforcement Network (FinCEN) published guidance for interstate banks to allow them to accept cannabis business accounts without violating federal money laundering statutes.³⁷

Other Federal Law Consideration

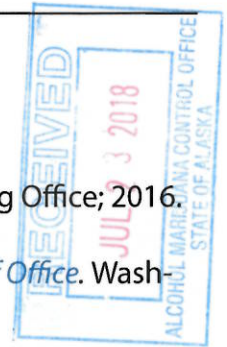
- Federal protection is not available for cannabis trademarks, except where it does not violate the Controlled Substances Act.^{38 39} Registration is refused because applicant does not have a bona fide intent to lawfully use the applied-for mark in commerce.^{40 41 42}
- Plant, design, and utility patents are available for cannabis inventions.
- Copyright registrations are enforceable for cannabis creative works.



OVERVIEW OF CANNABIS LAWS AND REGULATIONS

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ALASKA LEGAL LANDSCAPE

Alaska Marijuana Laws and Regulations

ALASKA STATE MARIJUANA LAWS AND REGULATIONS

A. State Legal Status - Statutes

1. Marijuana¹ – The state of Alaska defines “marijuana” or “marihuana” as all parts of the plant Cannabis, whether growing or not; the seeds thereof; the resin extracted from any part of the plant; and every compound, manufacture, salt, derivative, mixture, preparation of the plant, its seeds or resin, including marijuana concentrate. The term does not include:



- a. *Fiber produced from the stalks, oil or cake made from the seeds of the plant, any other compound, manufacture, salt, derivative, mixture, or preparation of the mature stalks (except the resin extracted therefrom), fiber, oil, or cake, or the sterilized seed of the plant which is incapable of germination; or*
- b. *The weight of any other ingredient combined with marijuana to prepare topical or oral administrations, food, drink, or other products.*

2. Medical Marijuana – With the passage of voter incentive AS 17.37, the State of Alaska adopted strict laws regulating the registry of patients and listing of caregivers.²

3. Recreational Marijuana – In the interest of allowing law enforcement to focus on violent and property crimes, and to enhance individual freedom, the passage of voter incentive AS 17.38 declared that the use of marijuana should be legal for persons 21 years of age or older.³ Regulations adopted rules for:

- a. *Proof of age to purchase marijuana;*
- b. *Individuals who can conduct sales of marijuana; and*
- c. *Packaging and tracking requirements.*

B. Alaska State Rules

- 1. Retailer** – Licensed Marijuana Retailers are licensed by the Alcohol and Marijuana Control Office (AMCO) to distribute or sell marijuana to consumers over 21 years of age. A Retailer may receive, possess, display, store or transport marijuana or marijuana products, except that it may not be displayed in a manner that is visible to the general public from a public right-of-way.⁴
- 2. Cultivator** – Licensed Marijuana Cultivation facilities are licensed by the AMCO to cultivate, manufacture, harvest, process, package, transport, display, store or possess marijuana. A licensed cultivation facility may deliver, distribute, or sell marijuana to a marijuana cultivation facility, marijuana product manufacturer, or retail marijuana store.
- 3. Producer** – Licensed Marijuana Product Manufacturing facilities are licensed by the AMCO to package, process, transport, manufacture, display, or possess marijuana. A licensed cultivation facility may deliver, or sell marijuana to a marijuana cultivation facility, or retail marijuana store.
- 4. Tester** – Licensed Marijuana Testing facilities are licensed by the AMCO to possess, cultivate, process, repack, store, transport, display, transfer, or deliver marijuana.



C. Marijuana Handlers - Marijuana Handler Permit Card

1. Each licensee, employee, or agent of a marijuana establishment who sells, cultivates, manufactures, tests, or transports marijuana or marijuana product, or who checks identification of a consumer or visitor, must obtain a marijuana handler permit card from AMCO before being licensed or beginning employment at a marijuana establishment.⁵

- a. Marijuana handler permits are valid for three years from the date of course completion; and*
- b. There are no Alaska residency restrictions for obtaining a permit.*



ALASKA STATE MARIJUANA LAWS AND REGULATIONS

REFERENCE LIST

1. [Sec 17.38.900 Definitions See paragraph \(10\) \(2017\)](#)
2. [AS 17.37.040 Restrictions on Medical Use of Marijuana \(2015\)](#)
3. [Sec 17.38.010 Purpose and Findings \(2017\)](#)
4. [Sec 17.38.070 Lawful operation of marijuana-related facilities \(2017\)](#)
5. [3 AAC 306.700 Marijuana Handler Permit \(2018\)](#)





ALASKA LEGAL LANDSCAPE

Medical Marijuana Voter Incentive AS 17.37

MEDICAL MARIJUANA VOTER INCENTIVE AS 17.37

A. Medical Marijuana Patients and Designated Providers

1. Registry of Patients and Listing of Caregivers⁶ – The department shall create and maintain a confidential registry of patients who have applied for and are entitled to receive a registry identification card. The registry is not a public record.

a. Patient Qualifications⁷

1. *Alaska State Resident;*
2. *Diagnosed with a debilitating medical condition; and*
3. *Obtain a statement signed by the patient's physician.*

2. Privileged Medical Use of Marijuana⁸– A patient, primary caregiver, or alternative caregiver registered with the department has an affirmative defense to a criminal prosecution related to marijuana.

- a. *A person is not subject to arrest, prosecution, or penalty in any manner for applying to have the person's name placed on the confidential registry.*
- b. *A physician is not subject to any penalty, including arrest, prosecution, or disciplinary proceeding for advising a patient whom the physician has diagnosed as having a debilitating condition about the risks and benefits of medical use of marijuana.*



3. Debilitating Conditions⁹

- a. Cancer, glaucoma, human immunodeficiency virus (HIV), or acquired immune deficiency syndrome (AIDS), or treatment for any of these conditions;
- b. Any chronic or debilitating disease which produces;
 - 1. Cachexia;
 - 2. Severe pain;
 - 3. Severe nausea;
 - 4. Seizures, including those that are characteristic of epilepsy; or
 - 5. Persistent muscle spasms, including those that are characteristic of multiple sclerosis.



4. Restrictions on Medical Use of Marijuana¹⁰– A patient, primary caregiver, or alternate caregiver may not;

- a. *Engage in the medical use of marijuana in a way that endangers the health or wellbeing of any person;*
- b. *Engage in the medical use of marijuana in plain view of, or in a place open to, the general public; or*
 - 1. Within 500 feet of school grounds, recreation or youth center; or
 - 2. On a school bus.
- c. *Sell or distribute to any person; or*
- d. *Possess in the aggregate more than one ounce or six plants.*

MEDICAL MARIJUANA VOTER INCENTIVE AS 17.37

REFERENCE LIST

6. AS 17.37.010 Registry of Patients and Listing of Caregivers (2015)
7. AS 17.37.010. Registry of Patients and Listing of Caregivers (2015)
8. AS 17.37.030 Privileged Medical Use of Marijuana (2015)
9. AS 17.37.070 Definitions (2015)
10. AS 17.37.040 Restrictions on Medical Use of Marijuana (2015)





ALASKA LEGAL LANDSCAPE

Recreational Marijuana Voter Incentive AS 17.38

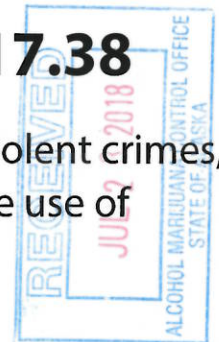
RECREATIONAL MARIJUANA VOTER INCENTIVE AS 17.38

A. Purpose and Findings¹¹ - In the interest of allowing law enforcement to focus on violent crimes, and to enhance individual freedom, the people of the state of Alaska find and declare that the use of marijuana should be legal for persons 21 years of age or older.

1. Individuals will have to show proof of age before purchasing marijuana;
2. Legitimate, taxpaying business people, and not criminal actors, will conduct sales of marijuana; and
3. Marijuana sold by regulated businesses will be labeled and subject to additional regulations to ensure that consumers are informed and protected.

B. Personal Use of Marijuana¹² – The following acts, by persons 21 years of age or older, are lawful and are not criminal or civil offenses under Alaska law;

1. Possessing, using, displaying, purchasing, or transporting marijuana accessories or one ounce or less of marijuana;
2. Possessing, growing, processing or transporting;
 - a. Not more than six marijuana plants;
 - b. With three or fewer being mature, flowering plants;
 - c. Except that not more than 12 plants, with six or fewer being mature, may be present in a single dwelling regardless of the number of persons 21 years of age or older residing in the dwelling.



C. Restrictions and Penalties

1. Marijuana plants shall be cultivated in a location where the plants are not subject to public view without the use of binoculars, aircraft, or other optical aids;¹³
 - a. *Violation of this is punishable by a fine up to \$750.*
2. It is unlawful to consume marijuana in public;¹⁴
 - a. *Violation of this is punishable by a fine up to \$100.*
3. A person under 21 years of age may not use fraudulent identification to attempt to enter a marijuana establishment or purchase marijuana.¹⁵
 - a. *Violation of this is punishable by a fine up to \$400*



RECREATIONAL MARIJUANA VOTER INCENTIVE AS 17.38

REFERENCE LIST

11. Sec 17.38.010 Purpose and Findings (2017)
12. Sec. 17.38.020 Personal Use of Marijuana (2017)
13. Sec. 17.38.030 Restrictions or personal cultivation, penalty (2017)
14. Sec. 17.38.040 Public consumption banned, penalty (2017)
15. Sec. 17.38.050 False identification, penalty (2017)





ALASKA LEGAL LANDSCAPE

Recreational Marijuana Regulations 3 AAC 306

RECREATIONAL MARIJUANA REGULATIONS 3 AAC 306

A. license Requirements¹⁶

1. A marijuana establishment may not operate in the state unless it has obtained the applicable marijuana establishment license.
2. The board will not issue a marijuana establishment license if;¹⁷
 - a. *The license premises will be located within 500 feet of school grounds, a recreation or youth center, a building in which religious services are regularly conducted, or a correctional facility; or*
 - b. *A person has been found guilty of selling alcohol without a license, misdemeanor crime involving a controlled substance, or conviction of a felony; or*
 - c. *An individual or a sole proprietorship is not a resident of the state of Alaska.*
3. A marijuana establishment must file a renewal application no later than June 30th of the current calendar year.¹⁸



B. Licensed Marijuana Establishments

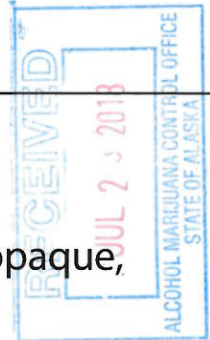
1. A licensed retail marijuana store is authorized to sell and store marijuana purchased from a licensed marijuana cultivation or product manufacturing facility.¹⁹
 - a. *Product must be packaged and labeled as required in a quantity not exceeding the limits set out.*
 - b. *Product must be consumed off the licensed premises*
2. Each licensee, employee, or agent who is required to be physically present on the licensed premises must obtain a Marijuana Handler Permit before being licensed or employed at a marijuana retail store, cultivation facility, product manufacturing facility, testing facility or establishment.²⁰
3. A licensed retail marijuana store may not sell, give, distribute, deliver or offer to sell marijuana to;²¹
 - a. *A person under the age of 21 years*
 - b. *A person that is under the influence of an alcoholic beverage, inhalant, or controlled substance.*
4. A licensed retail marijuana store may not;
 - a. *Sell over the internet and may only sell marijuana to a consumer who is physically present on the licensed premises;*
 - b. *Sell after the expiration date shown on the label of the product;*
 - c. *Conduct business or allow consumer access to premises between the hours of 5:00am and 8:00am each day;*
 - d. *Offer free marijuana or marijuana products including samples; or*
 - e. *Offer alcoholic beverages for free or for compensation*



RECREATIONAL MARIJUANA REGULATIONS 3 AAC 306

5. A licensed retail marijuana store may not sell in a single transaction;²²
- a. More than one ounce of useable marijuana;*
 - b. Sixteen ounces of marijuana-infused product in solid form;*
 - c. More than seven grams of marijuana-infused extract for inhalation;*
 - d. Seventy-two ounces of marijuana-infused product in liquid form.*
6. Licensed marijuana retail stores, cultivation facilities, product manufacturing facilities, testing facilities or establishments must use a marijuana inventory tracking system to ensure;²³
- a. All marijuana product is identified and tracked from receipt of any batch through sale, transfer or disposal*
 - b. That no marijuana or marijuana product is not received without a valid transport manifest*
 - c. Transactions are reconciled each day from the store's point of sale system and current inventory at the close of each business day.*





C. Packaging Requirements

1. Any marijuana or marijuana product sold at a retail marijuana store must be packaged in opaque, reclosable, child-resistant packaging when the purchaser leaves the retail premises;²⁴
 - a. The packaging must be designed or constructed to be significantly difficult for children under five years of age to open; but*
 - b. Not normally difficult for adults to use properly.*
2. A retail marijuana store shall affix a label to each package of marijuana or marijuana product that;
 - a. Identifies the marijuana retail store selling the marijuana product by name or distinctive logo and marijuana establishment license number; and*
 - b. States the total estimated amount of THC in the labeled product.*
3. All packaging and advertising for marijuana must contain the following warnings;
 - a. "Marijuana has intoxicating effects and may be habit forming and addictive"*
 - b. "Marijuana impairs concentration, coordination, and judgment. Do not operate a vehicle or machinery under its influence"*
 - c. "There are health risks associated with consumption of marijuana"*
 - d. "For use only by adults 21 and older. Keep out of reach of children"*
 - e. "Marijuana should not be used by women who are pregnant or breast feeding"*

RECREATIONAL MARIJUANA REGULATIONS 3 AAC 306

REFERENCE LIST

16. 3 AAC 306.005 License required (2018)
17. 3 AAC 306.010 License restrictions (2018)
18. 3 AAC 306.035 Application for renewal of license (2018)
19. 3 AAC 306.305. Retail marijuana store privileges (2018)
20. 3 AAC 306.320. Marijuana handler permit required (2018)
21. 3 AAC 306.310. Acts prohibited at retail marijuana store (2018)
22. 3 AAC 306.355. Limit on quantity sold (2018)
23. 3 AAC 306.330 Marijuana inventory tracking system (2018)
24. 3 AAC 306.345. Packaging and labeling (2018)





AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

EARLY HISTORY OF CANNABIS USE

AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

OBJECTIVE:

This module charts the development and spread of cannabis and its various uses as a fiber, as a food, and as a medicine as far back as 5000 years ago. Cannabis was an essential treatment for the ancient Chinese, the Indian Ayurvedics as well as the Victorians who adopted it into the Western Pharmacopoeia in the mid-1850s. It was used in Europe and North America as a household tonic until its prohibition in 1937 in the United States.

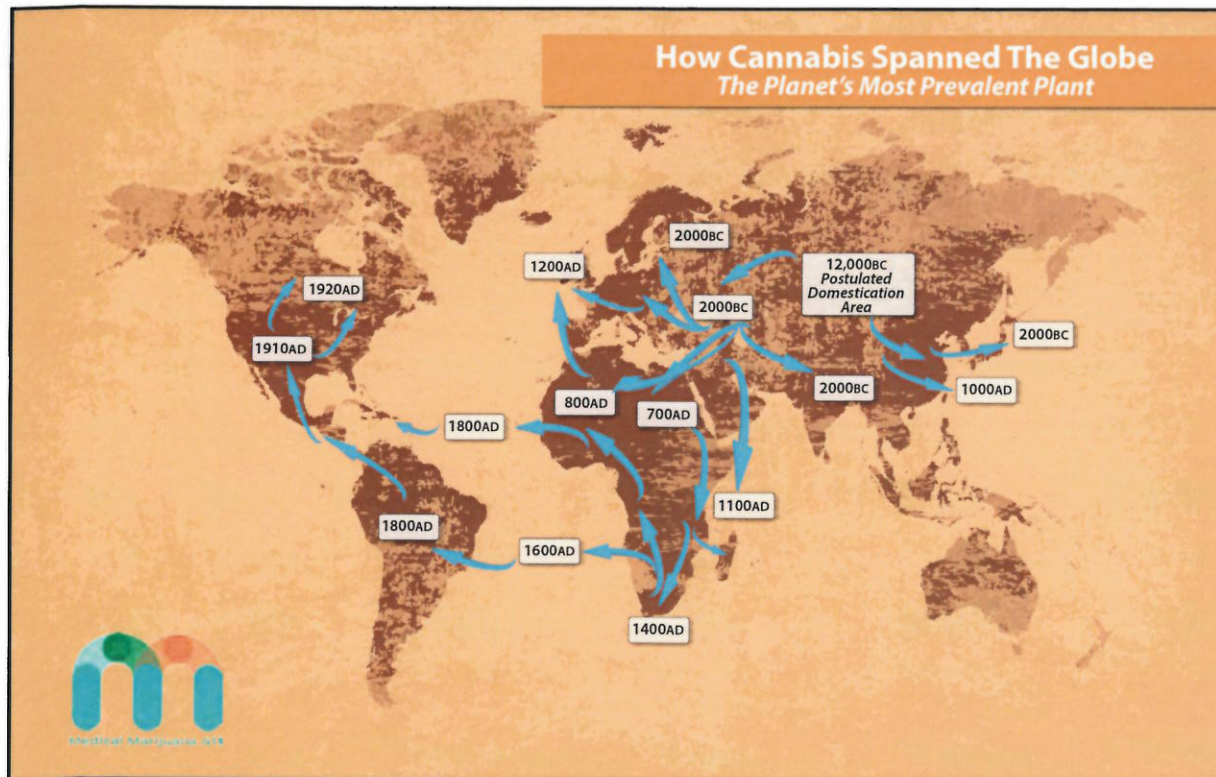


AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

EARLY HISTORY OF CANNABIS USE

According to biologists, botanists, and anthropologists, the cannabis plant (a relative of hops) debuted in the Caucasus Mountains, most likely in current-day Kazakhstan (ancestral home of Borat), some 10,000 years ago.¹ The harsh landscape and climate of Central Asia forced the plant to be hearty and, to a certain extent, inventive, in order to survive. It had to grow quickly before the short summer season ended, and it had to tempt animals and birds to gobble up the seeds and then excrete them while migrating.

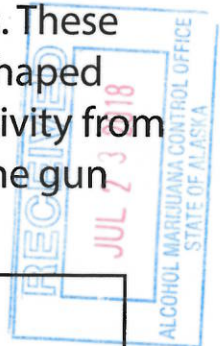
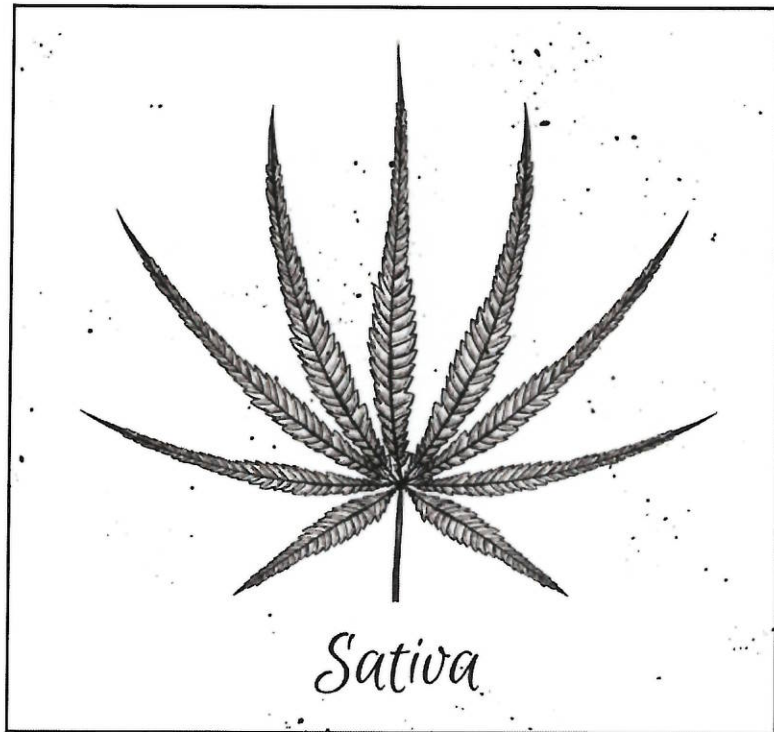


Humans did their bit too, carrying seeds out of Russia along the Silk Route. The seeds that moved east into the colder regions of the Himalayas developed into the so-called Indica or Kush strains; the psychoactivity they produce tends to be more physical than cerebral, bringing on a sleepy condition, perfectly expressed by the phrase "couchlock." Indica plants are shorter and bushier, with rounder leaves. They also mature and flower quickly, in 12-16 weeks, to contend with their shorter growing season.

AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

Seeds that went west to the Middle East and Africa are today commonly called the Sativa varieties. These warmer climate plants are more gangly, at times stretching 20 feet tall. They have narrow, finger-shaped leaves and rangy buds that take longer to mature (some can take up to a half year). The psychoactivity from a sativa variety is generally more energetic. They stimulate talkativeness, nervousness, and machine gun bursts of creative flow.

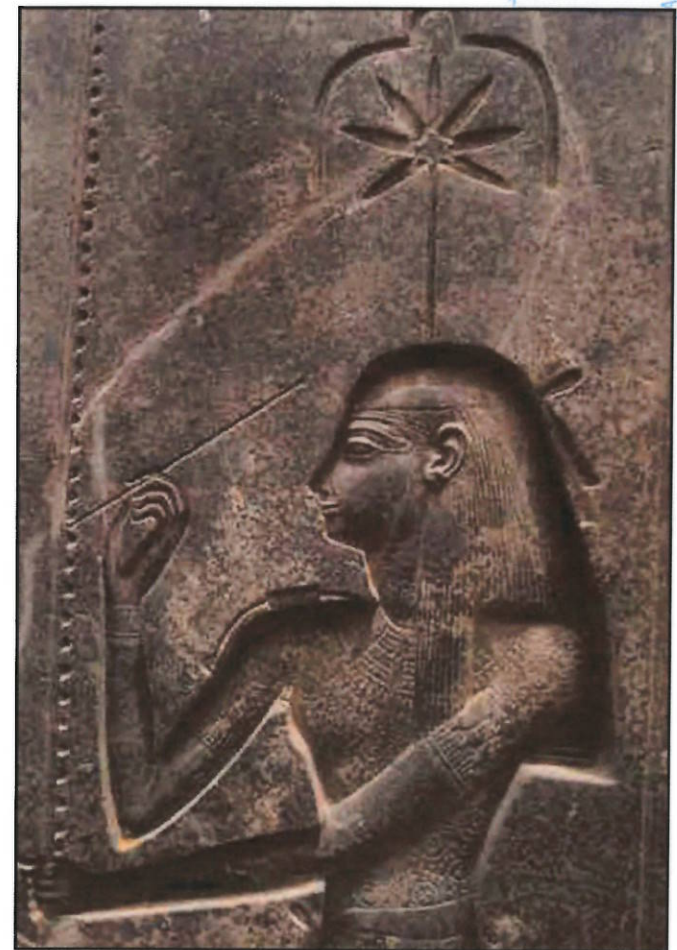


It should be noted that the terms "sativa" and "indica" are, by and large, meaningless, as the plant in North America has been hybridized over the last 50-60 years. Though the terms are unreliable at predicting effects, they are now ingrained in the common lexicon and we will use them here with that forewarning.

AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

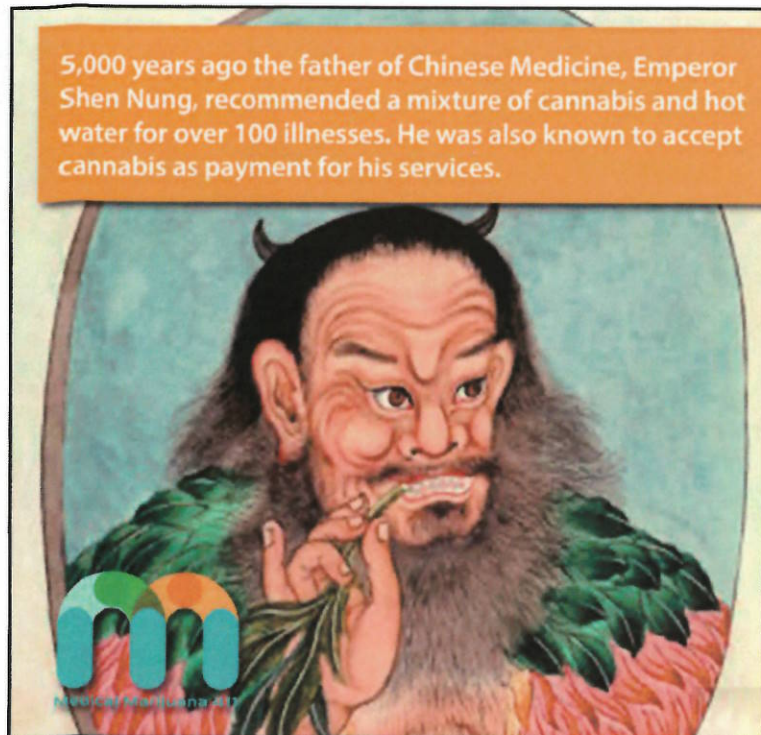
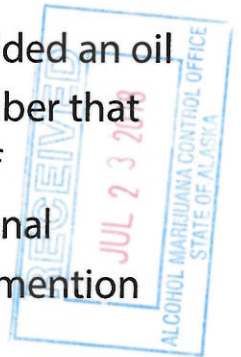
Ethnobotanists agree that cannabis has also made itself extremely useful to human beings as our species has adapted over thousands of years. When our hunter/gatherer ancestors were chased by a wild boar, they likely nibbled some cannabis buds to help them forget the trauma, relax, recover, and get to sleep so that they could get up the next day and hit the plains again. Archeological evidence indicates that women munched the sticky flowers to ease the nausea of pregnancy and to numb and then forget the pain of childbirth so they could repeat the experience and help our species proliferate—an undeniably strategic evolutionary benefit.²



AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

Once humans settled and began to farm the land, cannabis seeds not only fed the animals but yielded an oil that contained the exact ratio of essential fatty acids to help children thrive.³ The stalks provided fiber that was turned into tents and clothes, and eventually sails and paper (early drafts of the Declaration of Independence were written on hemp paper).⁴ And the plant found its way into the healers' medicinal arsenal. Healers were plantsmen, after all. Without plants, their formulary, their stature, and not to mention their patients, all would have disappeared.



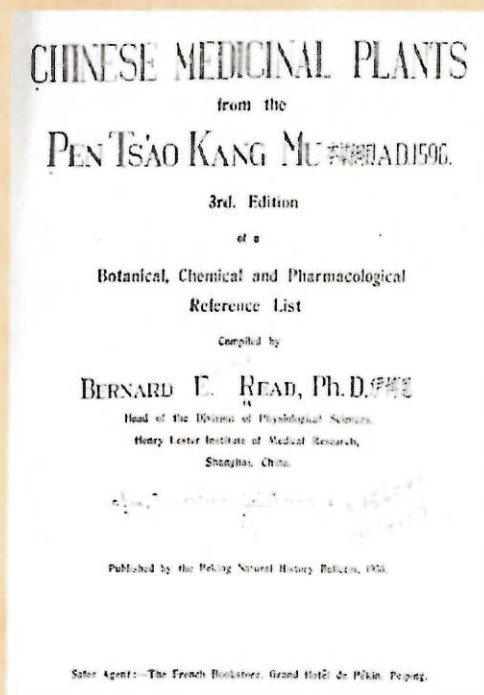
5,000 years ago the father of Chinese Medicine, Emperor Shen Nung, recommended a mixture of cannabis and hot water for over 100 illnesses. He was also known to accept cannabis as payment for his services.

The ancient Chinese considered this wild grass one of the 50 fundamental herbs and were the first to write about its medical and spiritual benefits over 4,700 years ago. The father of Chinese medicine, Shen Nung, used "ma" to treat an array of illnesses, including gout, rheumatism, malaria, and constipation. Of the 2,000 medicinal plants known in the vast field of Indian Ayurvedic medicine, cannabis is the most important among them.⁵ While all these cultures occasionally inhaled the dried plant as smoke, it was most often used as a tincture or eaten. The Egyptians used it in suppositories and to relieve eye pain; they buried kings and royalty with pounds of cannabis. The Greeks made wine steeped with cannabis, which they used to treat inflammation and ear problems.⁶

AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

Cannabis in the Pen-ts'ao ching, the world's oldest pharmacopoeia



Medical Marijuana 411

Cannabis is mentioned in the
Pen-ts'ao ching, the world's oldest
pharmacopoeia, which was compiled
from Chinese oral traditions dating
back to 2700 B.C.

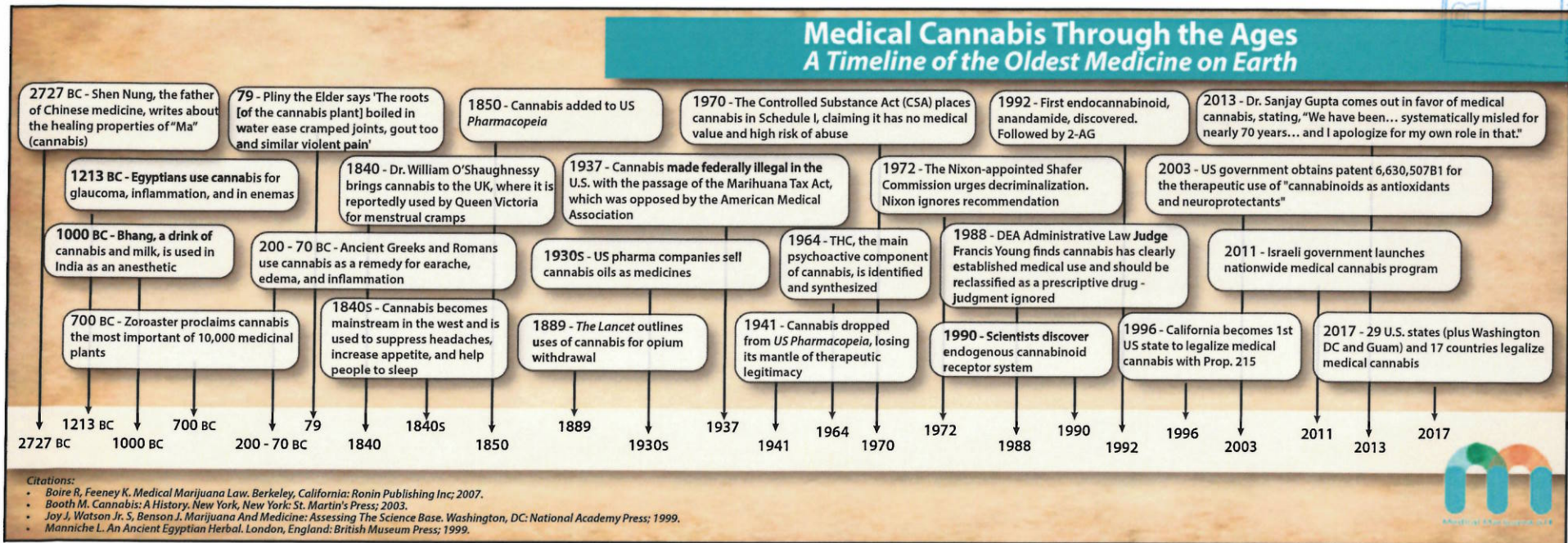


AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

In 1993, a 2500-year old mummy in Russia was found buried with meat, ornaments, and cannabis. A recent MRI of the so-called Siberian Ice Princess of Altai, who was perfectly preserved in ice, shows her body riddled with Stage 4 metastatic breast cancer. Scientists say she used cannabis to blunt the immeasurable pain of her illness and that she was probably a shaman who used cannabis to treat others as well.⁷

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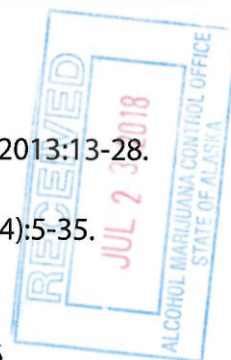


AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

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AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

CANNABIS IN THE WEST

AN ANCIENT PLANT FOR MODERN ILLNESSES

A *Short* Version of the Long History of Cannabis as Medicine

OBJECTIVE:

This module charts the development and spread of cannabis and its various uses as a fiber, as a food, and as a medicine as far back as 5000 years ago. Cannabis was an essential treatment for the ancient Chinese, the Indian Ayurvedics as well as the Victorians who adopted it into the Western Pharmacopoeia in the mid-1850s. It was used in Europe and North America as a household tonic until its prohibition in 1937 in the United States.



AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

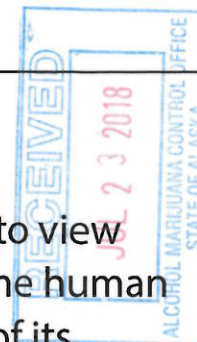
CANNABIS IN THE WEST



Dr. William O'Shaughnessy introduced cannabis tincture to Victorian England after observing its healing properties in the hospitals of Calcutta, India.

With the advent of modern religion, Westerners began to view plant substances with suspicion. In its efforts to break the human bond with magic plants on earth and refocus the gaze of its followers on one God in heaven, elders in the Catholic Church branded plant users pagans, sorcerers, or witches. The Spanish Conquistadors massacred hordes of natives in Latin America for using psilocybin, peyote, datura, morning glory, salvia, and ayahuasca, in addition to cannabis.

Europeans remained largely ignorant about cannabis until Sir William Brooke O'Shaughnessy (an Irish inventor and physician) went to work in the hospitals of Calcutta, India in 1839. While there, he developed a fascination with Indian botanical medicines, chief among them a tincture of cannabis indica, also known as hemp oil. O'Shaughnessy was curious about the ways Eastern cultures in hot, crowded regions used botanicals prophylactically to prevent diseases before they struck and then to treat them once they had.⁸ He did the first animal studies on cannabis and noted that it effectively eased the pain of muscle spasms caused by rabies, tetanus, and cholera.



AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

O'Shaughnessy brought the plant back to England, where it caused enough of a sensation that physicians and small companies began to produce their own cannabis elixir and sell it privately and in general stores.⁹ In the very first issue of *The Lancet*, Queen Victoria's physician discusses tincture of cannabis in the treatment of dysmenorrhea. In this issue he also states: "When pure and administered carefully [cannabis indica] is one of the most valuable medicines we possess."¹⁰



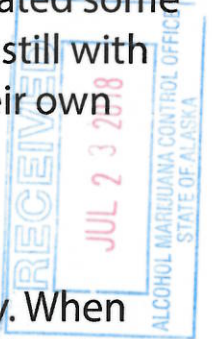
Cannabis tinctures, elixirs, powders, and "corn plasters" circa 1900.

AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

In the following 60 years, over 100 medical papers were written about this “wonder drug” that treated some old-fashioned sounding illnesses (including neuralgia and melancholy) and many others that are still with us today, including sleeplessness, nausea, and neuropathy.¹¹ In the U.S., physicians also made their own cannabis tinctures and sold them out of their offices, as did drug companies including Eli Lilly, Parke-Davis, and Squibb.¹²

The primary problem with this all-purpose plant tonic was not its efficacy, but dosing it accurately. When cannabis is swallowed it takes 1.5 to 2 hours for the effects to come on, so patients never knew if they had taken enough. Too large of a dose could cause harrowing anxiety, but most doctors worried about prescribing too little.



AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

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AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

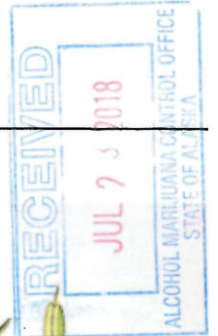
U.S. PROHIBITION

AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

OBJECTIVE:

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AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

U.S. PROHIBITION

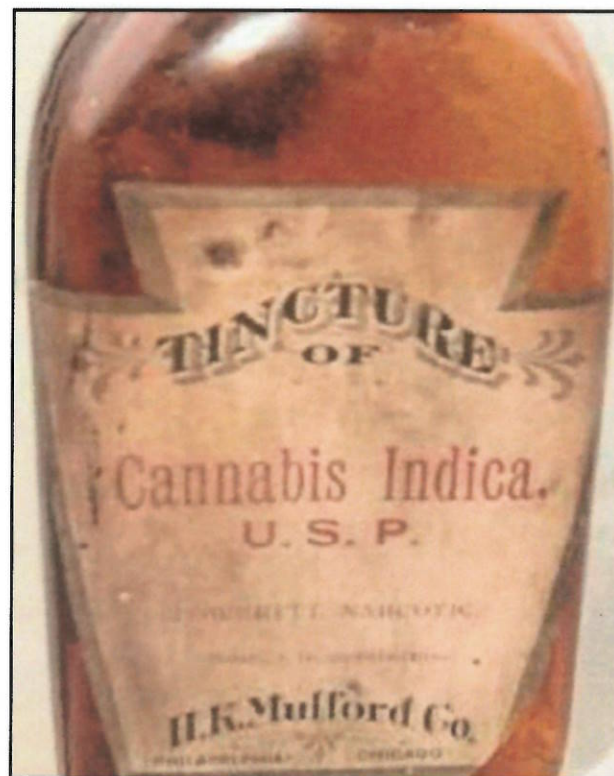


There were two powerful forces that combined to sideline cannabis as medicine and pave the way for the U.S. prohibition. One was a noxious mix of anti-immigrant fever spurred on by the 27% jobless rate of the Great Depression plus

corporate greed that viewed the plant as an economic threat.¹³ The other was a revolutionary medical invention: the pill.

In 1900 the conditions for which cannabis indica was most often prescribed were pain and insomnia. But in 1898, Bayer synthesized aspirin from birch bark; shortly thereafter the first barbiturates were also produced as pills.¹⁴ Today we take for granted the inexpensive manufacturing of precisely dosed, easy-to-swallow medications, but the invention of

pills and capsules that could be measured in milligrams was groundbreaking at the time. Tincture of cannabis indica, which varied in strength depending on the crop from which it was derived and was vexing to dose, suddenly seemed very old-fashioned.¹⁵



AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

During World War II, the United States produced a short film called "Hemp for Victory," praising the many uses of hemp. The film was meant to encourage farmers to join the war effort and grow cannabis. The US government vehemently denied the existence of such a film until 1989, when a copy was donated to the Library of Congress.



Then, in the 1930s came Harry Anslinger who was the head of the Federal Bureau of Narcotics, the precursor to today's FBI. With financial backing from the beverage industry that was just recovering from 14 years of alcohol prohibition, plus the support of certain pharma companies seeking to protect their patents, Anslinger proposed the Marijuana Tax Act to Congress.¹⁶ The idea was to impose a tariff so stiff

and paperwork so burdensome that no doctor would prescribe cannabis tincture and no company would produce it.

With no medical or scientific evidence backing him up, Anslinger told Congress that "marihuana is an addictive drug which produces in its users insanity, criminality, and death."¹⁷

Over the objections of the American Medical Association, which fought the legislation on the grounds that there is "no evidence that marijuana is a dangerous drug," Anslinger prevailed.¹⁸ Once FDR signed it into law in 1937 Anslinger cranked up his attacks. He wrote articles titled "Marihuana: Assassin of Youth," and published them in the nationwide chain of newspapers owned by arch-conservative tycoon William Randolph Hearst. The articles claimed that "the weed from the devil's garden" was a fast route to insanity and that it caused white women to seek sexual relations with negroes, and caused whites and black to dance cheek to cheek.¹⁹ With money from alcohol and pharmaceutical companies, Anslinger also produced anti-marijuana films.



AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

Reefer Madness is a cult classic today, but it succeeded then in convincing the vulnerable masses that marijuana was a portal to lewd behavior or that one puff brought on irreversible insanity.²⁰ By 1941, the Marijuana Tax Act had imposed such a burden that doctors quit prescribing cannabis. It was dropped from the *U.S. Pharmacopeia* in 1941, and the tincture vanished from the shelves.²¹



AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine



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AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

THE MEDICAL IMPLICATIONS OF U.S. PROHIBITION

AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

OBJECTIVE:

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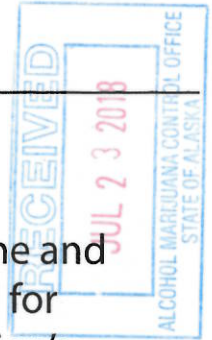
THE MEDICAL IMPLICATIONS OF U.S. PROHIBITION

The prohibition of cannabis has had wide ranging effects on society and medicine, despite numerous attempts over 70 years to separate the myths from the facts. One of Prohibition's greatest successes has been a diminution of the plant's healing qualities.

In 1944, for example, the New York Mayor Fiorello La Guardia commissioned a report from the New York Academy of Medicine that questioned the prohibition. Its findings said that marijuana is not physically addictive, is not a gateway drug, and that it did not lead to crime.²² Thirty years later, President Richard Nixon, who associated marijuana with the anti-Vietnam War protesters that marked (and marred) his time in office, appointed the Shafer Commission to study worldwide use in hopes of proving the dangers of using the plant. Instead, the \$4 million, 4,000-page study, titled "Marijuana: A Signal of Misunderstanding," concluded that the punishment for marijuana was more harmful than the drug itself and recommended decriminalizing personal possession and moving it into Schedule III alongside

acetaminophen, synthesized testosterone and estrogen, drugs that "carry less potential for abuse."²³ Nixon disavowed the commission's findings and ignored its every recommendation.

Under the Controlled Substance Act, marijuana remains a Schedule I "narcotic" alongside heroin and LSD. Despite the fact that millions of patients use it medicinally with no toxic reactions, Schedule I inaccurately defines both THC and CBD as having "high potential for abuse" with "no accepted medical use" and a "lack of accepted safety."²⁴ The U.S. Drug Enforcement Agency claims the drug's chemistry is "not known and reproducible" and that there are "no adequate safety studies or studies proving efficacy." In fact, cannabis is one of the most widely studied drugs internationally. There are over 22,000 published studies in PubMed about cannabis; still the DEA, as recently as 2016, justified its decision because cannabis "does not meet the criteria for currently accepted medical use in treatment in the United States."²⁵



AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

How Drugs Are Classified In The U.S.

| Schedule | Description | Examples |
|-------------------|---|--|
| Schedule 1 | Drugs with no currently accepted medical use and a high potential for abuse. They are the most dangerous drugs of all the drug schedules with potentially severe psychological or physical dependence. | <ul style="list-style-type: none"> - Heroin - Lysergic acid diethylamide (LSD) - Marijuana (Cannabis) - Methylenedioxymethamphetamine (Ecstasy) - Methaqualone - Peyote |
| Schedule 2 | Drugs with a high potential for abuse, with use potentially leading to severe psychological or physical dependence. These drugs are also considered dangerous. | <ul style="list-style-type: none"> - Combination products with less than 15mg of hydrocodone per dosage unit (Vicodin) - Cocaine - Methamphetamine - Methadone - Meperidine (Demerol) - Oxycodone (OxyContin) - Fentanyl - Dexedrine - Adderall - Hydromorphone (Dilaudid) |
| Schedule 3 | Drugs with a moderate to low potential for physical and psychological dependence. Schedule 3 drugs abuse potential is less than Schedule 1 and Schedule 2 but more than Schedule 4. | <ul style="list-style-type: none"> - Combination products with less than 90mg of codeine per dosage unit (Tylenol and Codeine) - Ketamine - Anabolic Steroids - Testosterone |
| Schedule 4 | Drugs with a low potential for abuse and low risk of dependence. | <ul style="list-style-type: none"> - Xanax - Soma - Darvon - Darvocet - Valium - Ativan - Taiwin - Ambien - Tramadol |
| Schedule 5 | Drugs with a lower potential for abuse than Schedule 4 and consist of preparations containing limited quantities of certain narcotics. Schedule 5 drugs are generally used for antidiarrheal, antitussive and analgesic purposes. | <ul style="list-style-type: none"> - Cough preparations with less than 200mg of Codeine per 100ml (Robitussin AC) - Lomotil - Lyrica - Parepectolin - Motofen |

SOURCE: Drug Enforcement Administration



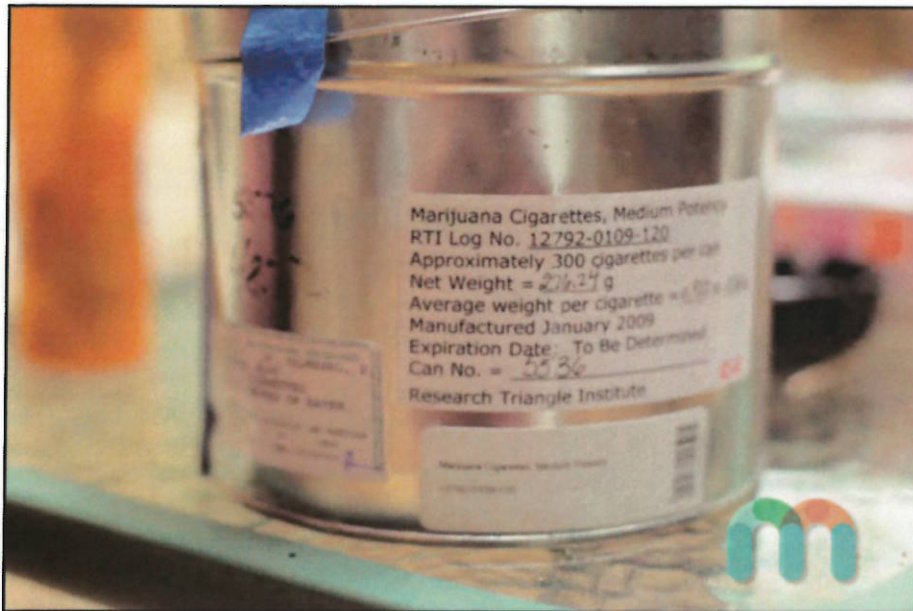
Medical Marijuana 411



AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

In 1974 Congress established the National Institute on Drug Abuse to research only the harmful effects of cannabis and specifically prohibited studying the medical benefits of the plant. To this day NIDA is the only legal entity federally allowed to grow cannabis on U.S. soil. The legal cannabis crop is used for research purposes and is grown at the University of Mississippi. Because of a loophole in NIDA's Compassionate Investigational New Drug program,²⁶ it still distributes a can of pre-rolled marijuana cigarettes at no cost to 4 survivors of the original 20 patients in the program.²⁷



A can of NIDA's pre-rolled marijuana cigarettes, provided to glaucoma patient Elvy Musikka.

