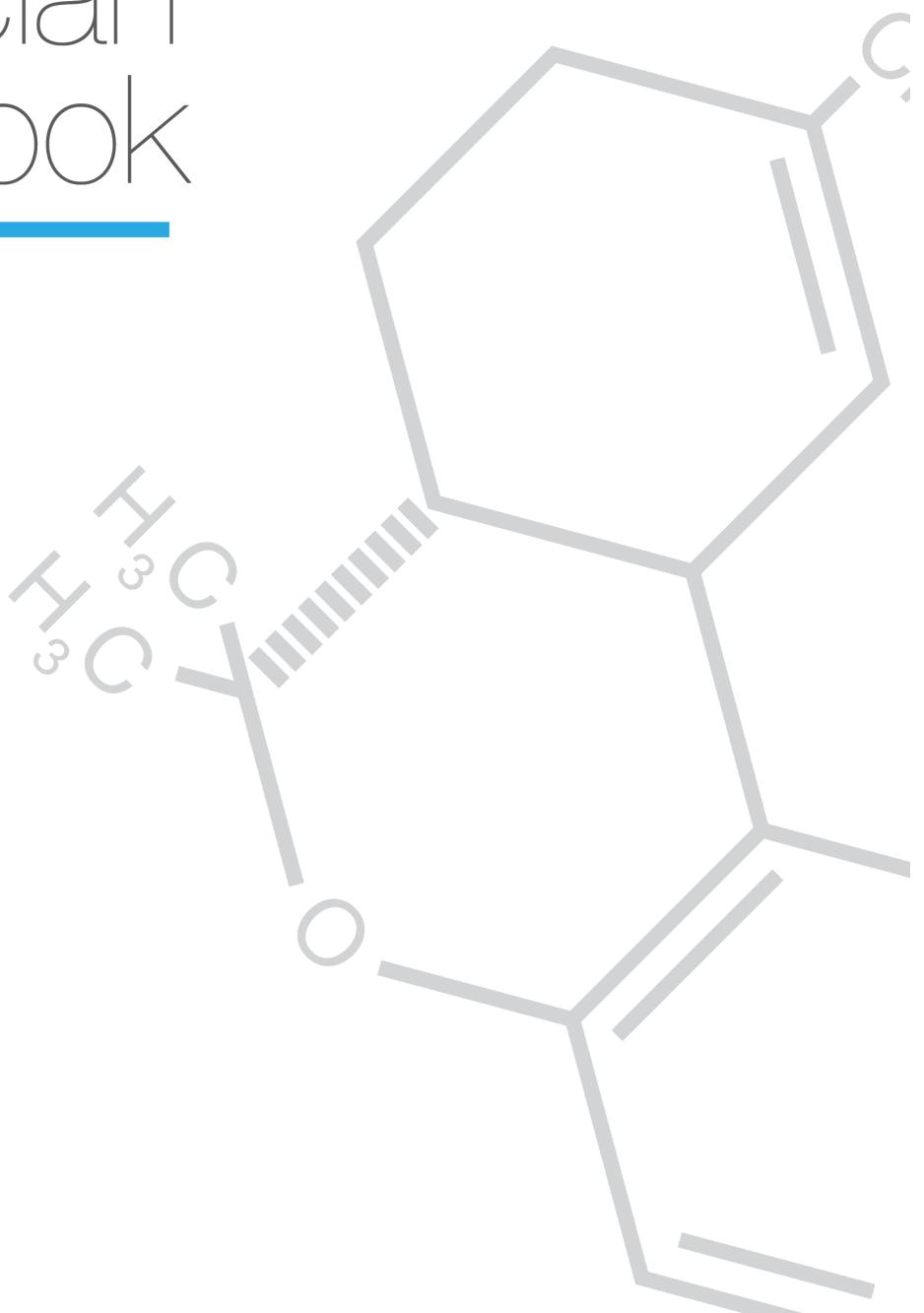




# Dispensary Technician Handbook

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**DISCLAIMER:** This handbook was compiled using data from respected resources and is designed only to provide general and basic information for educational purposes. This handbook is not intended to provide medical advice, professional diagnosis, opinion, treatment or services to you or to any other individual. The information provided in this handbook, or through links to other sites, is not a substitute for medical or professional care. Additionally, none of the information in this handbook is offered, nor should be construed as legal advice. Therefore, reliance on any information provided in this handbook is solely at your own risk. Consequently, the reader assumes all risk for any injury, loss or damage caused or alleged to be caused, directly or indirectly by using any information described in this handbook.

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**NOTE:** The medical cannabis industry and laws pertaining to it are rapidly changing. Therefore, this handbook is current as of the Current Version Date listed below. Essentially, the handbook is updated when significant changes occur in the industry or with state or federal law.

# INTRODUCTION

**This Handbook was developed to provide a foundation of knowledge for medical cannabis dispensary technicians working in licensed dispensaries in the United States.** Although cannabis has been voted legal by over half of all U.S. states, it remains federally illegal and is currently listed as a Schedule 1 substance according to the U.S. Controlled Substances Act. For this reason, dispensary employees should adhere to their particular state's laws, as well as follow all dispensary policies and procedures. Although this Dispensary Technician Handbook provides basic guidelines, none of the information contained herein should be construed as legal advice. The term dispensary technician is used to describe a person working in a cannabis dispensary. A dispensary technician sells and is knowledgeable about various cannabis products.

## **The Roles and Responsibilities of the Dispensary**

Cannabis dispensaries take on several roles. First, technicians who work within the dispensary engage in conversation



with caregivers and patients about the confidential information associated with their medical conditions and the use of medical cannabis. The dispensaries have the duty to provide articulate and compassionate information concerning medical cannabis and the debilitating medical conditions that it might improve.

Secondly, dispensaries offer public relations, outreach and educational services regarding the use of medical cannabis. They also have the duty of maintaining the inventory and registration systems of eligible patients. Most importantly, licensed cannabis dispensaries administer and

dispense medical cannabis to patients or their caregivers under the provisions of the Department of Public Health (DPH).