Despite the prohibition and extensive and multi-billion dollar War on Drugs, underground growers have worked diligently to keep strains alive. But because they were growing for recreational users, they have, over the last 40 years, selected for THC dominant strains over less psychoactive CBD varieties. As a result of what has been called the largest inadvertent breeding experiment in world history, CBD was largely eliminated from the majority of U.S. crops. With increasing evidence about the healing powers of CBD emerging regularly, this is changing now and high CBD crops are reemerging.



AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

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AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

MEDICAL CANNABIS TODAY

AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

OBJECTIVE:

This module charts the development and spread of cannabis and its various uses as a fiber, as a food, and as a medicine as far back as 5000 years ago. Cannabis was an essential treatment for the ancient Chinese, the Indian Ayurvedics as well as the Victorians who adopted it into the Western Pharmacopoeia in the mid-1850s. It was used in Europe and North America as a household tonic until its prohibition in 1937 in the United States.



AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

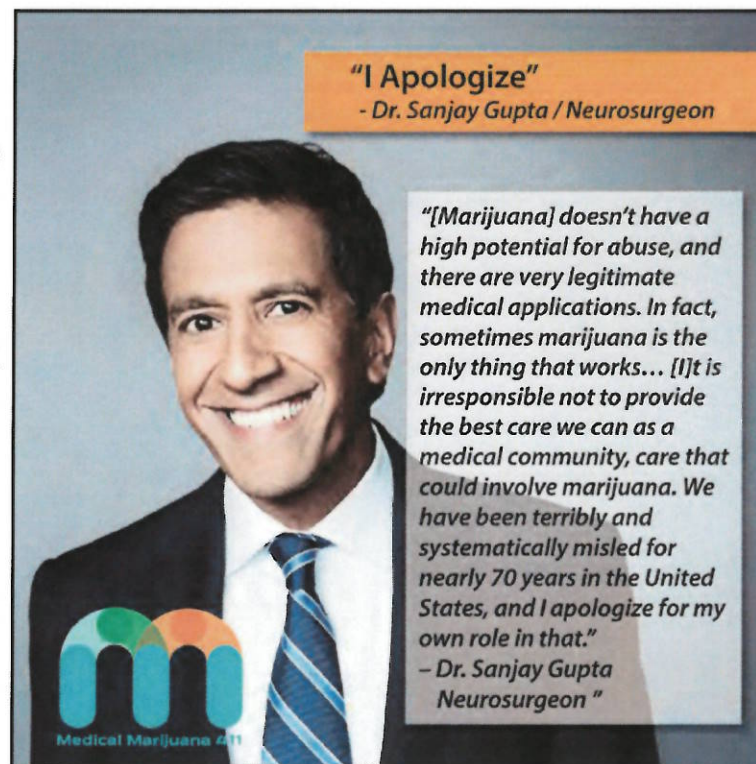
MEDICAL CANNABIS TODAY

The tide changed for medical cannabis in 1996 when the citizens of California voted in Proposition 215, the Compassionate Care Act, which created cooperatives between growers and patients and allowed anyone with a doctor's recommendation and a state-issued ID to purchase cannabis. Proposition 215 made no mention of distribution, sales, or taxation or regulation, but it brought the forgotten idea of medicinal cannabis back into the mainstream and paved the way for subsequent voter initiatives in other states.²⁸

In 2013, the Justice Department in the Obama administration issued the Cole Memo which guided Federal prosecutors to not interfere with states that regulate cannabis programs and to allow states to enact their own laws.²⁹

As of 2017 voters and patients in 29 U.S. states have enacted medical marijuana legalization.³⁰ The result is a patchwork of laws and regulations, approved medical conditions, products and methods of delivery that vary from state to state. Because cannabis is still (confusingly) federally illegal, U.S. doctors are prohibited from prescribing medical marijuana and patients are forbidden from crossing state lines with their medications.

The evolution of U.S. laws in addition to the exciting science and research into medicinal cannabis are among the reasons you're taking this course today.



AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

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AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

HEMP VS. CANNABIS

AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

OBJECTIVE:

This module charts the development and spread of cannabis and its various uses as a fiber, as a food, and as a medicine as far back as 5000 years ago. Cannabis was an essential treatment for the ancient Chinese, the Indian Ayurvedics as well as the Victorians who adopted it into the Western Pharmacopoeia in the mid-1850s. It was used in Europe and North America as a household tonic until its prohibition in 1937 in the United States.

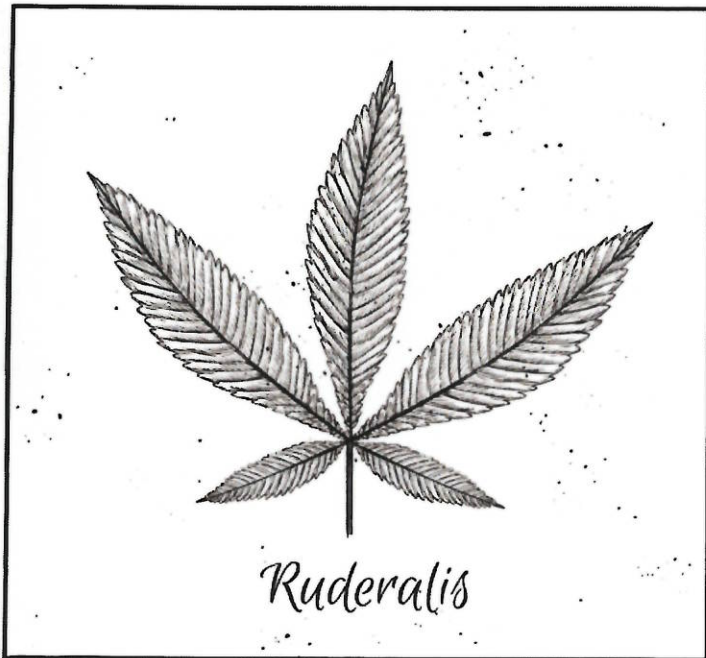


AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

HEMP VS. CANNABIS

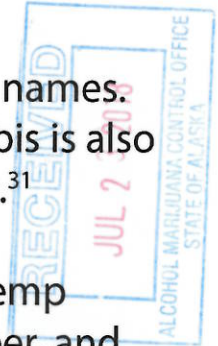
The differences between hemp and cannabis are thoroughly confusing, in large part because of the names. Both medical cannabis and hemp are known by the botanical name *Cannabis sativa*. Medical cannabis is also referred to as *Cannabis indica* or *Cannabis ruderalis*, but no one can seem to agree which one to use.³¹



Most people today find it easier to distinguish industrial hemp from drug varieties. Industrial hemp produces food, oil, fiber, and fuel and is also planted in brown fields where it is used as a soil remediator. Most industrial hemp has a miniscule THC content -- 0.2 to 0.4 percent -- so it is not psychoactive. It does, however, produce CBD in the seeds and stalks, which means that much larger quantities of hemp are necessary to extract CBD than what is necessary with cannabis drug varieties.³²

Growing hemp was outlawed in the 1937 Prohibition, with only a brief return during WWII. Today, under Farm Bill Section 7607, 33 states are now allowed to grow hemp for research and commercial purposes. Hemp CBD products can also be legally produced and shipped throughout the U.S. if they contain less than 0.3% THC.³³

Though hemp-derived CBD is good medicine, lack of federal regulation means that there is little quality and/or price control, and patients should be advised to read labels carefully. Again, the problem stems more from prohibition than from the plant.



AN ANCIENT PLANT FOR MODERN ILLNESSES

A Short Version of the Long History of Cannabis as Medicine

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CANNABIS AS MEDICINE: THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

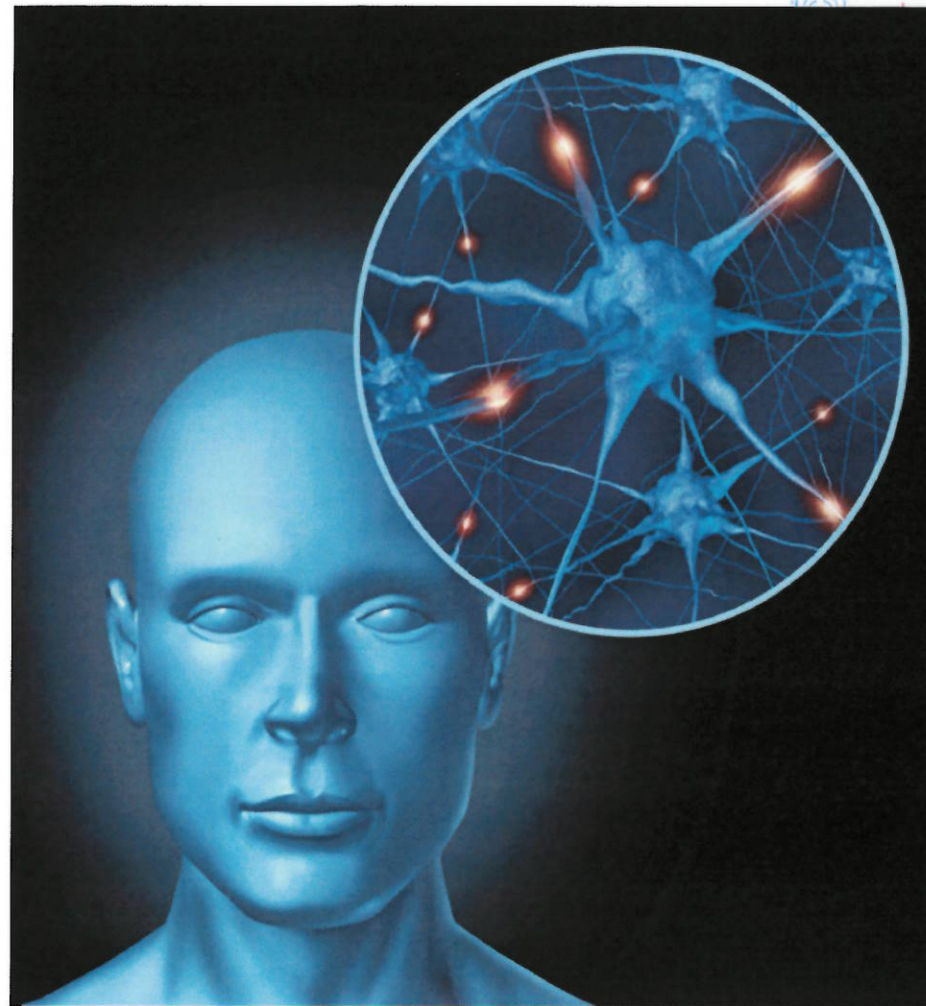
DISCOVERY OF THE ENDOCANNABINOID SYSTEM

THE DISCOVERY OF THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

OBJECTIVE:

This module charts how the 1964 discovery of THC and CBD led to the 1988 discovery of the Endocannabinoid System (ECS), the largest receptor system and the master regulator of homeostasis in the human body.



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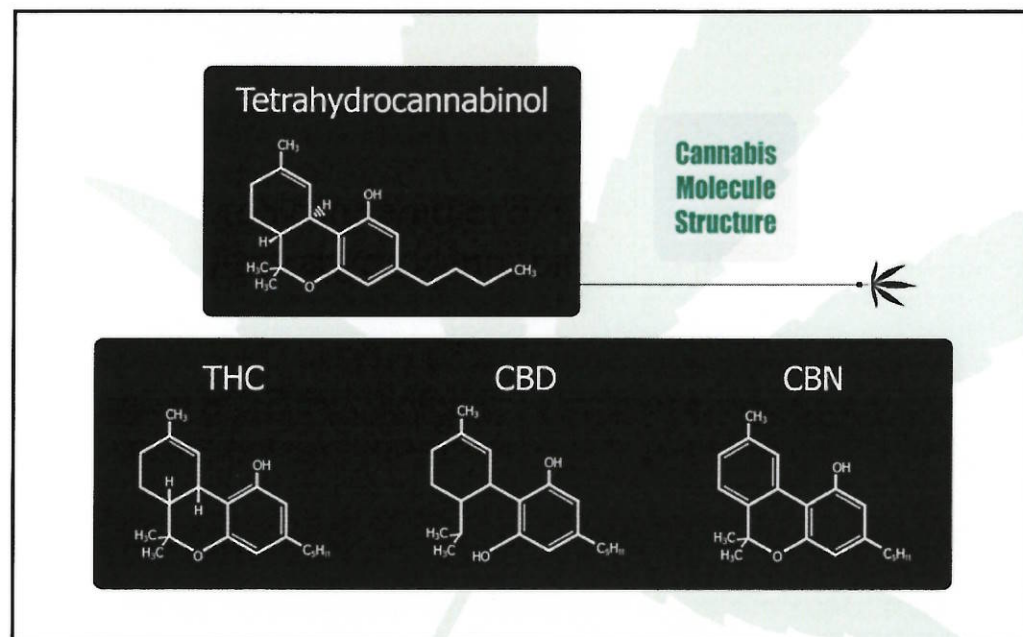


CANNABIS AS MEDICINE: THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

DISCOVERING THE ENDOCANNABINOID SYSTEM

In 1804 morphine was isolated from opium. Fifty years later cocaine was extracted from coca leaves. But the chemistry of cannabis, which was used much more widely for health and recreational purposes had remained a mystery—until 1964.¹ That's when Raphael Mechoulam, a 34-year-old biochemistry graduate student, and Yehiel Gaoni isolated cannabidiol or CBD, and the psychoactive molecule (delta-9-tetrahydrocannabinol), or THC.²

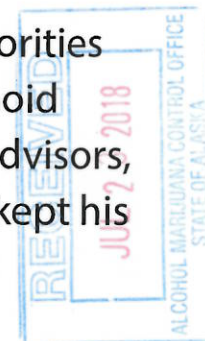


Dr. Mechoulam circa 1964

CANNABIS AS MEDICINE: THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

Since then, Mechoulam and his team of scientists at Hebrew University have become the world authorities on the chemistry of the plant and the system of receptors in the brain and body -- the endocannabinoid system (ECS) -- with which it interacts. His findings have earned him the respect of scientists, policy advisors, doctors, politicians, growers, and other researchers around the world. Yet prohibition has effectively kept his name relatively unknown outside of a small scientific circle.³



Dr. Allyn Howlett

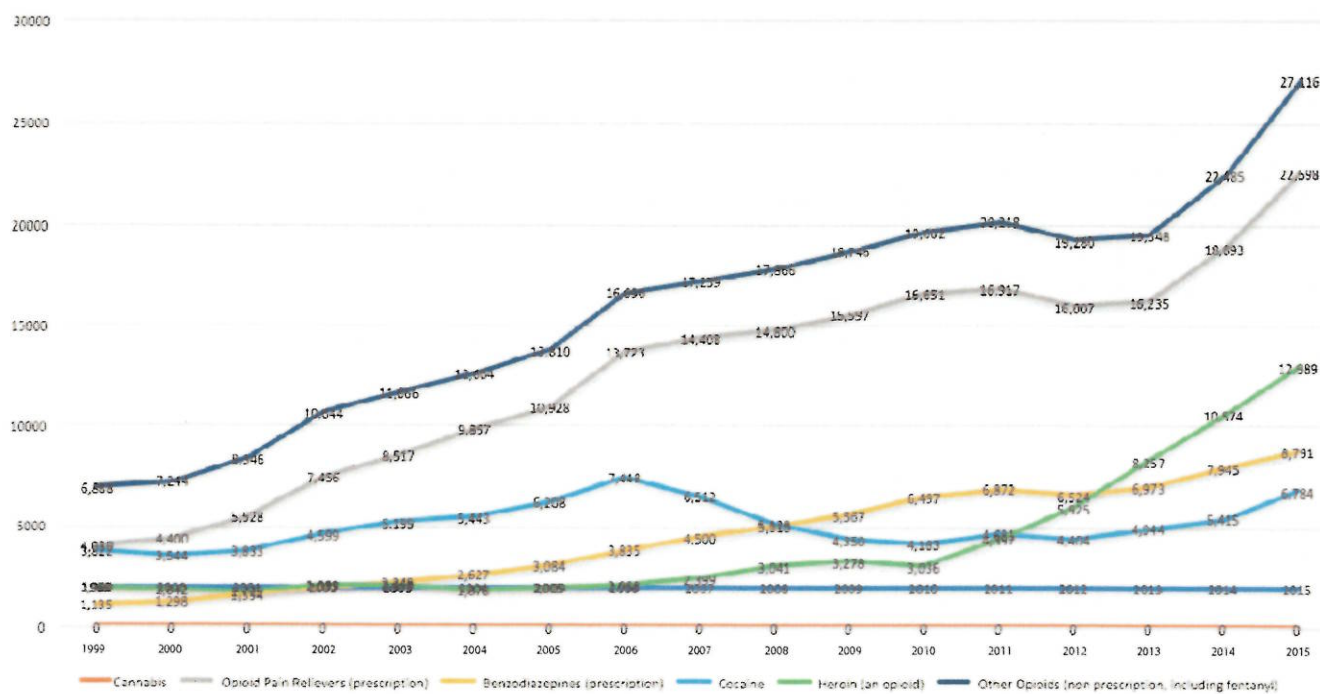
Although the discovery of THC and CBD solved one mystery, more important discoveries were still to come. In 1988 an American chemist, Dr. Allyn Howlett, located a large grouping of receptors in the brain that responded to THC. The densest concentration is in the brain areas that coordinate movement and control emotions, memory, pain, pleasure, and reproduction.⁴ Interestingly, there are no receptors in the cardiac and respiratory centers of the brainstem, the areas that shut down the heart and lungs in cases of overdose. The lack of receptors in the brainstem is why no one has ever died of a cannabis overdose, and why it is one of the safest, if not the safest, medicine on earth.⁵



CANNABIS AS MEDICINE: THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

Causes of Death by Drug



Source: CDC WONDER

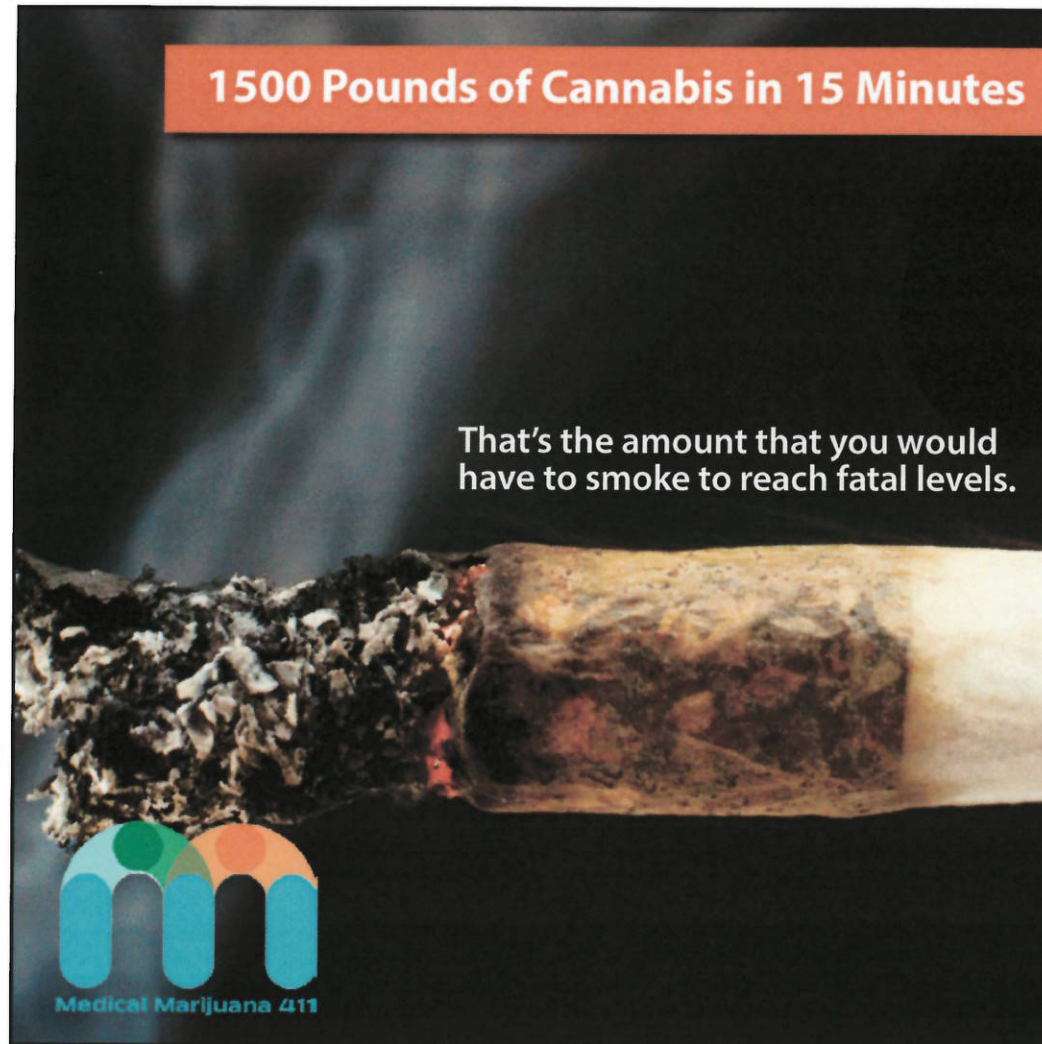
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CANNABIS AS MEDICINE: THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

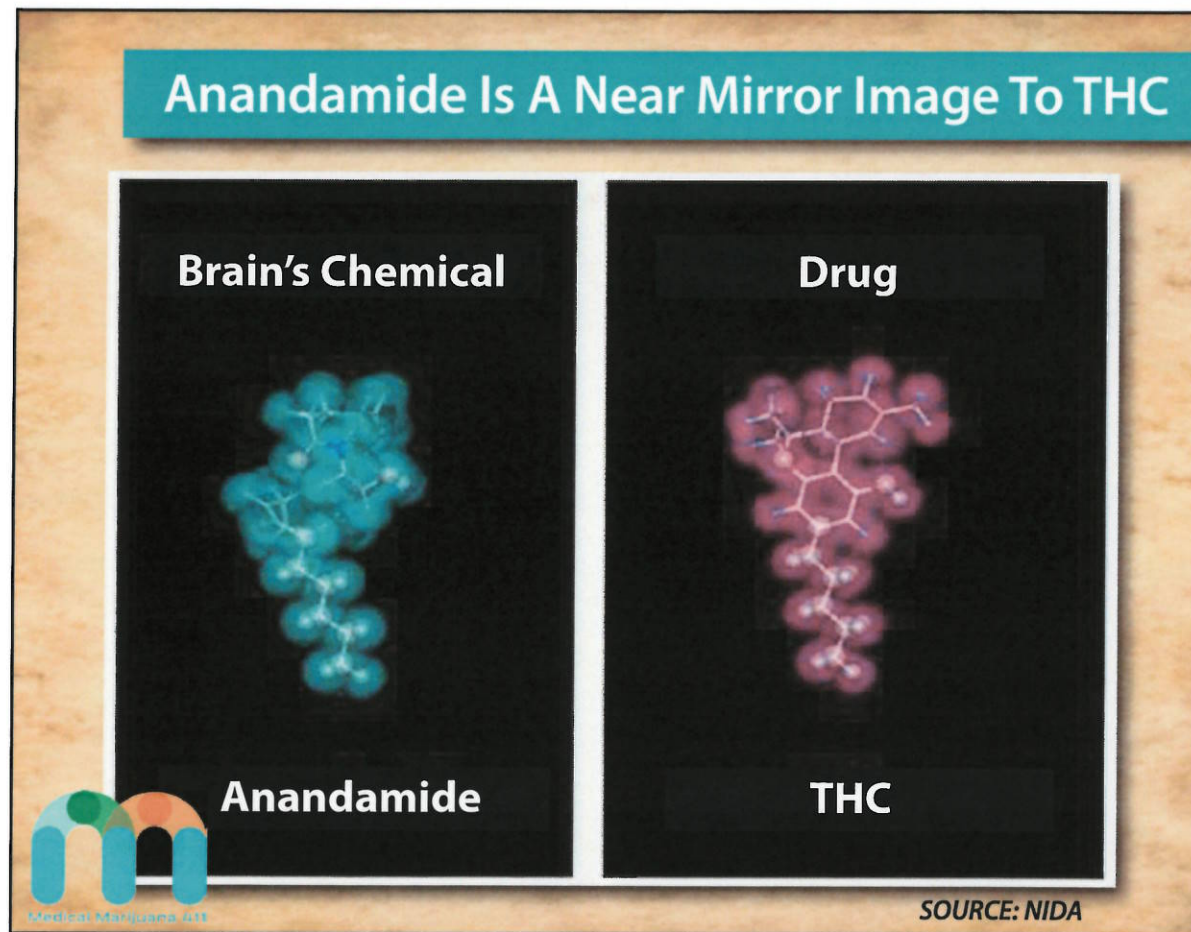
In fact, estimates say a human would have to smoke the equivalent of 20,000 to 40,000 joints in 15 minutes to kill him or herself.⁶ This computes to over 1,500 pounds of cannabis inhaled in 15 minutes. In terms of addiction, cannabis is about as addictive as coffee and “withdrawal” symptoms are typically limited to insomnia, anxiety, and sweating.⁷



CANNABIS AS MEDICINE: THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

In 1992 Mechoulam's lab discovered a chemical produced by the brain that mirrors the effects of THC and binds to the same receptors. They named it anandamide after the Sanskrit word ananda, for bliss. Just like THC, anandamide is thought to intensify sensory experience, stimulate appetite, temporarily blot out short-term memory and create feelings of pleasure. Shortly after, they identified another brain chemical that mimics CBD, which they named 2-AG.⁸ They soon discovered a galaxy of endocannabinoid receptors that extends into every organ, gland, immune cell, and connective tissue in the body.



CANNABIS AS MEDICINE: THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

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CANNABIS AS MEDICINE: THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

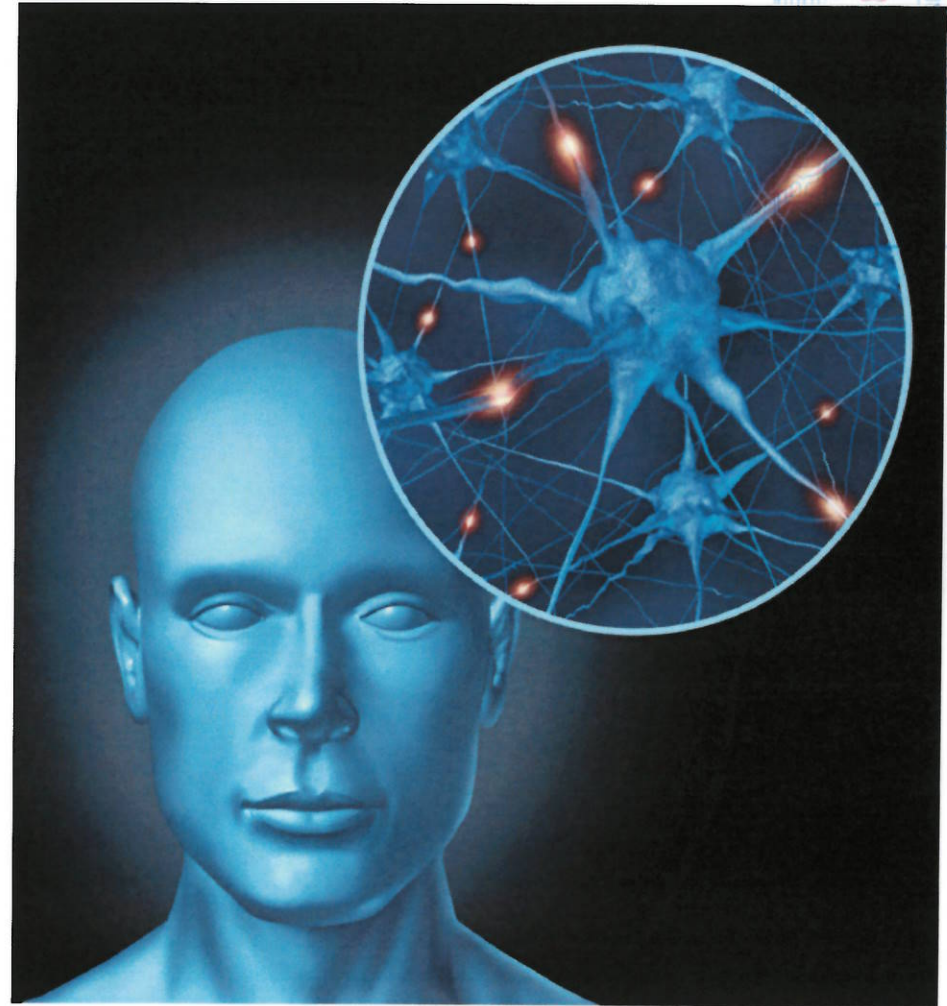
THE ENDOCANNABINOID SYSTEM: THE BODY'S SUPERCOMPUTER

THE DISCOVERY OF THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

OBJECTIVE:

This module charts how the 1964 discovery of THC and CBD led to the 1988 discovery of the Endocannabinoid System (ECS), the largest receptor system and the master regulator of homeostasis in the human body.



CANNABIS AS MEDICINE: THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

THE ENDOCANNABINOID SYSTEM: THE BODY'S SUPERCOMPUTER

Broadly speaking, neurotransmitter systems are like cell phone networks: the brain sends chemicals and electric impulses that command cells to communicate with each other. Other neurotransmitter systems are better known because they were discovered first -- dopamine, serotonin, histamine -- but the ECS is the largest of all. One Italian researcher dubbed it "the body's supercomputer" because one of its primary functions is to keep every other bodily system in balance.⁹

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Marijuana Can Help Broken Bones Heal Faster

Researchers found that cannabidiol - a molecule of marijuana that does not get them high - improved the healing process in rats with broken leg bones after eight weeks. Yankel Gabet who led the study, said it found the molecule "makes bones stronger during healing," which could prevent future fractures. This process occurs as cannabidiol or CBD, enhances the maturation of collagen the protein in connective tissue that holds the body together."

"After being treated with CBD, the healed bone will be harder to break in the future," said Dr. Gabet



Medical Marijuana 411

SOURCE- ScienceDaily & Journal of Bone and Mineral Research

The endocannabinoid system regulates blood sugar, immune function, muscle and fat tissues, hormones, the way we feel pain and pleasure and metabolic functions. It maintains the heart's steady beat, the stomach's digestion, the lungs' bellows, and the speed at which bones heal. It enables us to forget pain and rewards us for eating and having sex.¹⁰



CANNABIS AS MEDICINE: THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

At A Glance - Some Of The Health Benefits Of Marijuana



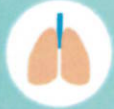
Seizure Control

Studies show that cannabis reduces seizure frequency in adults and children, and enhances anticonvulsant activity of traditional seizure medications.



Reduced Anxiety

Cannabis acts on GABA receptors that activate the parasympathetic nervous system, reducing the fight or flight response and inducing a state of calm.



Bronchodilation

Although it seems counterintuitive, cannabinoids aid in bronchodilation and research teams are developing asthma treatments with cannabis.



Neuroprotection

Cannabinoids are successfully used as neuroprotectants in range of conditions including MS, Alzheimer's disease, TBI, Parkinson's disease, ALS, and Huntington's disease.



Pain Management

Over 300 studies have shown that cannabinoids can help patients with chronic pain, including 36 double blind randomized controlled clinical trials.



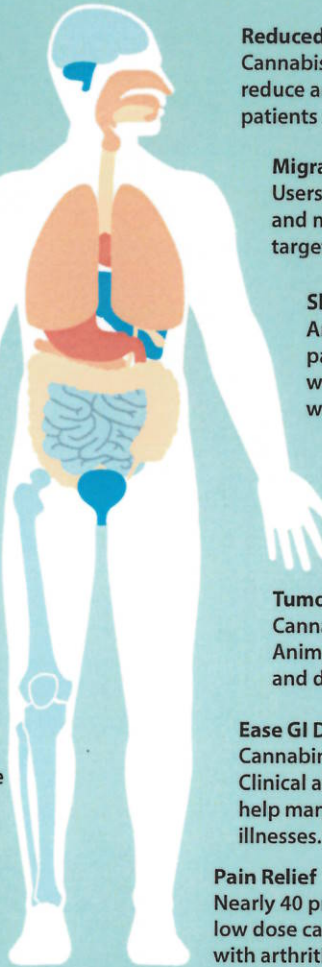
Decreased Inflammation

Cannabis has 20 times the anti-inflammatory potency of aspirin, and twice that of hydrocortisone – with minor adverse side effects when compared to mainstream medications.



Cancer Care

Therapies with cannabis are effective in managing the adverse side effects of cancer treatment, while cannabinoids affect key cell signaling pathways that affect cancer cell survival and proliferation.



Reduced PTSD Symptoms

Cannabis helps reprioritize painful memories/night terrors, reduce anxiety and fear response, and improve sleep for patients suffering from Post Traumatic Stress Disorder.

Migraine Relief

Users of cannabis show a reduced frequency of migraines, and manipulation of CB2 receptors is a potential new target for developing migraine treatments.

Sleep Aid

Anecdotal reports show that cannabis is effective in helping patient get to sleep faster, stay asleep longer, and feel well-rested without the morning grogginess associated with sleeping pills.

Stomach – Appetite Stimulant

Cannabis functions as an appetite stimulant, helping patients suffering from chemotherapy side effects or a range of illnesses affecting appetite such as anorexia or ALS.

Tumor Reduction

Cannabinoids prevent blood vessels from feeding tumors. Animal studies show that cannabinoids also slow angiogenesis and decrease metastasis in multiple tumor types.

Ease GI Disorders

Cannabinoids modulate actions of the gastrointestinal (GI) tract. Clinical and anecdotal data supports cannabinoid therapy to help manage Crohn's disease, ulcerative colitis, IBS, and other GI illnesses.

Pain Relief

Nearly 40 pre-clinical and clinical trials have shown that low dose cannabis relieves neuropathic pain. Patients with arthritis and myofascial pain often seek pain relief with cannabis.




Medical Marijuana 411



CANNABIS AS MEDICINE: THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

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|  US006630807B1 | |
| (12) United States Patent Hampson et al. | (10) Patent No.: US 6,630,507 B1 (45) Date of Patent: Oct. 7, 2003 |
| OTHER PUBLICATIONS | |
| (54) CANNABINOIDS AS ANTIOXIDANTS AND NEUROPROTECTANTS | Windholz et al., The Merck Index, Tenth Edition (1983) p. 241, abstract No. 1723.* Mechoulam et al., "A Total Synthesis of d1- Δ^8 -Tetrahydrocannabinol, the Active Constituent of Hashish ¹ ," <i>Journal of the American Chemical Society</i> , 87:14:3273-3275 (1965). Mechoulam et al., "Chemical Basis of Hashish Activity," <i>Science</i> , 18:611-612 (1970). Ottersen et al., "The Crystal and Molecular Structure of Cannabidiol," <i>Acta Chem. Scand. B</i> 31, 9:807-812 (1977). Cunha et al., "Chronic Administration of Cannabidiol to Healthy Volunteers and Epileptic Patients ¹ ," <i>Pharmacology</i> , 31:375-385 (1989). |
| (75) Inventors: Aidan J. Hampson, Irvine, CA (US); Julius Axelrod, Rockville, MD (US); Maurizio Grimaldi, Bethesda, MD (US) | |
| (73) Assignee: The United States of America as represented by the Department of Health and Human Services, Washington, DC (US) | |
| (*) Notice: Subject to any disclaimer, the term of this | |



Here's another amazing fact: Despite the fact that the US government classifies cannabis as a Schedule I drug that it defines as having "no therapeutic value," it has owned patent #6,630,507¹¹ on Cannabinoids as antioxidants and neuroprotectants since 2003. These understudied compounds are so promising that Julius Axelrod, the Nobel Prize winning biochemist who discovered dopamine pathways in the brain, is one of the patent's three signatories.

How receptors work *"The ECS is critical to human survival. At the most basic level it controls how we eat, sleep, relax, forget and protect ourselves."* - Vincenzo Di Marzo, Ph.D., Research Director of the Institute of Biomolecular Chemistry of the National Research Council in Pozzuoli, Naples, Italy¹²

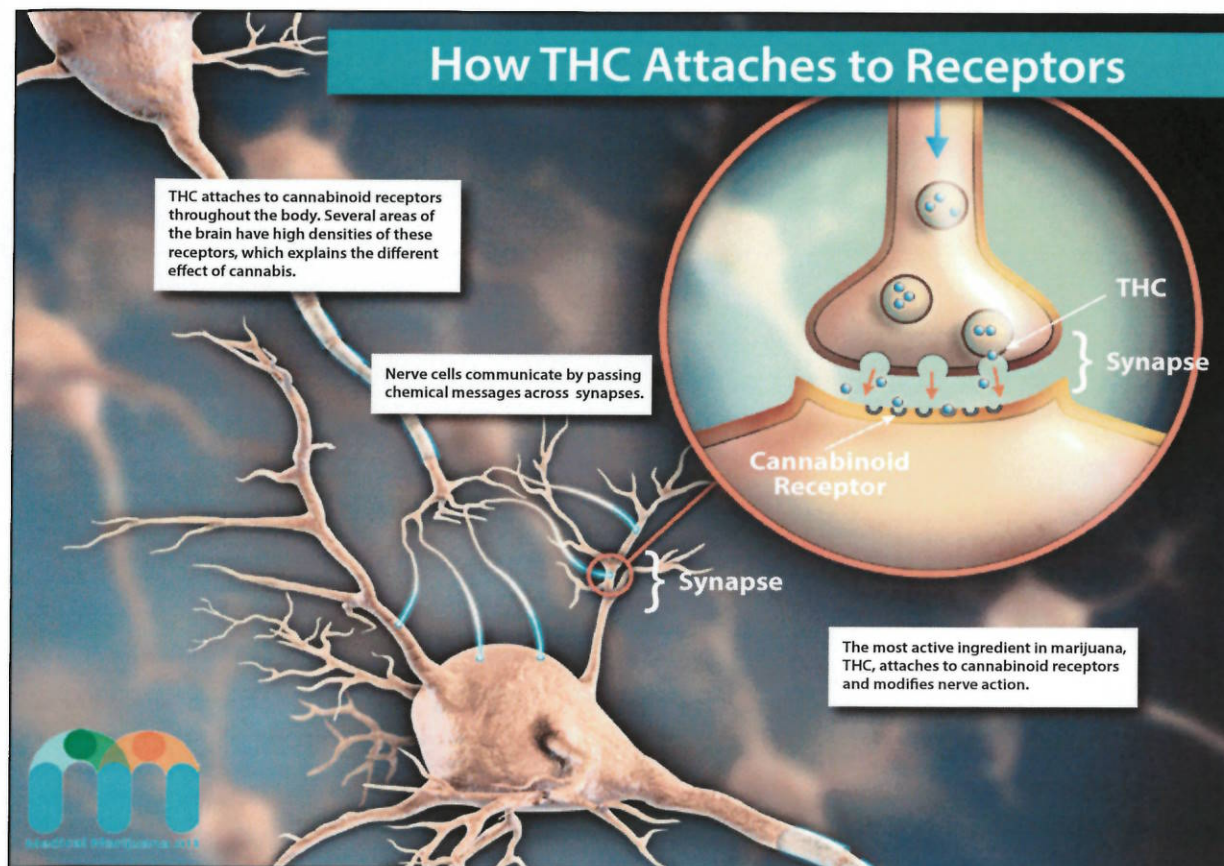


CANNABIS AS MEDICINE: THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

HOW CANNABINOIDS ATTACH TO RECEPTORS

In simple terms, cannabinoids bind with receptors the way a key fits a lock. When a cannabinoid lands on the receptor it causes a chain of chemical reactions that affect the way we feel and heal.



Cannabinoid receptors are the densest receptors in the brain, far more dense than opiate or nicotinic receptors.¹³ In the nervous system alone, cannabinoid receptors govern nerve transmission, memory, mood, emotion, pain perception, feeding, reproduction, and metabolism among others.¹⁴

Of the five cannabinoid receptors identified to date, CB1 and CB2 are the most prevalent; they differ in terms of where they are located and what they do.¹⁵



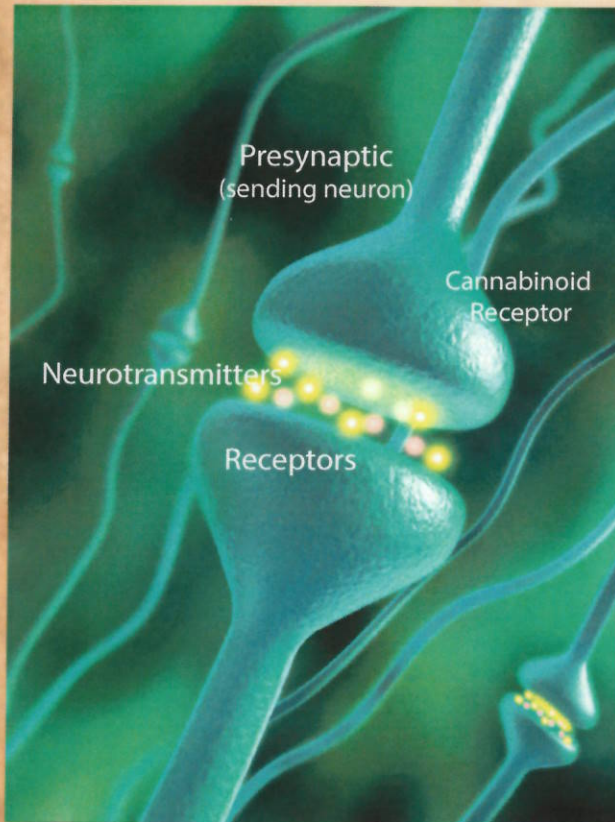
CANNABIS AS MEDICINE: THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

The Human Endocannabinoid System

The Endocannabinoid System (ECS) is a group of endogenous cannabinoid receptors located in the mammalian brain and throughout the central and peripheral nervous systems, consisting of neuromodulatory lipids and their receptors. Known as "the body's own cannabinoid system", the ECS is involved in a variety of physiological processes including appetite, pain-sensation, mood and memory.

Two primary endocannabinoid receptors have been identified: CB1 and CB2. CB1 receptors are found predominantly in the brain and nervous system, as well as in peripheral organs and tissues, and are the main molecular target of the endocannabinoid ligand (binding molecule), Anandamide, as well as its mimetic phytocannabinoid, THC. One other main endocannabinoid is 2-Arachidonoylglycerol (2-AG) which is active at both cannabinoid receptors, along with its own mimetic phytocannabinoid, CBD. CB2 receptors are found throughout the body in the immune cells.