Generally speaking, a dispensary or medical cannabis dispensing organization has the right to acquire, possess and dispense medical cannabis along with educational materials and other related supplies and paraphernalia. The duty of the dispensary is to recommend, assist and provide the patient with the selection of the appropriate medical cannabis treatment based on the recommendations provided by the patient's licensed physician.

A successful medical cannabis dispensary is committed to providing its patients and the community it serves with accountable, transparent and professional services. For this reason, the dispensary should position itself as a collaborative partner when it comes to supporting the needs of the community.

### **The Roles and Responsibilities of the Dispensary Technician**

A dispensary resembles a traditional pharmacy but dispenses only one type of medicine in cannabis. The federal illegality of their primary product necessitates their separation from traditional pharmacies. A dispensary technician in a medical cannabis dispensary performs the duties of a pharmacist.

There are many responsibilities that a medical cannabis technician undertakes in his position. First, the technician verifies the identity of the cardholder with the use of a verification system. Next, the technician performs and obtains the required assessments of the patient's health status in order to formulate a medication treatment plan. Further, the technician must

perform and evaluate the patient's response to the form of cannabis that is being administered in order to identify any adverse reaction.

The technician also performs a holistic medication review for the identification, resolution and prevention of problems that may arise from the administration of medical cannabis. The technician has the role of providing verbal education and training to caregivers and patients concerning the use of medical cannabis for debilitating conditions. This includes informing the patient about the different options that are available in the administration of medical cannabis.

*“The dispensary should be viewed as a collaborative partner in supporting the needs of the community.”*

An important distinction between a dispensary technician and a pharmacist is that a medical cannabis technician is only able to receive generic recommendations from licensed physicians. The physicians do not indicate the amount or strain of cannabis that the patient should take for his or her condition. Consequently, the technician has a duty to guide the patient through the inventory and offers the best strain based on the patient's medical issue, his previous use of cannabis or any other factor deemed essential. Dispensary technicians differ from pharmacists in that they have a greater role in determining the medication for the patient while the typical pharmacist dispenses medication ac-

## Tips for Creating a Successful Medical Cannabis Dispensary

- 1** First, you should create a standard operating procedures manual that is fully compliant with each of your state's existing laws. Essentially, the rules will guide every action that the dispensary and its employees undertake.
- 2** It is essential that your cannabis dispensary has a thoroughly trained staff. The problem with many dispensaries hinges on the inadequate skills and knowledge of medical cannabis technicians. For this reason, every dispensary should have trained and knowledgeable technicians on staff. By staffing your dispensary with highly trained and compassionate technicians, you are demonstrating your dispensary's willingness and dedication to assisting those in your community who have genuine medical concerns.
- 3** You should create meaningful and useful relationships with local businesses, doctors, healthcare professionals and the overall community. Currently, the missing link in the cannabis industry is a feedback system that should exist between patient, dispensary and doctor. Fundamentally, such a system would ensure that patients receive sound advice while treating the ailments that medical cannabis is known to improve.
- 4** It is important to ensure that your dispensary's environment is professional and clean. For this reason, you should always know what's going on in and around the dispensary to ensure that you are maintaining a professional environment. In most cases, problems that occur are not caused by the dispensary, but by those who abuse the atmosphere.
- 5** Training and education should be your number one priority. Is your staff knowledgeable when it comes to cannabis? Are they properly certified? Do you have a patient education and community out-reach plan? How about employee manuals and staff training? Do you implement policies, plans and security procedures? Do you offer shatter or preorder services? And finally, do you have a good relationship with your community? These are all important questions that a medical cannabis dispensary technician should ask.
- 6** Each dispensary should make the security of patient records a top priority. You could imagine the problems a cannabis dispensary would face should a miscreant gain access to your patient membership records. This could put access to medical cannabis cards into the wrong hands. Misuse of the system could erase all logic behind what your dispensary is trying to accomplish in the community.
- 7** Your dispensary should educate patients on the responsible use of cannabis for medicinal purposes. For starters, patients should understand that although cannabis has many medicinal benefits, over time it can stress the body like any other medicine.
- 8** Your dispensary should offer a wide variety of cannabis products for consumption. In essence, you should provide your patients with many different forms of consumable cannabis, including but not limited to: various oral forms of cannabis, tinges, edibles, topical, body care products, etc.
- 9** Your dispensary should engage in community service. Since every community has important issues and projects in progress, the dispensary should invest in the needs of the community. Such actions will build a relationship that guarantees a permanent future for the business.
- 10** Your dispensary should contact local law enforcement and provide them with an informational package that shows them everything you are doing in order to be compliant and an active force that is helping the community. Essentially, you should make an appointment with officers or other staff to visit your dispensary so that you can demonstrate your compliance first hand.
- 11** Dispensaries should make staff certification mandatory. Moreover, you and your staff should participate in both online and classroom training and seminars, as well as regularly attending in-person educational events.

cording to the doctor's prescription. And just like a pharmacist, the technician has the duty of maintaining the confidentiality of any and all patient information.

A successful dispensary technician will be passionate about medical cannabis. Medical cannabis dispensaries are on the constant lookout for technicians who can communicate articulately and compassionately with customers about medical cannabis and debilitating medical conditions. In essence, the dispensary technician should have extensive product knowledge and be able to explain the benefits of each product. Finally, a dispensary technician must ensure that he or she has all licenses and permits required by state law to carry out the day-to-day operations of a medical cannabis dispensary.

The following is a list of skills, knowledge requirements and responsibilities that are required of a medical cannabis technician.