CBD, CBN and THC fit like a **lock and key** into existing human receptors. These receptors are part of the endocannabinoid system which impact physiological processes affecting pain modulation, memory, appetite, plus anti-inflammatory effects and other immune system responses.

THC

Tetrahydrocannabinol

THC, or tetrahydrocannabinol, is the chemical responsible for most of marijuana's psychological effects. It acts much like the cannabinoid chemicals made naturally by the body. THC binds to the CB1 receptors.

CBD

Cannabidiol

Cannabidiol is one of at least 113 active cannabinoids identified in cannabis. It is a major phytocannabinoid, accounting for up to 40% of the plant's extract.

CBN

Cannabinol

CBN acts as a partial agonist at the CB1 receptors, but has a higher affinity to CB2 receptors, however, with lower affinities in comparison to THC.

Receptors are found
on all cell surfaces

CB1 receptors are responsible for marijuana's psychoactive effects. They are present in many areas of the brain and play a role in memory, mood, sleep, appetite and pain sensation.

CB2 receptors are responsible for marijuana's anti-inflammatory effects. They are found in immune cells and work to reduce inflammation. Inflammation is an immune response and is believed to be a factor in many diseases and conditions.



CANNABIS AS MEDICINE: THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

CB1 receptors are primarily activated by THC and are located in the Central Nervous System and affect brain functions that direct movement, anxiety, stress, fear, pain, appetite, reward, and motor control. When CB1 receptors are activated psychoactivity occurs.¹⁶

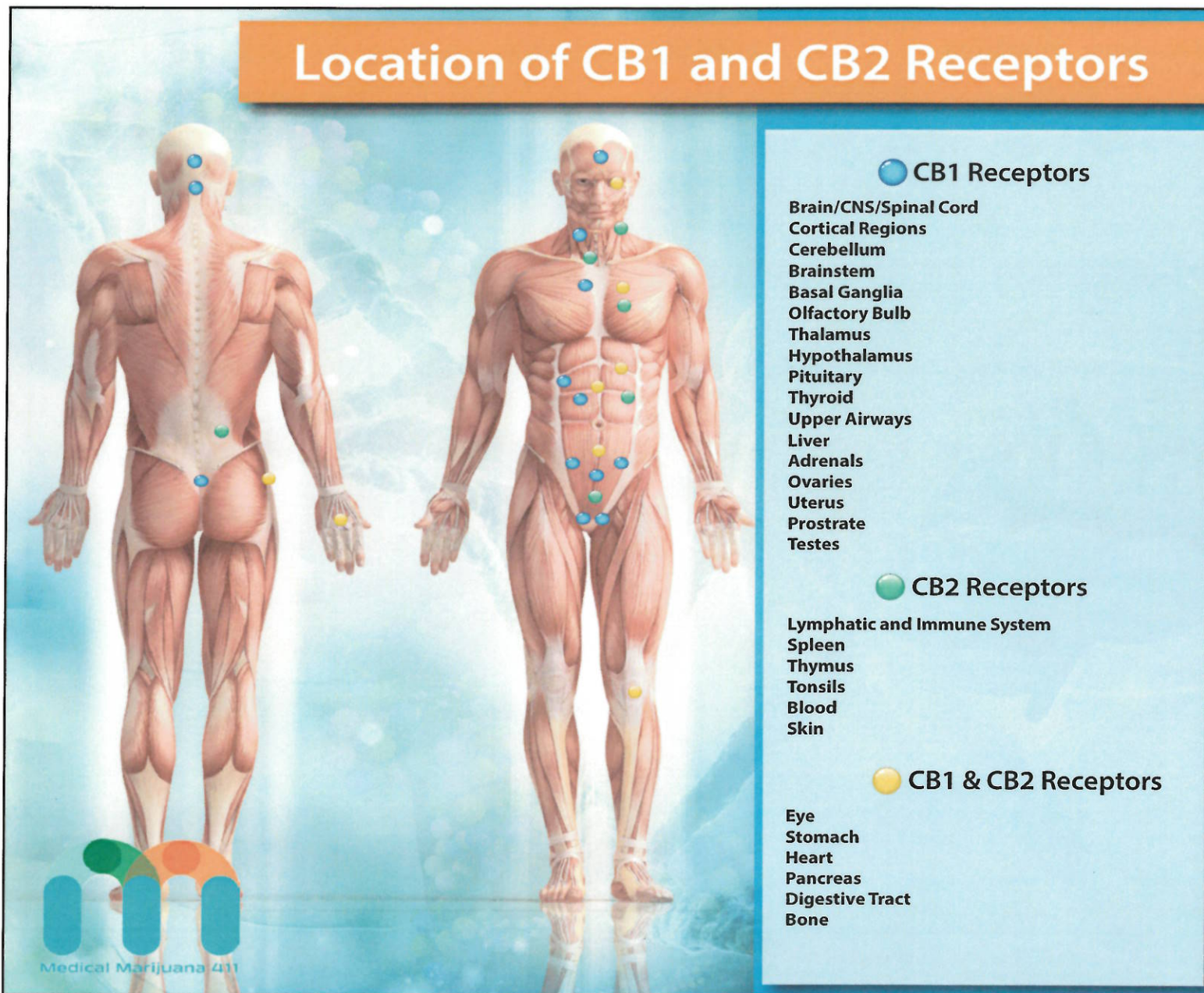
Much CB1 activity occurs in the nervous system at synapses, where nerve cells “talk” to each other. Because of their high densities in the brain, CB1 receptors are also responsible for the ways cannabis affects short term memory, cognition, mood and emotion, muscle motor function, pain perception, and nerve protection.¹⁷

CB2 receptors are primarily activated by CBD they are found in blood cells, the spleen, and in connective tissue. They play an important role in inflammation during illness or after injury. CB2 activation causes no psychoactivity.¹⁸ None.



CANNABIS AS MEDICINE: THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

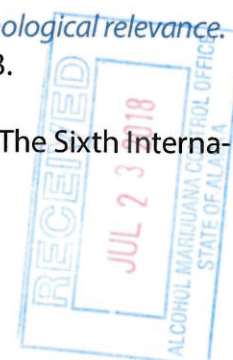


CANNABIS AS MEDICINE: THE ENDOCANNABINOID SYSTEM

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CANNABIS AS MEDICINE: THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

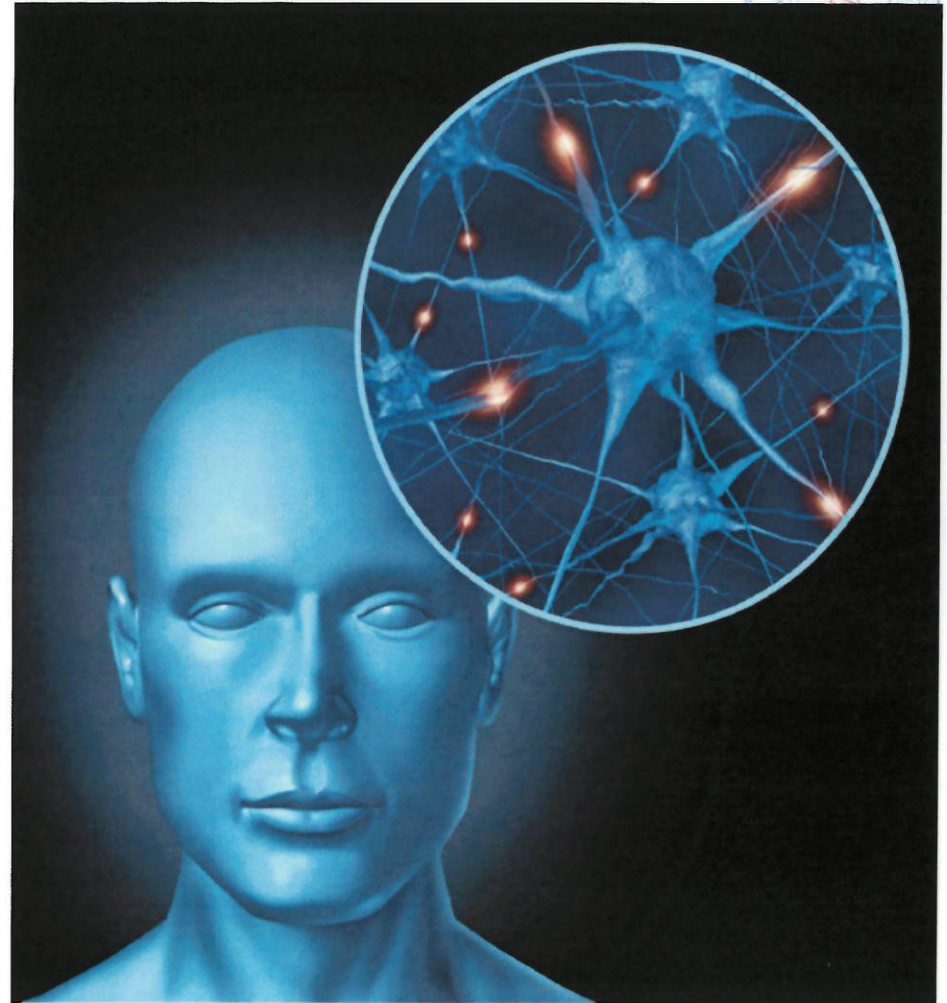
ENDOCANNABINOIDS AND HUMAN THRIVING BEHAVIOR

THE DISCOVERY OF THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

OBJECTIVE:

This module charts how the 1964 discovery of THC and CBD led to the 1988 discovery of the Endocannabinoid System (ECS), the largest receptor system and the master regulator of homeostasis in the human body.

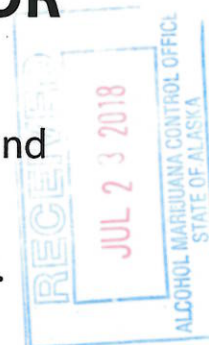


THE DISCOVERY OF THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

ENDOCANNABINOIDS AND HUMAN THRIVING BEHAVIOR

The effects of cannabinoids on thriving is an unusual topic because it doesn't fit contemporary healthcare models in which medicines are used to only treat illnesses. But the distinction is profound and worthy of your consideration. While it's too early to weave together a unified theory on how cannabinoids encourage human thriving behavior, science has identified various interesting clues.



THE DISCOVERY OF THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

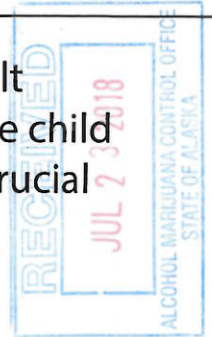
Take, for example, forgetting. While most people view forgetting as a memory lapse, Professor Mechoulam has repeatedly pointed out just how important it is for our brains to edit the torrent of sensory data that assaults us daily. If we weren't able to block out the sights, sounds, smells, and sensory input coming at us while driving, for example, we'd be paralyzed by overstimulation, unable to focus... and miserable. Forgetting is also crucial to treating illnesses like Post Traumatic Stress disorder (PTSD). Cannabis is known to be useful in helping sufferers eliminate painful memories that lodge in the minds and haunt them, often for life. In Mechoulam's view certain chemicals lock in memories and cannabinoids can help lock them out. Studies with Holocaust survivors and Vietnam War veterans indicate that cannabis effectively eradicates harrowing memories that turn sufferers into zombies. No other medicine does this.¹⁹



THE DISCOVERY OF THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

The same is true with other traumas, phobias, neuroses, and pain. Pain is one of the most difficult experiences to recall once it's over. That is evolutionarily adaptive – think about how many single child families there would be if women couldn't forget the agony of childbirth. Cannabinoids play a crucial role in helping human beings forget pain and move on.



"My brain's telling me to freak out because I'm missing my limbs, but when I'm on cannabis, it tells me to calm down, you're O.K., you're fine," Martinez says. Not only does it soothe the phantom pain of his missing limbs, but it also eases a racing and apprehensive mind riven with PTSD. "It relaxes me and helps me sleep at night," he says.

- Jose Martinez - U.S. Army infantryman in Afghanistan, he lost both legs, his right arm and his left index finger to a land mine



Jose Martinez, US Army infantryman in Afghanistan, lost both legs, his right arm and left index finger after stepping on a land mine. Suffering from PTSD, doctors prescribed him pharmaceutical pills to treat the phantom pain of missing limbs, night terrors and anxiety. "I started taking so many prescription pills I was numb to the world." Over time, he replaced the pills - over 150 a day - with marijuana. Now, Martinez fights for the ability of those suffering from PTSD to be able to use marijuana.



THE DISCOVERY OF THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

REFERENCE LIST

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CANNABIS AS MEDICINE: THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

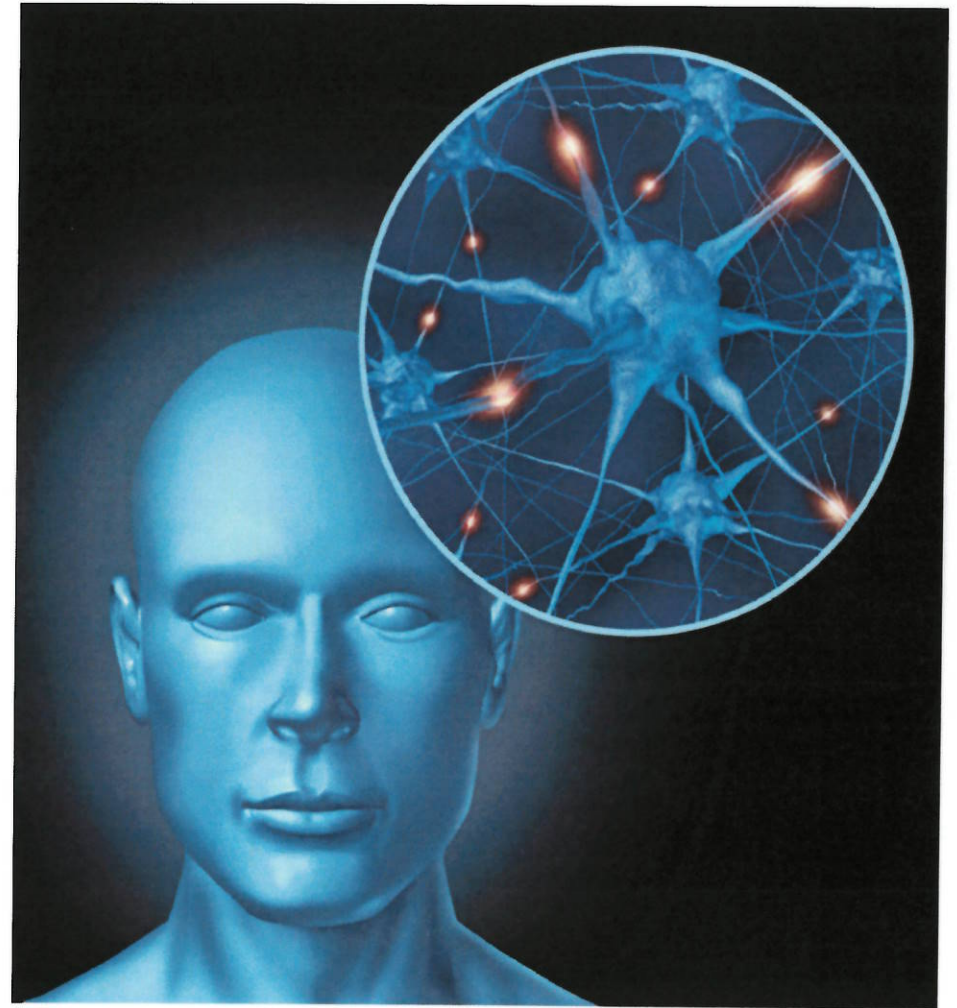
WHY THE ENDOCANNABINOID SYSTEM ISN'T TAUGHT IN MEDICAL SCHOOLS

THE DISCOVERY OF THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

OBJECTIVE:

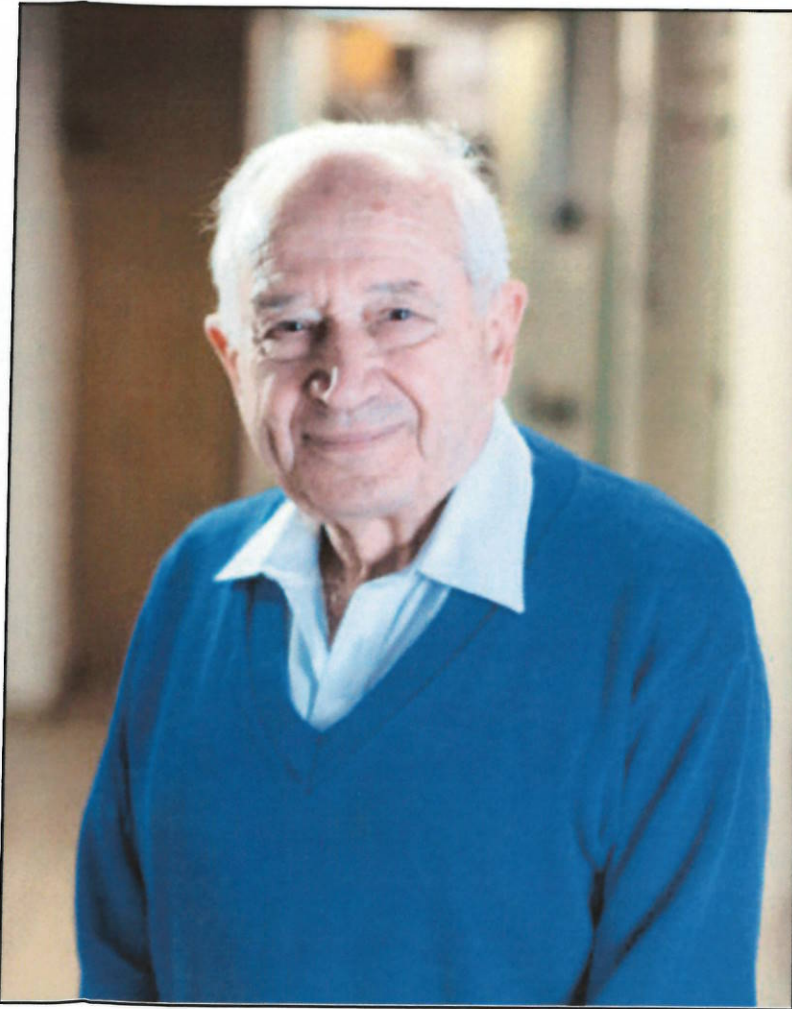
This module charts how the 1964 discovery of THC and CBD led to the 1988 discovery of the Endocannabinoid System (ECS), the largest receptor system and the master regulator of homeostasis in the human body.



THE DISCOVERY OF THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

WHY THE ENDOCANNABINOID SYSTEM ISN'T TAUGHT IN MEDICAL SCHOOLS



Dr. Raphael Mechoulam, Professor of Medical Chemistry at Hebrew University in Israel.

Cannabis' Schedule I status is the reason that no research institution has ever administered anandamide to a human being. It's also one of the main reasons the endocannabinoid system is not taught in medical schools. In part, this is due to the medical profession's bias against cannabis and botanical medicines, but practically speaking, it doesn't make much sense to spend time educating students about a bodily system that can only be treated by illegal compounds.

In 1902 Thomas Edison said, "There were never so many able, active minds at work on the problems of disease as now, and all their discoveries are tending toward the simple truth that you can't improve on nature."

Cannabinoid research has proven this statement true to this day.



THE DISCOVERY OF THE ENDOCANNABINOID SYSTEM

The Largest Receptor System in the Human Body

How Drugs Are Classified In The U.S.

| Schedule | Description | Examples | |
|------------|---|--|--|
| Schedule 1 | Drugs with no currently accepted medical use and a high potential for abuse. They are the most dangerous drugs of all the drug schedules with potentially severe psychological or physical dependence. | <ul style="list-style-type: none"> - Heroin - Lysergic acid diethylamide (LSD) - Marijuana (Cannabis) | <ul style="list-style-type: none"> - Methylenedioxymethamphetamine (Ecstasy) - Methaqualone - Peyote |
| Schedule 2 | Drugs with a high potential for abuse, with use potentially leading to severe psychological or physical dependence. These drugs are also considered dangerous. | <ul style="list-style-type: none"> - Combination products with less than 15mg of hydrocodone per dosage unit (Vicodin) - Cocaine - Methamphetamine - Methadone | <ul style="list-style-type: none"> - Meperidine (Demerol) - Oxycodone (OxyContin) - Fentanyl - Dexedrine - Adderall - Hydromorphone (Dilaudid) |
| Schedule 3 | Drugs with a moderate to low potential for physical and psychological dependence. Schedule 3 drugs abuse potential is less than Schedule 1 and Schedule 2 but more than Schedule 4. | <ul style="list-style-type: none"> - Combination products with less than 90mg of codeine per dosage unit (Tylenol and Codeine) - Ketamine - Anabolic Steroids - Testosterone | |
| Schedule 4 | Drugs with a low potential for abuse and low risk of dependence. | <ul style="list-style-type: none"> - Xanax - Soma - Darvon - Darvocet - Valium | <ul style="list-style-type: none"> - Ativan - Taiwin - Ambien - Tramadol |
| Schedule 5 | Drugs with a lower potential for abuse than Schedule 4 and consist of preparations containing limited quantities of certain narcotics. Schedule 5 drugs are generally used for antidiarrheal, antitussive and analgesic purposes. | <ul style="list-style-type: none"> - Cough preparations with less than 200mg of Codeine per 100ml (Robitussin AC) - Lomotil | <ul style="list-style-type: none"> - Lyrica - Parepectolin - Motofen |

SOURCE: Drug Enforcement Administration





EFFECTS OF CONSUMPTION OF MARIJUANA AND MARIJUANA PRODUCTS

Short and Long Term Positive and Negative Effects of Cannabinoids

EFFECTS OF CONSUMPTION OF MARIJUANA AND MARIJUANA PRODUCTS

Short and Long Term Positive and Negative Effects of Cannabinoids

OBJECTIVE:

In this module you will learn about how excessive marijuana use can lead to the development of problem use, known as a marijuana use disorder. Marijuana use disorders are often associated with *dependence*—in which a person feels withdrawal symptoms when not taking the drug. People who use marijuana frequently often report irritability, mood and sleep difficulties, decreased appetite, cravings, restlessness, and/or various forms of physical discomfort. This module covers the signs of abuse and misuse.



EFFECTS OF CONSUMPTION OF MARIJUANA AND MARIJUANA PRODUCTS

Short and Long Term Positive and Negative Effects of Cannabinoids

EFFECTS OF CONSUMPTION OF MARIJUANA AND MARIJUANA PRODUCTS

The short-term and long-term effects of marijuana consumption can fluctuate from person to person. Certain variables impact a person's reaction to cannabis, such as how much was consumed and how long that person has been using. Also, age can impact the body's reaction to marijuana, as well as how long it's been since the user has last consumed.

After marijuana is inhaled or ingested, its tetrahydrocannabinol (THC) enters the bloodstream and targets the brain and most organs, as well as the nervous system and immune system. However, if consumed orally (by food or beverage), it may take longer for the body to absorb the THC. It can take up to an hour to experience any effects.¹



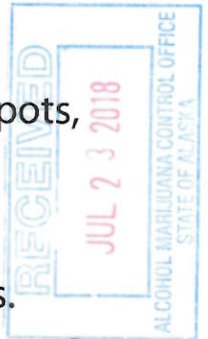
EFFECTS OF CONSUMPTION OF MARIJUANA AND MARIJUANA PRODUCTS

Short and Long Term Positive and Negative Effects of Cannabinoids

In most cases, patients experience feelings of satisfaction and contentment, which occur after the plant's THC attaches to the body's cannabinoid receptors. Ultimately, this stimulates pleasure hotspots, creating a euphoric sensation.²

Many users also experience heightened sensory perception, or the enhancement of primary senses. Colors tend to appear more vibrant, noise and odor are magnified and taste buds grow more sensitive.³ Other mood changes can occur, such as impulsiveness, loss of depression and decreased testosterone (and subsequently mood) levels in men.

Some receptors in the brain can be overstimulated by marijuana, resulting in an impairment of body movement or the ability to think and problem-solve. Also, memory loss can be attributed to marijuana, if the plant is consumed at high dosages.⁴ Anxiety and paranoia can occur, especially if a person is not used to cannabis.



EFFECTS OF CONSUMPTION OF MARIJUANA AND MARIJUANA PRODUCTS

Short and Long Term Positive and Negative Effects of Cannabinoids

HEALTH EFFECTS OF MARIJUANA ABUSE

Like other substances, marijuana has the potential to be abused. This may produce more long-term effects, such as high blood pressure and other cardiovascular complications. Marijuana may reduce blood flow to the brain, which causes cognitive impairment. Reproductive dysfunction in both men and women is uncommon among marijuana users, but remains a potential risk factor.⁵



Patients should regulate their usage or utilize a mix of consumption methods to avoid irritating the respiratory system. The physical act of smoking can increase a user's chances of obtaining an acute chest illness, such as bronchitis or pneumonia. It can also produce some less severe side effects, such as coughing fits or phlegm production. However, we should note marijuana does not create a higher risk of lung cancer for users, nor does it lead to other significant abnormalities in the lungs.⁶

Users may also experience an increased heart rate, which can last for up to 3 hours after consumption⁷ and may lead to rapid breathing. Nausea and headaches can be other short-term physical effects of cannabis if consumed exceedingly.



EFFECTS OF CONSUMPTION OF MARIJUANA AND MARIJUANA PRODUCTS

Short and Long Term Positive and Negative Effects of Cannabinoids



CANNABINOID HYPEREMESIS SYNDROME

One potential problem that marijuana smokers can run into is Cannabinoid Hyperemesis Syndrome (CHS). This recently discovered condition is classified by rather specific symptoms which include severe nausea, abdominal pain and vomiting. CHS is most common in individuals with long history of marijuana use.⁸ What makes this condition so unique is that most patients find relief through showering or bathing. Many patients find that their symptoms subside after only a few minutes of exposure to hot water⁹ or after discontinuing marijuana use. There is still a cloud of uncertainty that surround CHS, so as more states begin to legalize marijuana, we will begin to see more research invested in the nature of this condition.



EFFECTS OF CONSUMPTION OF MARIJUANA AND MARIJUANA PRODUCTS

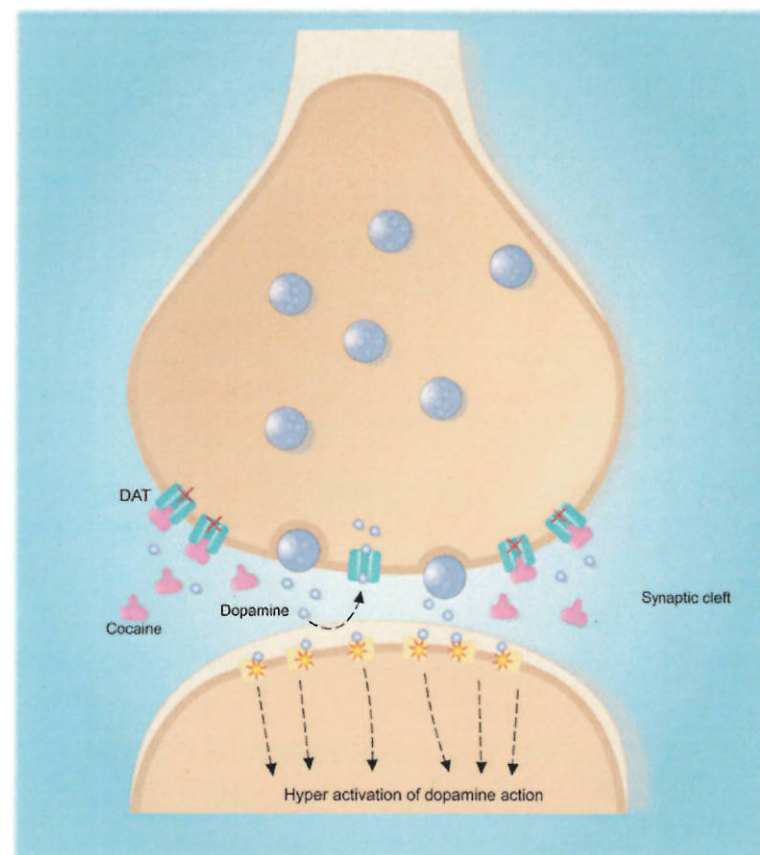
Short and Long Term Positive and Negative Effects of Cannabinoids

DOWN REGULATION

As with all medication, patients tend to develop a tolerance or dependency to marijuana after frequent use. However, unlike opiates and other prescriptions, taking increasingly higher doses of cannabis is not dangerous, thanks to our endocannabinoid system (ECS). Receptors in the ECS are able to create a balance within the body by limiting the amount of THC it can withstand.

Heroin, cocaine, amphetamines, alcohol and other drugs increase levels of dopamine in the body, which titillate the brain's reward receptors. To maintain the body's feeling of homeostasis, the brain ramps up it's production of dopamine, which consequently causes drug users to take more. If they aren't using, the body immediately feels the withdrawal symptoms. Drug abusers, especially those who use Heroin or Oxycontin, develop a high tolerance to their respective substances, which is often quite dangerous as they require more and more to feel the same effects as before.

- DAT (dopamine re-uptake transporter)
- D2 receptor
- Cocaine
- Dopamine



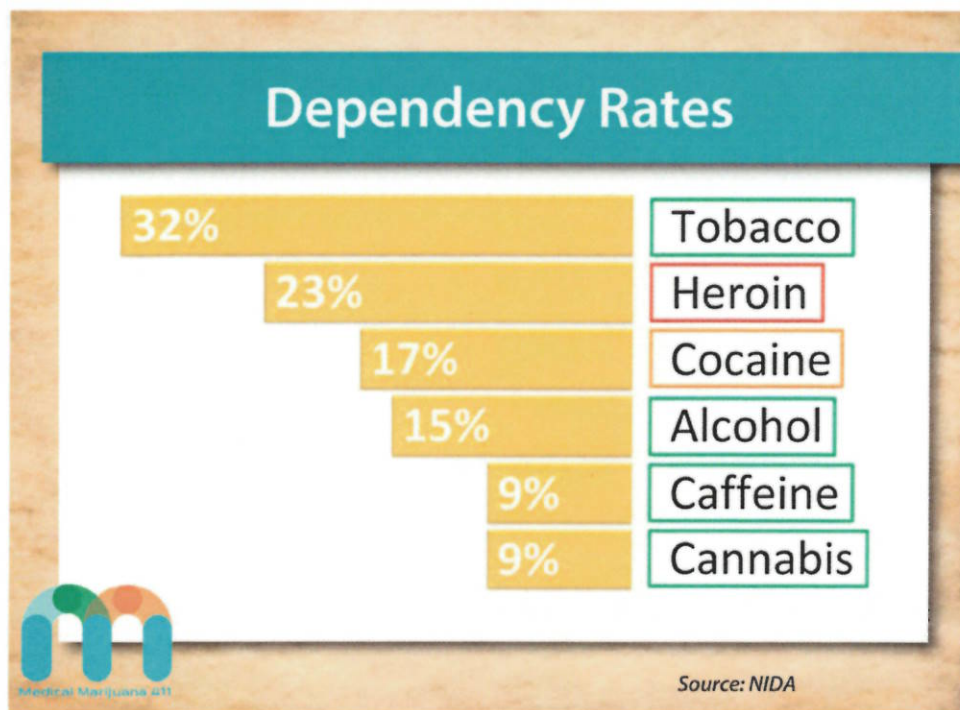
EFFECTS OF CONSUMPTION OF MARIJUANA AND MARIJUANA PRODUCTS

Short and Long Term Positive and Negative Effects of Cannabinoids

Medical professionals know a lot about opiate addiction because the dopamine neurotransmitter system was discovered in the 1970s. But cannabinoid receptors weren't understood until the 1990s, and scientists simply assumed that cannabis worked in the same way.

DEPENDENCY

Patients with tolerance or a dependency to marijuana require higher doses, which is not financially or medically efficient. The good news is that it's easy to rewind tolerance and "resensitize" the ECS by simply stopping use for as little as three days.



When patients end their "drug holiday," they can begin medicating again with a very low dose and escalate until effects are felt.¹⁰

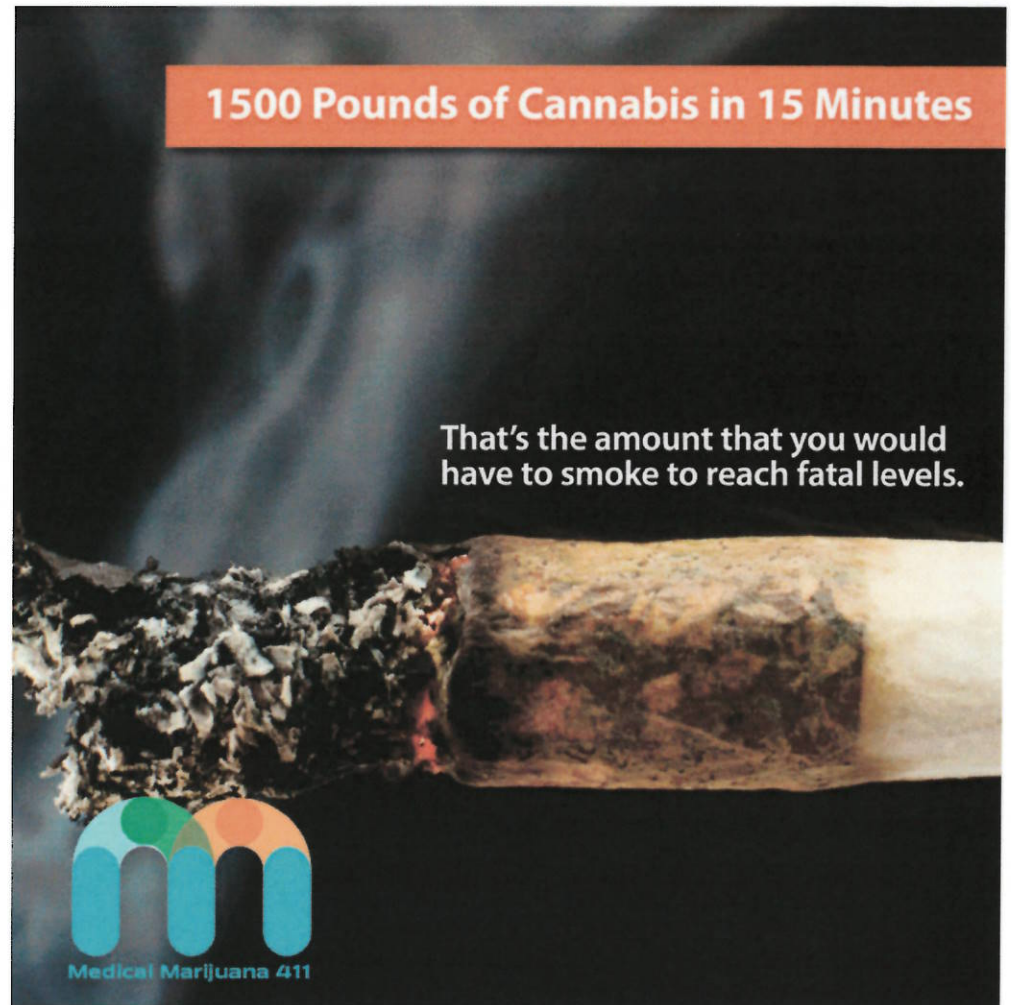
Yet, marijuana dependency rates remain among the lowest of any substance, with only 9% of users developing a dependence. This is in comparison to 32% of tobacco users, 17% of cocaine users and 15% of alcohol users.¹¹ Mild levels of irritability, sleep trouble and anxiety can occur if a person stops using.



EFFECTS OF CONSUMPTION OF MARIJUANA AND MARIJUANA PRODUCTS

Short and Long Term Positive and Negative Effects of Cannabinoids

Marijuana is also considered a safer alternative to other substances, as the Drug Enforcement Agency (DEA) reveals that no death or overdose has been reported.¹² In fact, DEA Judge Francis Young found a user would have to consume 20,000 to 40,000 times the amount of what's contained in one marijuana cigarette to reach a lethal state of intoxication.¹³ That equates to 1500 pounds in 15 minutes.



CANNABIS EFFECTS AND WARNINGS - IMPORTANT INFORMATION/WHAT TO AVOID

- Marijuana may cause dizziness, drowsiness and/or impaired judgement, so it's best to avoid engaging in potentially hazardous activity. This includes, but is not limited to, driving and operating other heavy machinery.
- Consuming alcohol after marijuana may further enhance any dizziness, drowsiness or impaired judgement. It's best to reduce or avoid alcohol intake after the use of cannabis, especially ingestible products.
- Conversely, cannabis and other cannabis-infused products can enhance dizziness, drowsiness and/or impaired judgement from other drug substances, including antidepressants, alcohol, antihistamines, sedatives, pain relievers, anxiety medicines, seizure medicines and muscle relaxants.



CANNABIS: WHAT TO AVOID

Cannabis Effects and Warnings Important Information/What to Avoid

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EFFECTS OF CONSUMPTION OF MARIJUANA AND MARIJUANA PRODUCTS

Short and Long Term Positive and Negative Effects of Cannabinoids

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SIGNS OF ABUSE AND MISUSE

Symptoms of Overuse

SIGNS OF ABUSE AND MISUSE

Symptoms of Overuse

OBJECTIVE:

In this module you will learn about how excessive marijuana use can lead to the development of problem use, known as a marijuana use disorder. Marijuana use disorders are often associated with *dependence*—in which a person feels withdrawal symptoms when not taking the drug. People who use marijuana frequently often report irritability, mood and sleep difficulties, decreased appetite, cravings, restlessness, and/or various forms of physical discomfort. This module covers the signs of abuse and misuse.





IS MARIJUANA ADDICTIVE?

Although dependency on marijuana is relatively low among users (only 9% report to having a dependency), it is still a potential threat. Marijuana Use Disorder¹ is a little more common, with 30% of users experiencing withdrawal-like symptoms when not consuming. Some of these symptoms include irritability, sleep and mood difficulties, decreased appetite, cravings, restlessness, and/or various forms of physical discomfort. These symptoms are caused by the brain's reduction in producing its own endocannabinoid neurotransmitters, which ultimately decrease the receptors' levels of sensitivity. This disorder is much more likely to appear in users who started using cannabis before they turned 18. This group of people are 4-7 times more likely to develop a dependency of marijuana.

SYMPTOMS OF OVERUSE, ABUSE AND ADDICTION²

- Regular use of marijuana- daily or several times a day
- Developing an urgency to use marijuana; not being able to focus until after consumption
- Using more and more marijuana to feel the same effects as before
- Consuming larger amounts of marijuana than expected
- Experiencing withdrawal symptoms when not using
- Missing or refraining from usual social and recreational activities
- Interference with work, school and other responsibilities
- Maintaining a steady supply of marijuana is a priority; especially when exhibiting patterns of hasty behavior to obtain, i.e. lying, stealing, using money you don't have, etc.

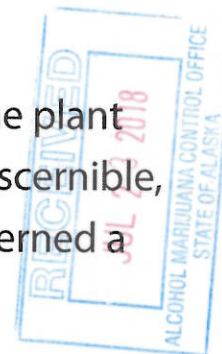


SIGNS OF ABUSE AND MISUSE

Symptoms of Overuse

RECOGNIZING MARIJUANA ABUSE IN FAMILY

When someone is using marijuana, the signs aren't always recognizable because many times, the plant leaves few effects on our behavioral and cognitive ability. The abuse of marijuana isn't always discernible, either, especially with teenagers who already exhibit signs of moodiness or angst. If you're concerned a family member might be abusing, here are some possible indicators³:



- Not participating in usual social or recreational activities or not fulfilling/lacking in responsibilities, such as school work or work performance
- Having a lack of focus or motivation, particularly with usual responsibilities
- Lying and/or being secretive with friends and family, especially with belongings, i.e. not permitting a parent to enter the bedroom
- Frequent requests for money and/or noticing that money and other valuables are missing or stolen
- Neglecting appearance/lost interest in grooming oneself



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STATE OF ALASKA

THE RISKS AND WARNING SIGNS OF OVERUSE AND ABUSE

How to Identify a Person Impaired by Marijuana

How to identify a person impaired by marijuana includes:

- Not participating in usual social or recreational activities or not fulfilling/lacking in responsibilities, such as school work or work performance
- Having a lack of focus or motivation, particularly with usual responsibilities
- Lying and/or being secretive with friends and family, especially with belongings, i.e. not permitting a parent to enter the bedroom
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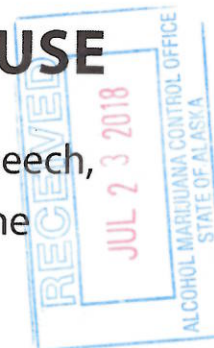
Source: Help Guide, 2017

SIGNS OF ABUSE AND MISUSE

Symptoms of Overuse

THE RISKS AND WARNING SIGNS OF OVERUSE AND ABUSE

If your family member is under the influence, they could have a hard time maintaining proper speech, balance and coordination, and may also exhibit some drastic behavioral changes, such as extreme drowsiness (i.e. falling asleep at the dinner table).



SIGNS OF ABUSE AND MISUSE

Symptoms of Overuse

REFERENCE LIST

1. Alcohol and Drug Abuse Institute. '[Cannabis Use Disorder](#)'
2. Mayo Clinic. '[Drug addiction \(substance use disorder\)](#)' (2017)
3. HelpGuide. '[Drug Abuse and Addiction](#)' (2017)





SIGNS OF ABUSE AND MISUSE

How To Identify A Person Impaired By The Consumption Of Marijuana

SIGNS OF ABUSE AND MISUSE

How To Identify A Person Impaired By The Consumption Of Marijuana

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SIGNS OF ABUSE AND MISUSE

How To Identify A Person Impaired By The Consumption Of Marijuana

HOW TO IDENTIFY A PERSON IMPAIRED BY THE CONSUMPTION OF MARIJUANA

The THC potency of a marijuana plant can impact a person's reaction to the medication, as well as how much they consume. It's important to note that not every patient will exhibit signs of use, as marijuana consumption doesn't always leave a strong impact on behavioral or cognitive ability.¹

However, it is common for users to experience minor side effects, such as redness of eyes (from expanded blood vessels), dryness of the throat or mouth and/or increased appetite levels.² This is caused by the plant's ability to heighten sensory perception.



SIGNS OF ABUSE AND MISUSE

How To Identify A Person Impaired By The Consumption Of Marijuana

HOW TO IDENTIFY A PERSON IMPAIRED BY THE CONSUMPTION OF MARIJUANA



If a person is impaired by marijuana, they may also have slower reaction times, in terms of muscle coordination or sociability. Cannabis tends to produce a calming effect on our primary receptors, causing them to “relax” or loosen tension. For that reason, it’s normal for a user to fall into a lethargic or sluggish state, or lose the ability to maintain balance or coordination.³

But, in some instances, marijuana can cause increased levels of anxiety or panic, if a person has consumed a higher than normal dosage. However, this is most common for new users or for those who haven’t used for a long period of time.⁴ As with any medication, our bodies build a tolerance to cannabis after regular use, so patients who are new to the plant may appear restless or even paranoid. Being in an unfamiliar or unsettling location can also induce fear or panic in a user.

You may also notice a change in a person’s ability to interact with others. Patients may seem spacey or confused, especially in conversation with others. Inappropriate or unrelenting laughter or unusual chattiness can be a sign that a person is using cannabis. On the flip side to this, it’s also common for people to avoid others or refrain from conversation.⁵ This can be related back to marijuana’s potential to produce slower reaction times in cognitive ability.



SIGNS OF ABUSE AND MISUSE

How To Identify A Person Impaired By The Consumption Of Marijuana

HOW TO IDENTIFY A PERSON IMPAIRED BY THE CONSUMPTION OF MARIJUANA

One obvious sign of impairment is if a person has a skunk-like odor. Cannabis has a very distinct smell that tends to carry and linger on clothing, hair and furniture. If a person were using in a bedroom or car, you'd be able to tell by the smell of the area.

Changes in actions can also be quite obvious to an outsider. It's likely for a user to experience a lack of motivation or focus⁶, as well as ongoing confusion. This may prompt them to refrain from their usual activities or other social encounters. Be wary of a person who is isolating themselves or who's becoming secretive of their behavior.