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## Minimum Skills and Knowledge Requirements:

- Exceptional customer service skills
- Desire to learn about all products in order to assist customers
- Strong attention to detail and a team-player mentality
- Ability to cultivate long-term customer relationships
- Ability to deal with problems and resolve them in a professional manner
- Knowledge of medical cannabis, cannabinoids, the benefits of use and the methods of medicating
- Basic computer skills and the ability to operate Point of Sale software and cash management systems

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## Responsibilities:

- Drive sales and create a positive customer experience by maintaining a tidy, safe and well merchandised store environment
- Ensure that the sales floor is properly stocked and that the store is well maintained
- Model a best-in-class service experience that consistently exceeds our customer's expectations
- Inspire customer confidence and create brand loyalty
- Promote a work environment that is positive, customer-service oriented and compliant with established policies and procedures
- Be accountable for accurately utilizing the dispensaries Point of Sale system





# DISPENSARY DAILY OPERATIONS

**The way in which a dispensary operates varies by state and the localities within the state. This section will cover some of the standard operating procedures.**

## Opening Procedures

The dispensary should maintain a well-defined document that outlines opening procedures. As a rule of thumb, the manager, dispensary technician and other staff should arrive 30 minutes prior to opening to allow adequate time for the day's preparations. Further, no employee should be allowed to open the store alone. You should wait for at least two staff members before unlocking the door. One employee should stay at the door to allow arriving employees to enter, one at a time, while keeping the door locked in between. The alarm system should be turned off prior to the start of the day.

The cash register should be switched on and assigned to the day's cashier/technician. Any adjustments to the work schedule should be made at this time.

## After-Sale Procedures

After making a sale, the dispensary technician should offer incentives with a goal to enhance that customer's experience. To do this, the technician can implement various after-sale activities such as a request for feedback. Be sure that you make it well known to staff that the purpose of requesting feedback is not to improve their reputation. Instead, the feedback should show a genuine interest in identifying the quality of the customer's experience. This way, the request for feedback will make the customer feel that the technician really cares.

Another rule of thumb is that the dispensary technician or some other member of staff maintains contact with the customer after the sale. The technician or staff member should inquire about the effect

that the medication is having on the patient, the patient's response and any other questions that show concern for the customer. This personalization of service will help the dispensary maintain a positive relationship with the customer.



## Closing Procedures

The closing procedures are as important as the opening procedures. At closing time, all staff should perform a walk-through of all restrooms and floors, making sure that there are no remaining customers left in the building. The technician(s) must close out and lock up each cash register. You should also ensure that all computers are properly shut down. If there is any paperwork left to fill out, the technician or staff should take care of it before exiting the premises. Security personnel should check all departing employees to ensure that they exit the store without product. You should turn off all of the building's mechanical systems such as the air conditioning and lights, and then activate the alarm system. Finally, you should double check that the front door is locked securely.

## Sign-in and Sign-out Procedures

Although the sign-in and sign-out procedures change from one state to another, they always need to be HIPAA-compliant. All employees are required to sign-in with their arrival time and sign-out before they leave the premises. The sign-in procedures should identify when the employee plans to be absent due to a personal appointment, sick leave or vacation. The sign-in and sign-out procedures will help the dispensary to classify employees. The classification and identification of employee responsibilities will help to classify what is and what is not an expense related to the business.



## Staffing

The General Manager is in charge of all daily dispensary operations. Therefore, any staffing issues should be reported to the General Manager or CEO. All suspensions or terminations will be at the discretion of the CEO. The General Manager will notify the division of any change in the employment status of an employee, with the nature and reason for such change in documented form, within five business days of the change. Upon termination of employment, the agent's ID card must be returned to the Dispensary and the Dispensary must return the agent identification card to the Division.

## Inventory

The Operations Director and General Manager are responsible for managing product inventory and for ensuring that the Dispensary is capable of meeting patient demand. When the Dispensary is running low on inventory, the General Manager will arrange for additional purchases from licensed cultivation centers. The Dispensary will not enter into an exclusive agreement with any cultivation

center. Consequently, it will conduct business with a cultivation center that has the ability to deliver the products.

## **Dispensary Agents and Agent Registration Cards**

Security at the Dispensary is of paramount importance. The dispensary is divided into limited and restricted access areas which are meant to be accessed by specific personnel. Therefore, each Staff member will be required to scan his or her ID and Registration Card when clocking in. Moreover, the dispensary agents will be required to wear their dispensary agent registration card around their neck in an unobstructed manner at all times while in the dispensary. Agents will not be permitted in the premises without this card.

## **Visitor Logs**

Authorized visitors such as local law enforcement representatives, outside vendors, service professionals or any others that are necessary for conducting a dispensary business, will be required to log in and obtain a visitor identification badge. Visitors will wear this badge for the duration of their visit. A Dispensary agent that is authorized to enter restricted access areas will escort visitors at all times. Finally, when visitors exit the dispensary, they must sign out from the Visitor Log and return their badge.

## **Quality Control Plan**

In ensuring the quality of medical cannabis products, it is integral to the dispensary's mission that the Dispensary's Quality Control Team (operations director, medical director, security director and general manager) remains responsible for ensur-

ing that all cannabis products dispensed maintain the identity, strength, quality and purity that they purport to possess. Therefore, any changes to quality control procedures must be drafted, reviewed and approved by the Quality Control Team.

## **Health of an Agent**

If any member of the Management Team determines that a dispensary agent has a health condition that could adversely affect the safety or quality of cannabis products at the dispensary, then the dispensary agent will be prohibited from having any direct contact with the cannabis products, equipment or any other materials. This prohibition will continue until at least two members of the Quality Control Team determine that the agent's health condition will not adversely affect such product.



## **Inspections, Maintenance and Cleaning**

The Dispensary should create and maintain a sanitary environment that is consistent with the style of traditional pharmacies and medical offices. Consequently, all dispensary staff will be responsible for daily, weekly, and monthly cleaning activities.

## **Safety and Sanitation**

All dispensary staff must keep dispensary equipment, materials and facilities properly sanitized. The general manager must ensure that a copy of the safety and sanitation rules are posted in a conspicuous place. Employees on duty will keep the dispensary neat and free of clutter and garbage during the day, and thoroughly clean the dispensary after closing. All rooms, cabinets, storage facilities and hallways in the Dispensary will have proper lighting, which will be monitored by the General Manager and Shift Managers.

When necessary, the dispensary and its employees will use rodenticides, insecticides, fungicides and cleaning and sanitizing agents in conformance with the manufacturer's directions and OSHA regulations. All exhaust fans, lighting and fire extinguishers will be maintained in compliance with the state and local building codes. Fire extinguishers must be mounted in public view throughout the dispensary and all employees must be trained on the proper operation of the fire extinguisher. A first aid kit and an automated external defibrillator (AED) must be placed in the Limited Access Area and the Restricted Access Area. All employees must be trained in basic first aid and CPR, including AED operation.