SIGNS OF ABUSE AND MISUSE

How To Identify A Person Impaired By The Consumption Of Marijuana

REFERENCE LIST

1. Cox, Lauren. '[Marijuana: Effects of Weed on Brain and Body](#)' (2017)
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STATE OF ALASKA

How to Determine Valid Identification

HOW TO DETERMINE VALID IDENTIFICATION

What You Need to Know

Beginning in June 2014, all new Alaska driver licenses and identification cards will be issued in a new format and mailed to you from a secure facility. Upon issuance of a new card, or when your current card expires, you will receive a black and white temporary license or identification card that is valid for 60 days. The new card will be mailed to you and should arrive in approximately two weeks. The new card design and issuance process is part of a nationwide effort to make it harder for criminals to obtain your identity. The newly designed card will include numerous security features to protect your identity and reduce fraud. A few of the key features you will notice on your new license are listed here.



NOTE: Alaska driver licenses have new features which include a new design of Denali, fine line patterns like those on dollar bills, and a laminate with a hologram of snowflakes and the state seal.

For additional information visit the State of Alaska FAQ page

A. Sec 17.38.050 False identification, penalty

- i. A person who is under 21 years of age may not present or offer to a marijuana establishment or the marijuana establishment's agent or employee any written or oral evidence of age that is false, fraudulent, or not actually the person's own, for purpose of
 1. Purchasing, attempting to purchase, or otherwise procuring or attempting to procure marijuana or marijuana products
 2. Gaining access to a marijuana establishment
- ii. A person who violates this section is guilty of a violation punishable by a fine of up to \$400



HOW TO DETERMINE VALID IDENTIFICATION

CARD FRONT

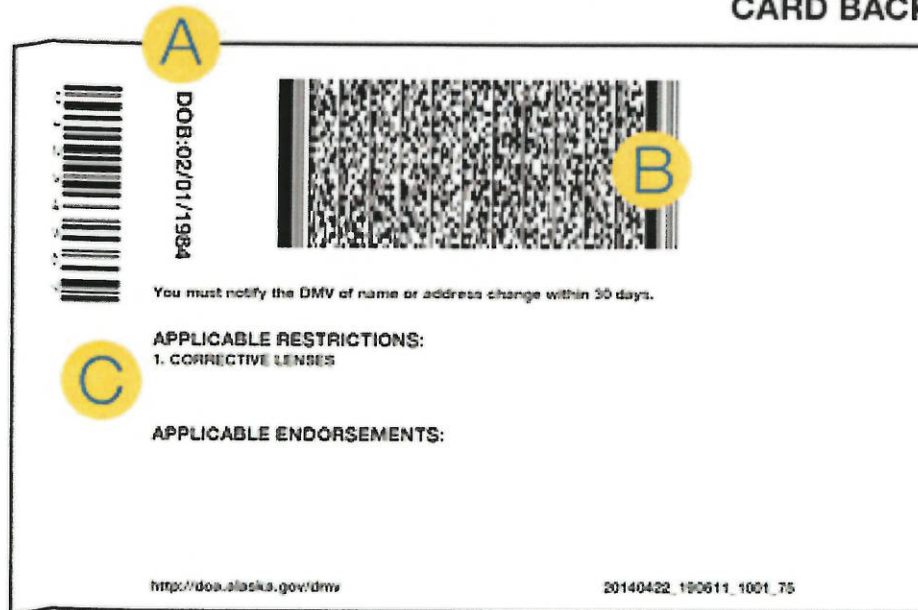


CARD FRONT

- 1 Primary Photo
- 2 Card Type and DL/ID Number
- 3 Cardholder Name and Address
- 4 Cardholder Information
- 5 Fine Line Pattern
- 6 Ghost Image
- 7 Clear Window in Shape of State
- 8 Optional Donor and Veteran Designations



CARD BACK



CARD BACK

- A Cardholder Date of Birth
- B 2D Barcode
- C Cardholder Restrictions and Endorsements



SIGNS OF ABUSE AND MISUSE

*How to Intervene to Prevent Unlawful
Marijuana Consumption*



SIGNS OF ABUSE AND MISUSE

How to Intervene to Prevent Unlawful Marijuana Consumption

OBJECTIVE:

In this module you will learn about how excessive marijuana use can lead to the development of problem use, known as a marijuana use disorder. Marijuana use disorders are often associated with *dependence*—in which a person feels withdrawal symptoms when not taking the drug. People who use marijuana frequently often report irritability, mood and sleep difficulties, decreased appetite, cravings, restlessness, and/or various forms of physical discomfort. This module covers the signs of abuse and misuse.



ALCOHOL MARIJUANA CONTROL OFFICE
STATE OF ALASKA

SIGNS OF ABUSE AND MISUSE

How to Intervene to Prevent Unlawful Marijuana Consumption

RECREATIONAL USE OF CANNABIS

As of March 2018, the recreational use of marijuana is permitted by 8 states, as well as the District of Columbia. These states include: Alaska, California, Colorado, Maine, Massachusetts, Nevada, Oregon and Washington. Individuals must be 21 or older to purchase cannabis in legal states.

It's important to note that under the Controlled Substances Act (CSA), marijuana remains a Schedule 1 drug to the federal government¹, with no "accepted medical use" and a "potential for high abuse". Under this act, the possession of marijuana and paraphernalia is illegal, and cultivating or distributing the plant is considered a felony. (Cultivating 100 or more plants can even result in a minimum sentence of 5 years.) But, although the CSA permits the prosecution of marijuana offenders, even in legalized recreational states, it's unlikely the federal government will go after individuals who comply with state-mandated regulations. This often blurs lines for not only consumers in recreational states, but also federal prosecutors so the Department of Justice issued guidance to the latter to focus on the following specific priorities²:



SIGNS OF ABUSE AND MISUSE

How to Intervene to Prevent Unlawful Marijuana Consumption

RECREATIONAL USE OF CANNABIS

- Preventing distribution to minors
- Preventing revenues from sale of marijuana towards criminal activity, including enterprises, gangs or cartels
- Preventing the diversion of marijuana from states where it is legal under to state law in some form to other states
- Preventing state-authorized marijuana activity from being used as a cover or a pretext to traffic other illegal drugs or other illegal activity
- Preventing violence or the use of firearms in cultivation and distribution of marijuana
- Preventing drugged driving and the exacerbation of other adverse public health consequences associated with marijuana use
- Preventing the growing of marijuana on public lands and the attendant public safety and environment dangers posed by marijuana production on public lands
- Preventing marijuana possession or use on federal property



SIGNS OF ABUSE AND MISUSE

How to Intervene to Prevent Unlawful Marijuana Consumption

CONTROLLED SUBSTANCES ACT

Controlled Substance Act (CSA)

These guidelines include:

- Preventing distribution to minors
- Preventing revenues from sale of marijuana towards criminal activity, including enterprises, gangs or cartels
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- Preventing violence or the use of firearms in cultivation and distribution of marijuana
- Preventing drugged driving and the exacerbation of other adverse public health consequences associated with marijuana use
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- Preventing marijuana possession or use on federal property



Source: Americans For Safe Access

Some recreational states permit out-of-state visitors to purchase cannabis. There are specific city and county laws in place to ordain how tourists can possess and consume marijuana.



SIGNS OF ABUSE AND MISUSE

How to Intervene to Prevent Unlawful Marijuana Consumption

REFERENCE LIST

1. Lopez, German. '[Marijuana is illegal under federal law even in states that legalize it](#)' (2018)
2. Americans for Safe Access. '[Federal Marijuana Law](#)'





SIGNS OF ABUSE AND MISUSE

*How to Intervene to Prevent Unlawful
Marijuana Consumption*



SIGNS OF ABUSE AND MISUSE

How to Intervene to Prevent Unlawful Marijuana Consumption

OBJECTIVE:

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SIGNS OF ABUSE AND MISUSE

How to Intervene to Prevent Unlawful Marijuana Consumption

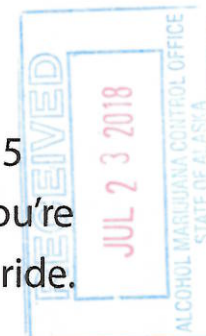
MARIJUANA AND DRIVING

It's illegal in all states for individuals to drive while impaired by cannabis. State-to-state regulation on the amount of cannabis that can be consumed before reaching an impairing condition varies. For instance, it's illegal to have 5 or more ng/mL of THC in your blood while operating a vehicle in Colorado and Washington. (However, it's illegal for anyone under 21 to have any amount of THC in their blood while on the road.) Alaska, on the other hand, has a Zero Tolerance policy, which makes it illegal to operate a vehicle with any amount of THC in the body.¹



Similar to a drunk driving test, blood samples are taken at either a police station or a nearby medical facility. Certain variables, such as gender and body size, can affect how long THC remains in the blood. However, as a rule of thumb, it's recommended to wait 4 hours for THC levels to drop beneath 5 ng/mL. Edible products can take even longer to exit the system, so it's good to wait at least 6 hours after ingesting THC.²

Keep in mind that a person can consume beneath the 5 ng/mL limit and still feel impaired. If you're unsure if you're impaired, avoid the roads and call a taxi or friend for a ride.



SIGNS OF ABUSE AND MISUSE

How to Intervene to Prevent Unlawful Marijuana Consumption

SAFE STORAGE

It's crucial to safely store your marijuana and marijuana products, especially if you have children or pets. This will prevent the unsolicited use of these products, which can lead to illness or accidental poisoning in animals and small children. It's easy for both parties to mistake edible products as regular candies, cookies and other treats, so those especially need to be hidden well. All cannabis products should be left in their original packaging to indicate they contain THC. Store these products in a child-restraint container and keep them in a locked closet or cabinet when not in use.

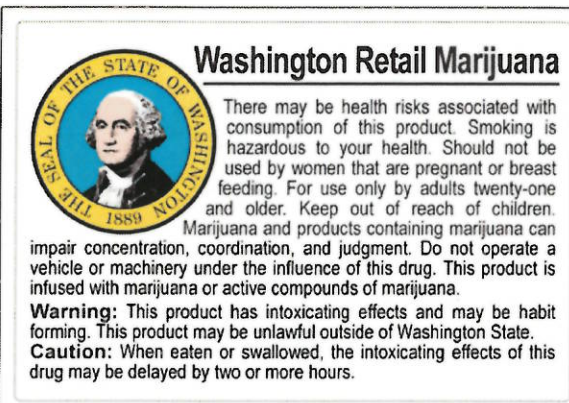
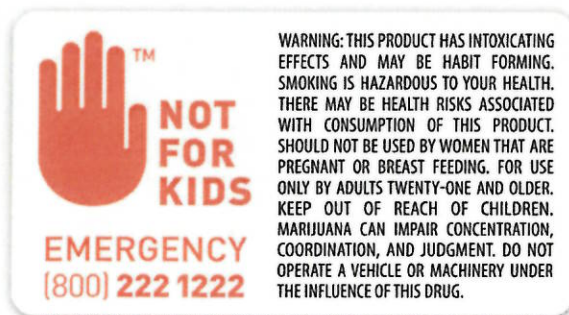


SIGNS OF ABUSE AND MISUSE

How to Intervene to Prevent Unlawful Marijuana Consumption

SAFE PACKAGING

Each state has their own requirements for the packaging and handling of marijuana products. These laws can be fairly strict and they are frequently updated to further protect the safety of consumers. To prevent a child or animal from interfering, it's mandatory for all products to be sold in a tamper-proof container.³ Edible products need to specify they contain marijuana and that they should be kept out of children's reach. Also, edible packaging must indicate the amount of THC the product contains.



SIGNS OF ABUSE AND MISUSE

How to Intervene to Prevent Unlawful Marijuana Consumption

REFERENCE LIST

1. Governors Highway Safety Association. '[Drug Impaired Driving](#)'
2. Leaf Science. '[Marijuana and Driving: What You Should Know](#)' (2017)
3. Leafly Staff. '[A State-by-State Guide to Cannabis Packaging and Labeling Laws](#)' (2015)





STATE OF ALASKA

Penalties for Unlawful Acts by a Licensee

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PENALTIES FOR UNLAWFUL ACTS BY A LICENSEE

A. Suspension or Revocation of License

1. The board will suspend or revoke a marijuana establishment license if any licensee is convicted of a felony, or a crime listed in 3 AAC 306.010
2. The board may suspend or revoke a license if the licensee;²⁵
 - a. *Misrepresented a material fact on an application;*
 - b. *Is following any practice or procedure that is contrary to the best interest of the public;*
 - c. *Using any process not approved by the board for extracting or manufacturing marijuana concentrate or products;*
 - d. *Selling or distributing any marijuana concentrate or product that has not been approved by the board;*
 - e. *Knowingly allowed an employee or agent to violate AS 17.38;*
 - f. *Failed to comply with any applicable public health, fire, safety, or tax law or regulation in the state; or*
 - g. *Used the licensed premises for any illegal purpose including gambling, possession or use of narcotics other than marijuana, prostitution or sex trafficking.*



B. Seizure of Marijuana or Marijuana Products

1. The director, an enforcement agent, an employee of the board, or a peace officer acting in an official capacity, may seize marijuana if the marijuana establishment has;²⁶
 - a. *Any marijuana or marijuana product not properly logged into the marijuana establishment's marijuana inventory tracking system;*
 - b. *Any adulterated marijuana food or drink product forbidden under 3 AAC 306.510;*
 - c. *Any marijuana or marijuana product that is not properly packaged and labeled; or*
 - d. *Not renewed its license.*

C. Civil Fines

1. The board may impose a civil fine, not to exceed the greater of²⁷
 - a. *An amount that is three times the monetary gain realized by the marijuana establishment;*
 - b. *\$10,000 for the first violation;*
 - c. *\$30,000 for the second violation; or*
 - d. *\$50,000 for the third or subsequent violation.*

PENALTIES FOR UNLAWFUL ACTS BY A LICENSEE

REFERENCE LIST

- 25. 3 AAC 306.810. Suspension or revocation of license (2018)
- 26. 3 AAC 306.830. Seizure of marijuana or marijuana product (2018)
- 27. 3 AAC 306.840. Civil fines (2018)





ALASKA MARIJUANA HANDLER PERMIT

Completing Your Handler Permit Application

ALASKA MARIJUANA HANDLER PERMIT

A. Who must obtain a marijuana handler permit card²⁸

1. Each licensee, employee, or agent of a marijuana establishment who sells, cultivates, manufactures, tests, or transports marijuana or marijuana product, or who checks identification of a consumer or visitor, must obtain a marijuana handler permit card from AMCO before being licensed or beginning employment at a marijuana establishment.

a. Marijuana handler permits are valid for three years from the date of course completion.

b. There are no Alaska residency restrictions for marijuana handler permits.

2. The board will not issue a Marijuana Handler Permit to a person who

a. Has been convicted of a felony in the state and either less than five years have elapsed from the time of the person's conviction; or the person is currently on probation or parole for that felony.

b. Has within the two year period immediately preceding submission of an application, been convicted of a class A misdemeanor in the state involving a controlled substance other than a Schedule VIA controlled Substance, under AS 11.71.190.



B. How to apply for Alaska Marijuana Handler Permit

1. Complete an Alaska Marijuana Control Board approved marijuana handler permit education course.
 2. Complete the marijuana handler permit online application
 3. For applicants who live near Anchorage or Fairbanks, bring the following documents and items;
 - a. Standard Cover Page from completed online application²⁹*
 - b. Marijuana handler permit education course completion certificate*
 - c. \$50 payment via check, money order or cashier check payable to "State of Alaska"*
 - d. Valid Government issued ID*
 4. Walk in locations for application submission
 - **Anchorage:**
550 West 7th Ave, Suite 1600
Tuesdays, Wednesdays and Thursdays from 9:30am to 11:00am
 - **Fairbanks:**
1648 Cushman St, Suite 203
Wednesdays from 9:00am to 12:00pm
 5. For applicants submitting application via mail, also include:
 - a. Clear photo copy of Valid Government issued ID*
 - b. 2"x2" passport size full color photo*
- **AMCO**
Attn: Handler Permit
550 West 7th Ave, Suite 1600
Anchorage, AK 99501

For detailed instructions:
[https://www.commerce.alaska.gov/web/amco/
MarijuanaHandlerPermit.aspx](https://www.commerce.alaska.gov/web/amco/MarijuanaHandlerPermit.aspx)

ALASKA MARIJUANA HANDLER PERMIT

REFERENCE LIST

28. [3 AAC 306.700 Marijuana Handler Permit \(2018\)](#)
29. [AMCO Marijuana Handler Permit Application Instructions \(2018\)](#)



**Visual Overview
of the
Alaska Marijuana Handler Permit
Online Course**

by
MM411, Inc.
dba Medical Marijuana 411

Prepared by:

Christine Nazarens
COO & Co-Founder
Medical Marijuana 411

7.30.18



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Medical Marijuana 411 uses one of the leading Advanced Learning Management Systems available and we have included this document to help visually illustrate what the student experience will be, as they take the Alaska Marijuana Handler Permit Certification.

Our team of medical marijuana professionals has developed state-of-the-art e-learning programs for cannabis education.

All coursework and graphics can be downloaded for future re-use. Additional resources of lengthier, pertinent PDFs are available by clicking on the research endnote at the end of each section module. The student has a permanent “student dashboard” where they can review information and newly revised information (laws for example) can be accessed.

Our program, once approved, would be on the Alaska DOH website for access to the Alaska Marijuana Handler Permit Certification course. *The example below, is from our Washington State approved Consultant Certification course. A page just for the Alaska Marijuana Handler Permit Certification would be created for easy navigation to the course.*

Google search results for "washington approved medical marijuana certified educators" showing a map of Washington and search results for "The Washington State Medical Marijuana Authorization Agency" and "Medical Marijuana Washington".

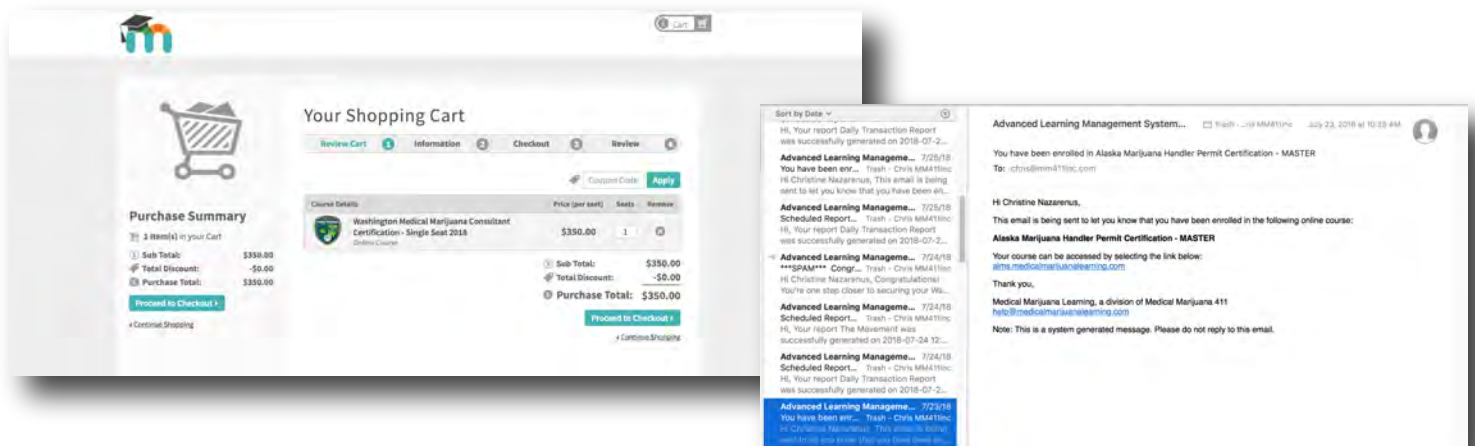
Washington State Department of Health website showing the "Medical Marijuana" section under "You and Your Family". It lists "Approved Programs Providing Consultant Certification Training" and mentions the "Advanced Learning Management System from Medical Marijuana 411".

Medical Marijuana 411 website showing the "GET STARTED ON YOUR WA STATE MEDICAL MARIJUANA CONSULTANT CERTIFICATION" section. It includes a logo for "MEDICAL MARIJUANA CONSULTANT CERTIFICATION" and pricing: "Single Student: \$350" and "Group Pricing: \$333 per student".

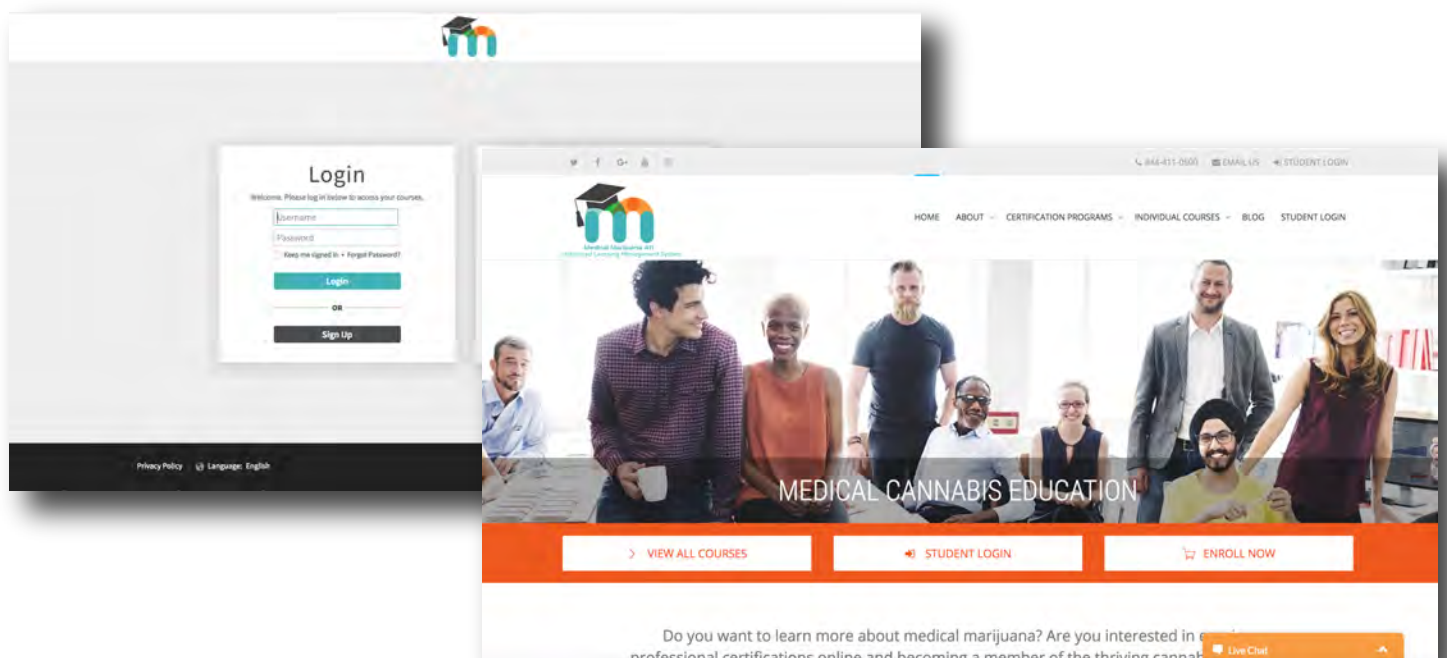
The website also includes a "LIVE CHAT" button and contact information for MM411 INC.