## **Labels Affixed and Accompanying Disclosures**

In accordance with rules and regulations, the dispensary will only sell cannabis that is pre-packaged and labeled by the supplying cultivation center. Therefore, the dispensary will ensure that all cannabis products include a label clearly showing the name and phone number of the dispensary.

## **Patient Verification Procedures**

The Dispensary will employ a two-step patient ID verification process.

### **Step 1: Pre-Entry**

Upon entering the Main Entrance Vestibule, patients and caregivers will be greeted by a security officer from the reception office. The security officer will verify the authenticity of the government-issued ID, and check to make sure that the name on the ID matches the name on the registry card. He will confirm that neither of these ID's are expired, and he will do a visual verification that the picture on the government-issued ID matches the person presenting it.

If compliant, the security officer will then scan the registry card to alert the dispensary technician to the fact that a patient or caregiver is entering the waiting room. The alert will indicate whether the person is either a new or established patient. Next, the security officer will disengage the secured door to allow the patient or caregiver to enter the waiting room. If it is determined that the patient or caregiver is not compliant, then he or she will be asked to leave immediately.

## **Step 2: After Entering the Waiting Room**

If the patient or caregiver is new to the dispensary, then the dispensary technician will call the person to the new patient service window. The dispensary technician will complete a second verification of the government-issued ID and registry card. A new patient intake form will need to be completed in order to collect the patient's: name, phone number, email address, mailing address, birth date, designated caregiver (if applicable), physician information, registry card number, registry card expiration date and scholarship program price tier (if applicable). This information will be entered into the state's medical cannabis electronic verification system as well as the recordkeeping modules of the POS inventory system, where it will then be readily available to authorized personnel.

Registry cards, IDs and relevant physician information will be scanned and entered into the electronic records. The patient or caregiver's record will include the documentation of any patient education and support materials given, including a description of the materials and the date that they were provided. Upon approval of the ID and the verification of purchases that have taken place in the last 14 days, the dispensary technician will then print out an order form that includes the patient's name and registry number, the dispensary's license information, a unique patient ID barcode and enough space to write down the order information.

Next, the dispensary technician will conduct a New Patient Orientation. Fundamentally, the orientation will include the determination of how long the patient or

caregiver has been purchasing and/or using medical cannabis, assessing the patient or caregiver's knowledge of medical cannabis, providing appropriate education materials, explaining policies and procedures, obtaining a signature on the Patient/Caregiver Code of Conduct Form, explaining the Patient Feedback Form and answering any questions that the patient or caregiver may have. After the orientation, the dispensary technician will escort the new patient or caregiver to a service window, where the dispensary technician can then assist with the purchase.

If the patient or caregiver is established, then the general manager will direct them to the service window. The general manager will then complete a second verification of the government-issued ID and registration card. Upon approval of the ID and verification of purchases in the last 14 days, the general manager will print out an order form.

## **Purchases and Denial of Sales**

The general manager will ask the patient or caregiver if they had filled out a Patient Feedback Form from their last order. The form gathers information about their medical needs, symptoms, any adverse events and any other feedback that they wish to provide regarding their experience



with medical cannabis or the Dispensary. Upon reviewing the Feedback Form and obtaining the information verbally, the General Manager will recommend three or four strains and explain which aspects of the particular strains or products will help alleviate the patient's symptoms.

If the patient/caregiver is looking for a specific product that the Dispensary does not have in stock, then the general manager will provide recommendations on similar products. In addition, the general manager will provide relevant educational materials when appropriate and document the patient or caregiver's record with a description of the materials and the date that the materials were provided.

Once the order has been determined, the general manager will log in to the electronic verification system, as well as the POS inventory control system, and will enter the patient's detailed information. Such information will include the patient's registry number, verification of their current authorization from the Department of Public Health to purchase medical cannabis and verification that the amount requested does not exceed the limit of 2.5 ounces in 14 days (unless approved by Department of Public Health). The General Manager will enter the amount, type and strain dispensed, the status of the purchaser as a qualifying patient or patient's designated caregiver and the date and time that product was dispensed.

The General Manager will place all cannabis product(s) and the receipt in an unmarked, childproof, and zippered bag to limit immediate access to the product. The General Manager will hand the bag to the patient/caregiver through the security window. As the patient approaches the exit,

a large, obvious sign overhead will warn patients that consuming cannabis on the dispensary premises is not permitted nor is driving under the influence of cannabis or consuming cannabis in public.

If the General Manager determines that the sale should be refused, then the patient or caregiver will be asked to leave the premises immediately. Whenever a patient or caregiver is denied the ability to purchase cannabis, the general manager must make a record of such by entering the specifics into the electronic verification and inventory control systems. The information entered must include: the specific product that was denied, the product amount, the date, the name and registry number of the patient or caregiver and the reason for the denial.



## Confidentiality

Under state law and federal HIPAA Regulations, the patient or caregiver's information will be treated as confidential and protected. The dispensary's policies and procedures will ensure that the handling of patient health information is in compliance with the HIPAA Privacy Rule. Therefore, the disclosures will be limited

to legally permitted disclosures, including those: 1- made to the patient, 2- for treatment, payment or healthcare operations, and 3- as required by HIPAA and other federal authorities. The dispensary will store all physical copies of patient files in a locked file cabinet. Additionally, the dispensary patient records will be maintained using the POS inventory system and will be available for inspection by the division upon request. Essentially, the data will be backed up at regular intervals and the dispensary will use offsite storage facilities to store copies of sensitive patient information.

### **Customer Relations and the Dispensary Technician**

Excellent customer service is key to a successful medical cannabis dispensary. One of a dispensary employees' many responsibilities is to satisfy the needs of every patient. Although some patients can be difficult, an employee's patience and courtesy level is likely to influence his patient's behavior. In order to maintain good customer relations, the dispensary technician must be knowledgeable about every product that he sells. As a dispensary technician, you should be able to tell your patients how the product is likely to interact with their bodies. Since patients trust what a dispensary technician says, it is important that you give them all of the information that you have concerning whatever ailment that they are suffering from. To do this, it is of the utmost importance that you learn about the patient's ailment so that you can properly educate them about the medicine and ultimately guide them to an informed decision.