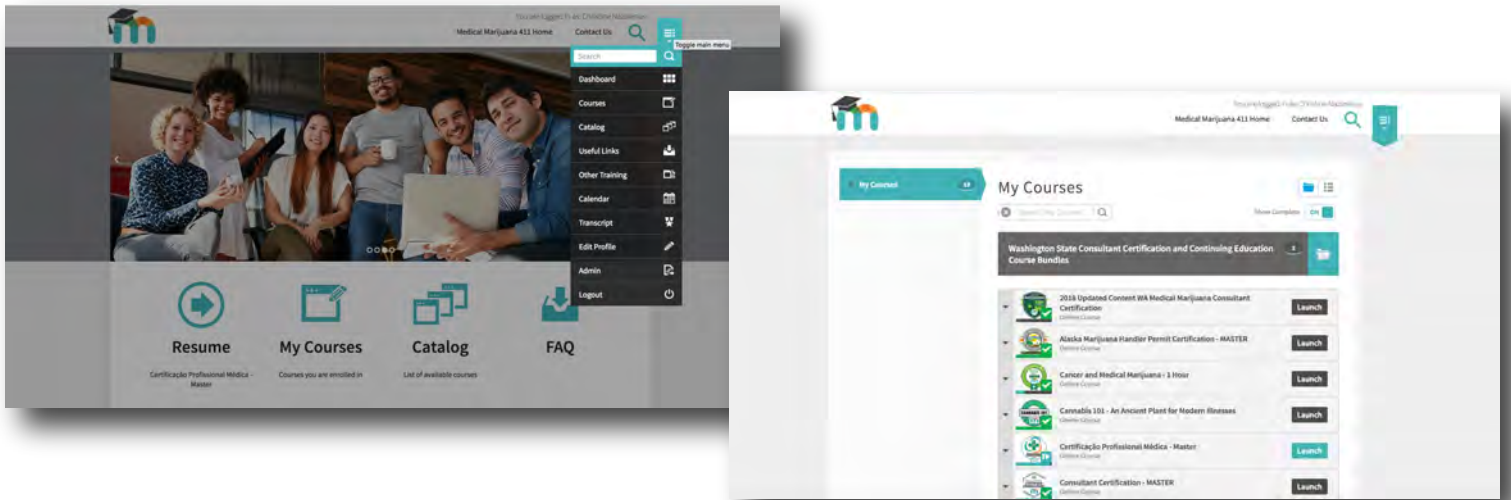
Once a person purchases the course, they are taken to a secure shopping cart where purchases are completed via Stripe or PayPal. An autogenerated email is sent with a link to immediately start the course. ***Again, we used the Washington State Consultant Certification as the example. Once we get to the actual course, the Alaska Marijuana Handler Permit Certification will be used. The Alaska Marijuana Handler Permit Certification course is created, but not live for purchase, until it is approved by the Alaska Marijuana Control Board.***



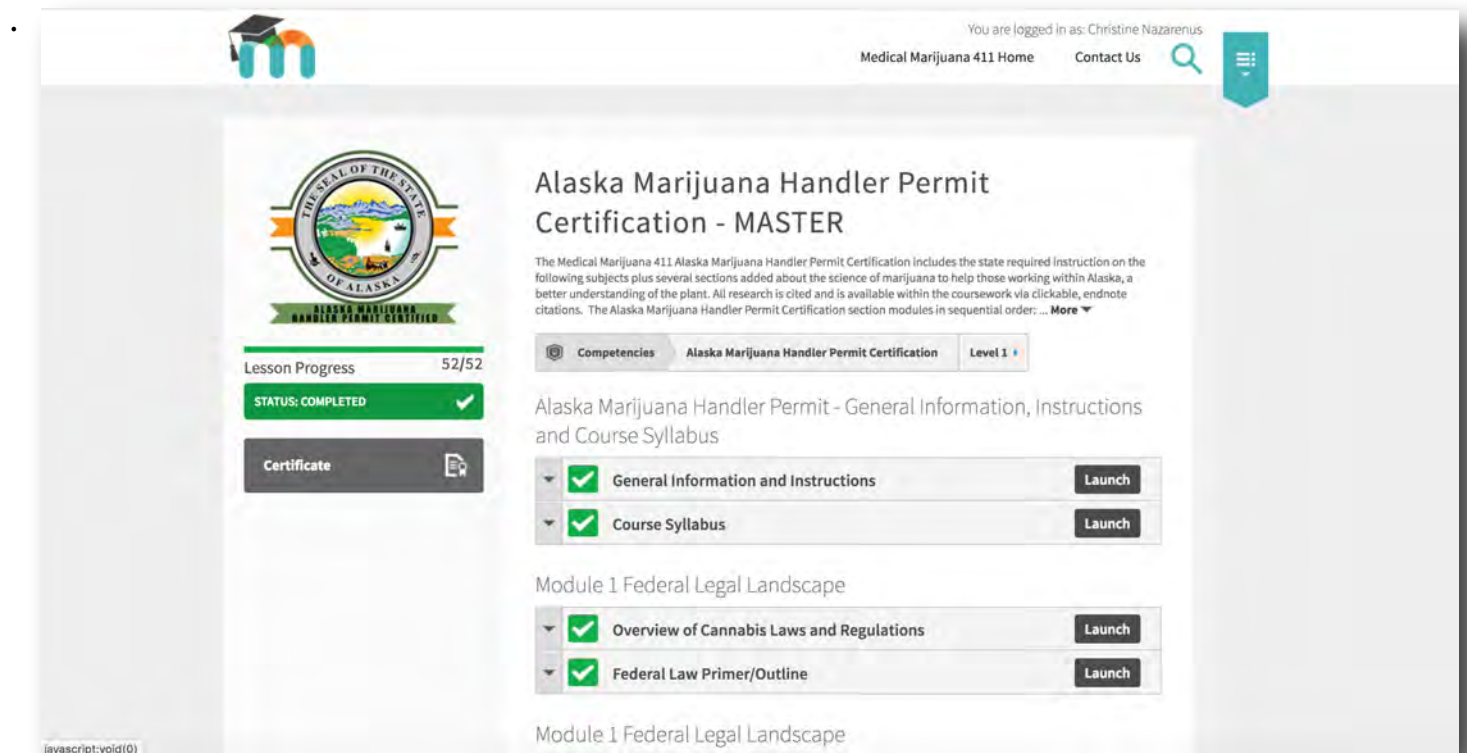
The student clicks on the link in the email and is taken to the student login. The student login is also available on our website for ease of use.



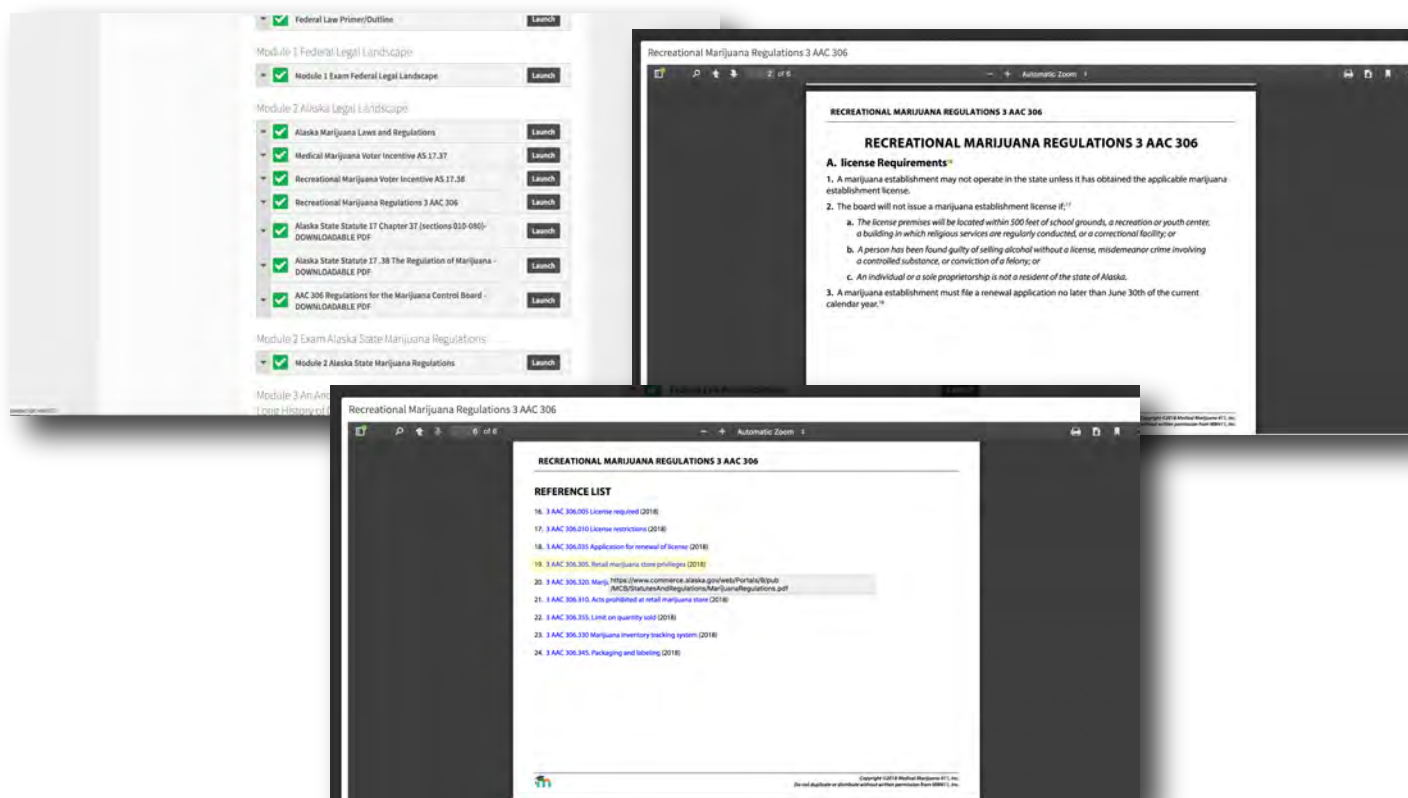
After logging into the Advanced Learning Management System, the student is taken to their own dashboard where all enrolled courses are available and they can download their transcript and certificates. As additional classes are taken, those classes are added to their permanent student dashboard.



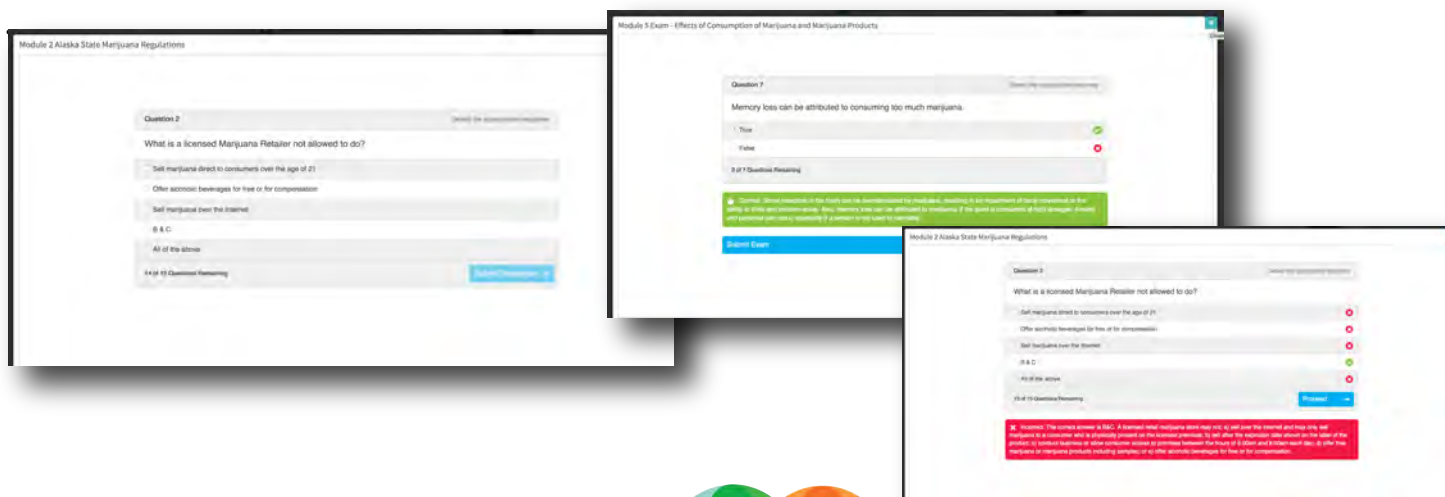
The student clicks on the course to begin. A student must go through the each of the section modules in sequential order, before moving to the next section. Upon completion of each section of the a passing score of 70% on the section exam, is required to move to the next section. An aggregate passing score of 70% is required to receive the Alaska Marijuana Handler Permit Certification.



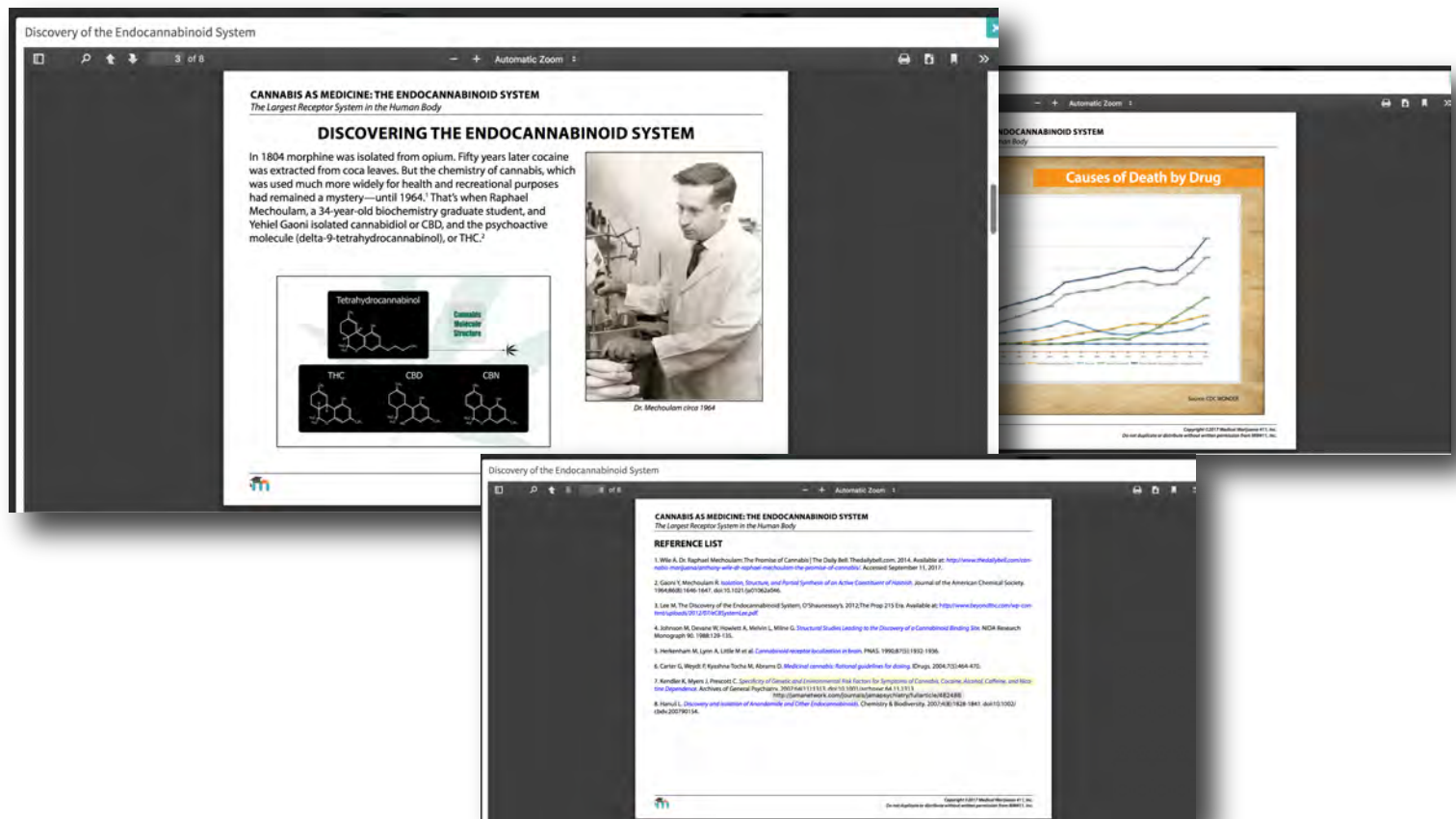
By a simple click on the "launch" button, opens up a pdf. Each pdf is downloadable and the entire course is what was printed out with the application. **NOTE: each endnote in the pdf's is a direct link to the referenced material. This example uses the Alaska Marijuana Regulations 3 AAC 306. The cited link is available for the student to reference as part of the coursework. The reference material will open in a new window.**



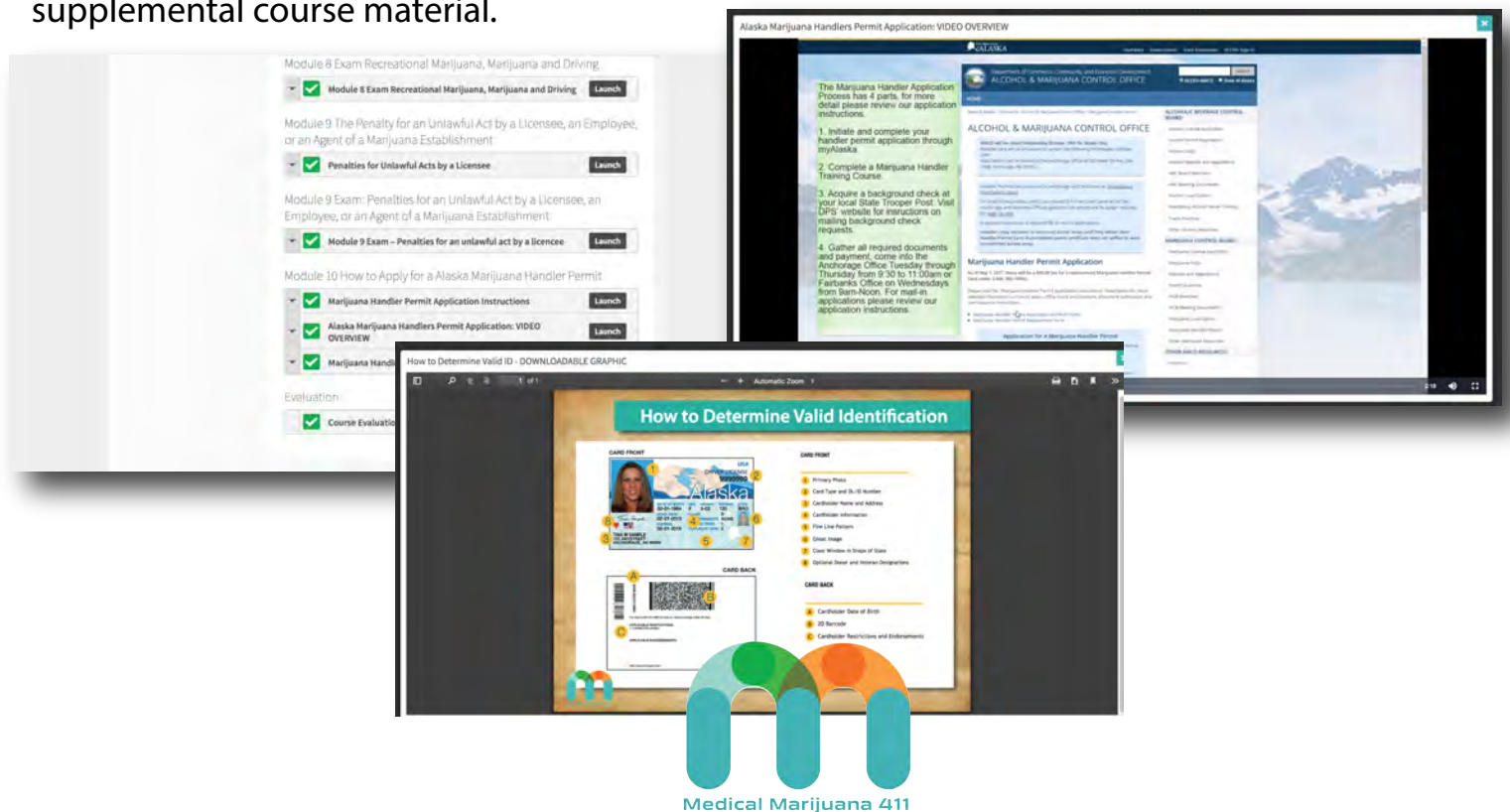
Once a student has reviewed all materials with a section, Alaska Marijuana Laws for example, they are required to take a section exam and pass with a score of 70% or higher before they can move on to the next section. Exam questions are randomly pulled from a larger pool of questions within the section question bank. Once the entry is selected, the student is shown either that they have answered correctly or incorrectly.



Each section pdf is filled with graphics to help illustrate key points. Graphics are downloadable for personal re-use. Again, all endnotes referenced within the course material are linked to the cited reference documents.



Also included are Alaska specific videos and graphics. For example: How to Determine Valid Alaska Identification and the video “How to Apply for a Alaska Marijuana Handler Permit” as supplemental course material.



Upon completion of the Alaska Marijuana Handler Permit Certification, students are required to complete a course evaluation. After passing with a 70% score or higher throughout all course sections, a certificate is generated with a random code which is matched within the system to ensure authenticity. A student has permanent access to their dashboard and transcript.