### **Get to Know Your Patients**

Over time, you will come to learn much about the lives of your patients. The more you learn and interact with patients, the more comfortable they become, and the more enjoyable their experiences with your dispensary will be. Since small details are important when it comes to building relationships with patients, it is important that you become familiar with your patient's preferences in regard to what they like and dislike. If you pay attention to the details, then you will be able to suggest to them the product that will help the most.

### **Customer Service**

It is the responsibility of dispensary staff to provide a great experience for patients so that they are eager to return. Dispensaries are real businesses, and therefore customer service should be a top priority, just like with any other type of business. A quality experience is paramount when it comes to doing business in any community, so making customer service a priority is sure to keep patients coming back. Your goal for good customer service should be to find the best way to give the patient what they are looking for, to maintain a positive attitude and to form a relationship of trust; after all, if your patient trusts you,

*“Small details are important when it comes to building relationships with patients.”*

then they will trust the medicine that you recommend for them.

Note: It is essential to stay with your patient for at least 10 minutes in order to create a positive customer experience. In fact, the worst thing you can do is to rush a patient through the experience.

## How to Work Successfully With Patients

### Step One: Engage the Patient

Get to know your patient by asking the following questions:

- What is your name? Your interaction with the patient has to be personal.
- What is your ailment? Ask them why they believe they need medical cannabis.
- What is your history with cannabis? Learn about the patient's history with cannabis.
- What works for you? Ask them which strains they have tried and which have helped.

### Step Two: Educate the Patient

With your knowledge of the patient, their condition, and their history, you can help them find the most effective medicine.

- Inform them of your inventory: Show them the strains and explain which ones work best for which ailments.
- Provide as much information about strains as possible. When you provide patients with detailed information about the strains, you make it much easier for them to make a confident and informed decision.

### Step Three: Empower the Patient

You should inform and guide the patient without telling them what to expect. As a result, you will provide them with everything that they need in order to make an informed and confident decision. By being able to make their own decisions with your guidance, the patient will be much happier and confident with their choice.

### Step Four: Enjoy a Lasting Relationship with the Patient

When you create an informative and meaningful experience for your patients, you are giving them a unique experience that they will not find in other dispensaries.

## Working With Different Types of Patients

A majority of medical cannabis patients suffer from multiple maladies as a result of their specific medical condition. For this reason you must learn all about the patient before you inform them of the inventory. Thereafter, you should guide them towards a product that you believe will work the best for them. The following is a chart that identifies certain types of patients that you may encounter.

### The “Stoner” Patient

When dealing with a “stoner” patient, you must learn about the patient and talk to them about the inventory, all while partaking in their love and appreciation for cannabis. Additionally, you should guide them towards a product that you believe will work best for them, while informing them of any returning patient specials that your dispensary has to offer.

### **The “One Track Mind” Patient**

When dealing with a “one-track mind” type of patient, be sure to learn all you can about them. This way if you believe that you have the product that will help them, you can direct them towards it without hesitation. In instances where you don’t have what they are looking for, you should tell them about the inventory and highlight similar products. Afterwards, you should guide them towards a product that you believe will work best for them. Even if they don’t make a purchase, let them know all of the ways that they can stay updated on the dispensary’s new arrivals.

### **The “Picky” Patient**

When dealing with a “picky” patient, you should learn about the patient and provide information about the inventory while keeping a positive attitude. Essentially, you should guide them towards a product that you believe will work best for them. Moreover, you should take the time to give them what they want so that they know you have been paying attention.

### **The “Deal Seeker” Patient**

When dealing with a “deal seeker,” you should learn about the patient and make them aware of any specials that they may be eligible for. You should walk them through the inventory and highlight the everyday value of the products, even when there is no specific special happening. Additionally, you should guide them towards a product that you believe will work best for them. Lastly, you should explain to them the different returning patient specials that your dispensary has to offer, being sure to emphasize every opportunity for them to get the most out of their money in the future.

### **The “Rude and Offensive” Patient**

When dealing with rude and offensive patients, you should learn about the patient, tell them about the inventory and direct their focus away from whatever seems to be upsetting them. You can tell them about how great the products are, all while highlighting their value. Essentially, you should guide them towards a product that you believe will work best for them. It is important to keep this type of patient focused on the positive. Pointing out what a great deal they are getting, or mentioning the specials that they can look forward to, are both great ways to lighten the mood and to get them back to the store. Lastly, you should report any unruly incidents to the manager.



## TRULY MEDICAL PATIENT



## STONER PATIENT



## ONE-TRACK MINDED PATIENT



They come to you seeking help and a means of dealing with their ailments.

They will be easy to serve.

They are very familiar with cannabis, and for them medicating with cannabis is part of their culture and lifestyle.

They come in with one specific item in mind, and do not want anything else.

### YOUR APPROACH

1. Learn about the patient
2. Inform them about the inventory
3. Guide the patient toward a product that you believe will work best for them

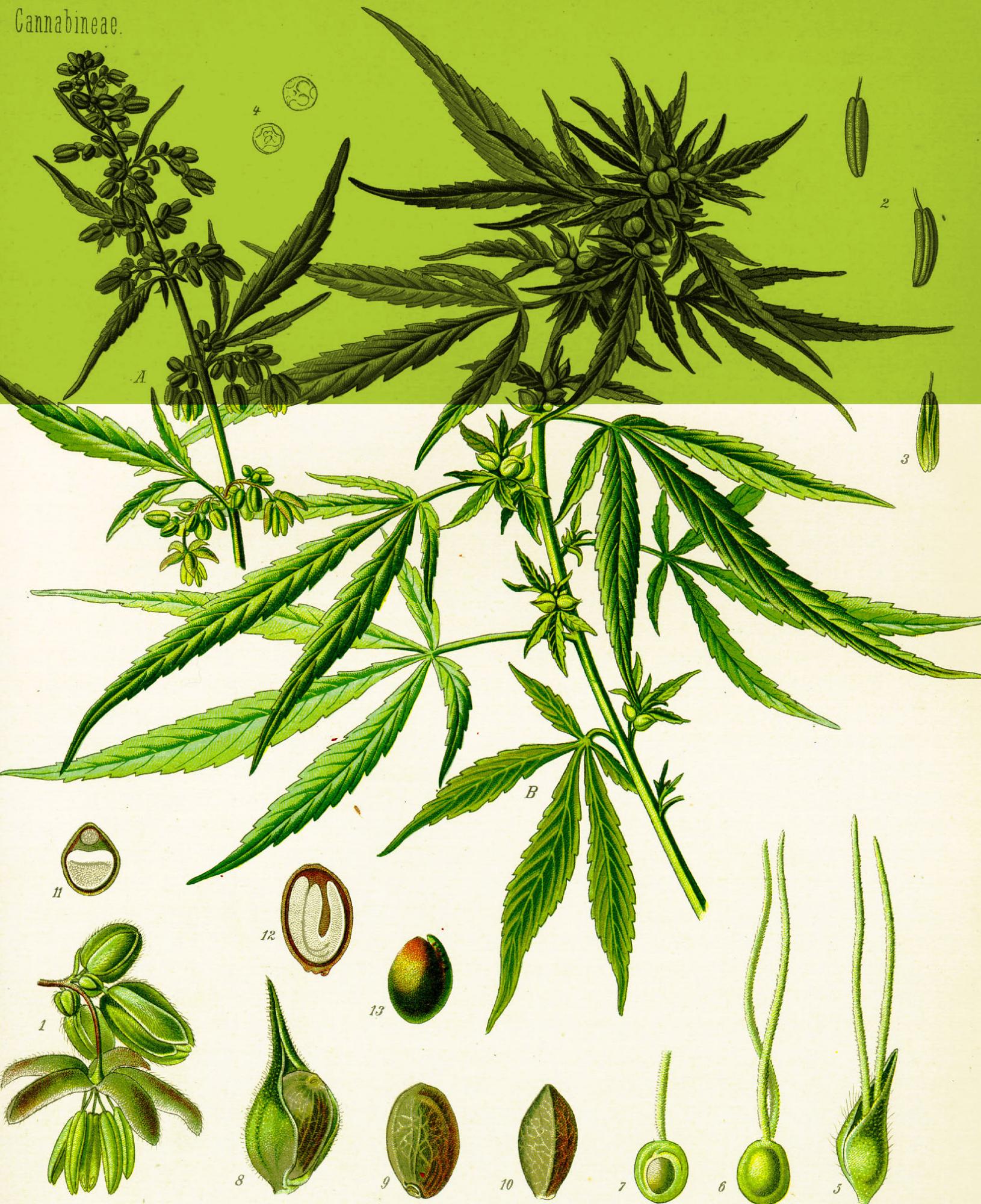
### YOUR APPROACH

1. Learn about the patient
2. Talk to them about the inventory, and partake in their love and appreciation for cannabis
3. Guide the patient toward a product that you believe will work best for them
4. Explain to them the different returning patient specials that your collective has to offer

### YOUR APPROACH

1. Learn about the patient
2. If you think you have what they want, direct them toward it without hesitation
3. If you do not have what they came in looking for, tell them about the inventory and highlight similar products
4. Guide the patient toward a product that you believe will work best for them
5. Even if they do not purchase anything, let them know about ways they can stay up to date with the collective's newest arrivals

| PICKY PATIENT   | THE DEAL SEEKER PATIENT  | RUDE & OFFENSIVE PATIENT   |
|---|--|--|
|    |   |   |
| <p>They are difficult to make satisfied, and are very particular about and critical of the product.</p>   | <p>Saving money is their priority, and they try to bargain with you to get any deal they can.</p>  | <p>They may insult you, the inventory, or the collective.</p>  |
| YOUR APPROACH   | YOUR APPROACH  | YOUR APPROACH  |
| <ol style="list-style-type: none"> <li>1. Learn about the patient</li> <li>2. Provide information about the inventory, and stay positive</li> <li>3. Guide the patient toward a product that you believe will work best for them</li> <li>4. Take the time to give them what they want (i.e. specific kinds of nugs) so they know you have been paying attention</li> </ol> | <ol style="list-style-type: none"> <li>1. Learn about the patient</li> <li>2. Explain any specials they may be eligible to take advantage of</li> <li>3. Walk them through the inventory, highlighting the value of the products, even when there is not a specific special happening</li> <li>4. Guide the patient toward a product that you believe will work best for them</li> <li>5. Explain to them the different returning patient specials that your collective has to offer, emphasizing opportunities to get the most for their money in the future</li> </ol> | <ol style="list-style-type: none"> <li>1. Learn about the patient</li> <li>2. Tell them about the inventory, and direct their focus away from whatever is upsetting them</li> <li>3. Remind them about how great the products are, and highlight their value</li> <li>4. Guide the patient toward a product that you believe will work best for them</li> <li>5. Keep them focused on the positive, like the great deal they are getting, or the specials they could look forward to</li> <li>6. Mention the incident to your manager if you feel it necessary to do so</li> </ol> |



*Cannabis sativa* L.

W. Müller.

# THE HISTORY OF CANNABIS

**Cannabis, also known as marijuana, is a plant that originated in Central Asia and is now grown in many parts of the world.** In essence, cannabis has been documented as a safe and effective therapeutic plant, dating all of the way back

to 2900 B.C. The Chinese emperor Fu Hsi referred to cannabis as a very popular medicine. The emperor Shen Nung, also known as the Father of Chinese medicine (circa 2700 BC), is credited with discovering the healing properties of cannabis.<sup>2</sup>

## Cannabis Timeline

|         |   |
|---------|---|
| 4000 BC | First known use of industrial hemp in China.  |
| 2900    | First known use of medical cannabis in China.   |
| 1500    | First known use of medical cannabis in the Chinese pharmacopeia.  |
| 1213    | Cannabis is used in Egypt to treat glaucoma and inflammation.   |
| 1000    | Bhang, a combination of milk and cannabis, is used in India as an anesthetic.                             |
| 200     | First reported use of medical cannabis in ancient Greece.   |
| 1 AD    | Chinese texts recommend cannabis use to treat over 100 ailments.  |
| 1611    | Industrial hemp is brought to North America by Jamestown Settlers for farming and manufacturing purposes. |
| 1745    | George Washington grows medical cannabis and industrial hemp.   |
| 1799    | Napoleonic forces bring cannabis to France and Egypt.   |
| 1840    | Cannabis becomes recognized as medicine in western society.   |

|                    |  |
|--------------------|--|
| 1850               | Cannabis added to U.S. Pharmacopeia.   |
| 1908               | Henry Ford's Model T is made from hemp plastic and powered by hemp ethanol.  |
| 1911               | Massachusetts becomes the first state to outlaw cannabis.  |
|                    | Marijuana Tax Act passed.  |
| 1937               | American Medical Association opposes Cannabis Tax Act.<br>First Federal arrest for the sale of cannabis.   |
| 1942               | Cannabis is removed from US Pharmacopeia.  |
| 1961               | United Nation's Single Convention on Narcotic Drugs includes cannabis.   |
| 1970               | The controlled Substance Act Classifies cannabis as a Schedule I drug with no accepted medical use.<br>NORML (National Organization for the Reform of Cannabis Laws) is founded. |
| 1985               | Marinol (a synthetic cannabinoid) is approved by the U.S. Food and Drug Administration.  |
| 1996               | California becomes the first State to legalize medical cannabis with proposition 215.  |
| 1998<br>to<br>2011 | The District of Columbia and 15 more states legalize medical cannabis:<br>AK, AZ, CO, DE, HI, ME, MI, MT, NJ, NM, NV, OR, RI, VT, WA   |
|                    | CT and MA legalize medical cannabis.   |
| 2012               | CO and WA are the first states to legalize recreational cannabis for regulation/taxation.  |
|                    | NH and IL legalizes medical cannabis.  |
| 2013               | Uruguay becomes the first country to legalize recreational cannabis for regulation/taxation.   |
|                    | First time legal sales of recreational cannabis takes place in the U.S. since prohibition (Colorado).  |
| 2014               | NY, MD and MN legalize medical cannabis. Medical cannabis is now legal in 23 states and DC.<br>AK, OR, DC and Guam legalize recreational cannabis.                               |

Source: <sup>5, 6</sup>

## The Medicinal Properties and Benefits of Cannabis

*"I now know that when it comes to cannabis... It does not have a high potential for abuse, and there are very legitimate medical applications. In fact, sometimes cannabis is the only thing that works... We have been terribly and systematically misled for nearly 70 years in the United States, and I apologize for my own role in that."*

~Sanjay Gupta, MD, Chief Medical Correspondent for CNN, "Why I Changed My Mind on Weed," 8/8/13<sup>18</sup>

The Cannabis Sativa L plant has two main subspecies known as Cannabis sativa and Cannabis indica. A third subspecies is Cannabis ruderalis. Cannabis sativa and Cannabis indica are used to produce both recreational and medical cannabis. Cannabis ruderalis is rarely farmed due to its natural lower THC content and small stature, however there is some cross-breeding with it.

Since hybridization is a common phenomenon, there are limitless numbers of cannabis strains. Each strain will have different medicinal properties. Canna-

bis has been crossbred so much over time that it's become very hard to find cannabis that is truly pure sativa or indica. It is likely that most of the cannabis now grown or sold in the U.S. is a hybrid with varying percentages of sativa and indica.

Their appearance and growing characteristics, as well as their contrasting physical effects, generally describe Sativa and indica. However, these generalizations can be misleading. The cannabinoids and terpenes have the most influence on the effects of cannabis.<sup>19</sup>



Cannabis indica

**SPECIES:  
CANNABIS  
SATIVA L**



Hybrid



Cannabis sativa

## What are Cannabinoids?

Cannabinoids are the therapeutic compounds and active ingredients found in Cannabis. Cannabinoids also occur naturally in the nervous and immune systems of humans and other animals.

There are three categories of Cannabinoids: Phytocannabinoids (cannabinoids), Endogenous Cannabinoids (endocannabinoid system) and Synthetic Cannabinoids. Phytocannabinoids (cannabinoids) are produced in the cannabis plant, while Endogenous Cannabinoids (endocannabinoid system) are produced in the bodies of humans and other animals. Lastly, Synthetic Cannabinoids are produced in a laboratory.

Over the years, research has identified over 100 unique cannabinoids found in the cannabis plant. However, tetrahydro-

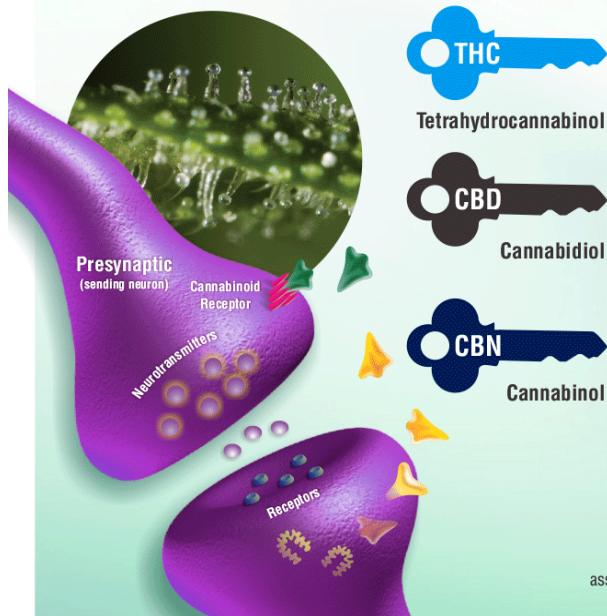
cannabinol (THC) is the most studied of the cannabinoids, followed by cannabidiol (CBD). Apart from these two cannabinoids, research has identified many others that interact with the cannabinoid receptors found in the human body. In the endocannabinoid system of humans, two cannabinoid receptors have been identified. These receptors are CB1 and CB2. There are specific properties in each cannabinoid that correlate with the endocannabinoid system to relieve specific symptoms and treat specific medical conditions.

Although Cannabinoids interact and regulate each other, they have profound physiological effects on the human body. Therefore, you may find that you prefer strains with a higher proportion of one cannabinoid to another, depending on the type of effect you are looking to achieve.

## THE HUMAN ENDOCANNABINOID SYSTEM

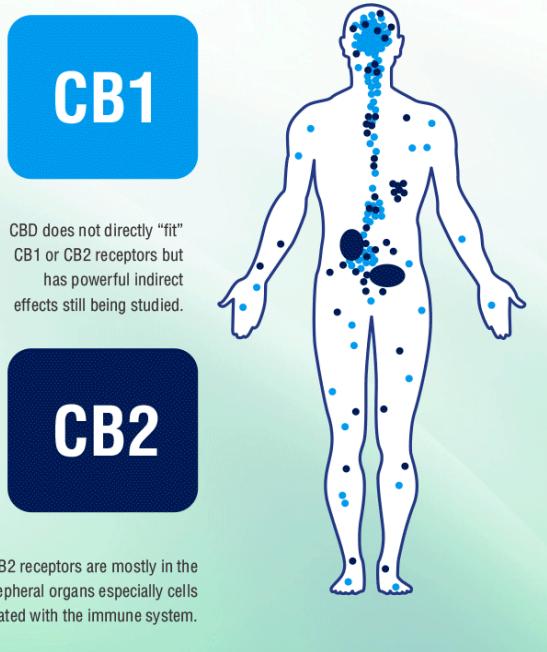
### The Human Endocannabinoid System

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, and appetite plus anti-inflammatory effects and other immune system responses. The endocannabinoid system comprises two types of receptors, CB1 and CB2, which serve distinct functions in human health and well-being.



CB1 receptors are primarily found in the brain and central nervous system, and to a lesser extent in other tissues.

### Receptors are found on cell surfaces



Courtesy of The-Human-Solution.org

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## There are eleven common cannabinoids:

THC = Tetrahydrocannabinol

CBD = Cannabidiol

CBN = Cannabinol

CBG = Cannabigerol

CBC = Cannabichromene

THCv = Tetrahydrocannabivarin

CBGa = Cannabigerolic Acid

CGCa = Cannabigerol acid

CBCa = Cannabichromenic Acid

THCa = Tetrahydrocannabinolic Acid, and

CBDa = Cannabidiolic Acid

The following table summarizes the properties of the 11 commonly discussed cannabinoids.

- 1** THC has analgesic (relieves pain), anti-emetic (reduces vomiting and nausea), anti-glaucomatous (lowers intraocular pressure), antispasmodic (suppresses muscle spasms) and appetite stimulating properties.
- 2** CBD has analgesic, antibacterial, anti-diabetic, anti-emetic, anti-epileptic, anti-glaucomatous, anti-inflammatory, anti-ischemic, anti-proliferative, anti-psoriatic, anti-psychotic, antispasmodic, anxiolytic, immunosuppressive, neuroprotective, intestinal anti-prokinetic, and bone stimulation properties.
- 3** CBN has analgesic, anti-insomnia, and anti-spasmodic effects.
- 4** CBG has anti-bacterial, anti-glaucomatous, anti-inflammatory, anti-proliferative, and bone stimulation properties.
- 5** CBC has analgesic, anti-inflammatory, anti-proliferative, antiviral and bone stimulation properties.
- 6** THCV has anorectic, anti-epileptic, and bone stimulation properties.
- 7** CBGA has analgesic and anti-inflammatory properties.
- 8** CGCA has anti-inflammatory properties.
- 9** CBCA has antibacterial and antifungal properties.
- 10** THCA has anti-inflammatory, antispasmodic, and anti-proliferative properties.
- 11** CBD-A has anti-inflammatory and anti-proliferative properties.

## Cannabinoids – Active Ingredients in Cannabis

Cannabinoids interact with and regulate each other and have profound physiological effects on the human body. Depending on the type of effect you are looking to achieve, you may find that you prefer strains with a higher proportion of one cannabinoid to another.

The following table focuses on the medicinal benefits of the 11 most common cannabinoids.<sup>22</sup>

| PROPERTIES   | THC | CBD | CBN | CBG | CBC | THC <sub>V</sub> | CBG <sub>A</sub> | CGC <sub>A</sub> | CBC <sub>A</sub> | THC <sub>A</sub> | CBD <sub>A</sub> |
|--|-----|-----|-----|-----|-----|------------------|------------------|------------------|------------------|------------------|------------------|
| Analgesic<br>(relieves pain)                                   | X   | X   | X   |     | X   |                  | X                |                  |                  |                  |                  |
| Anorectic<br>(suppresses appetite)                             |     |     |     |     |     | X                |                  |                  |                  |                  |                  |
| Antibacterial<br>(kills or slows bacterial growth)             |     | X   |     | X   |     |                  |                  |                  | X                |                  |                  |
| Anti-diabetic<br>(reduces blood sugar levels)                  |     | X   |     |     |     |                  |                  |                  |                  |                  |                  |
| Anti-emetic<br>(reduces vomiting & nausea)                     | X   | X   |     |     |     |                  |                  |                  |                  |                  |                  |
| Anti-epileptic<br>(reduces seizures & convulsions)             |     | X   |     |     |     | X                |                  |                  |                  |                  |                  |
| Antifungal<br>(treats fungal infection)                        |     |     |     |     |     |                  |                  |                  | X                |                  |                  |
| Anti-glaucomatous<br>(lowers intraocular pressure)             | X   | X   |     | X   |     |                  |                  |                  |                  |                  |                  |
| Anti-inflammatory<br>(reduces inflammation)                    |     | X   |     | X   | X   |                  | X                | X                |                  | X                | X                |
| Anti-insomnia<br>(aids sleep)                                  |     |     | X   |     |     |                  |                  |                  |                  |                  |                  |
| Anti-ischemic<br>(reduces risk of artery blockage)             |     | X   |     |     |     |                  |                  |                  |                  |                  |                  |
| Anti-proliferative<br>(inhibits tumors and cancer cell growth) |     | X   |     | X   | X   |                  |                  |                  |                  | X                | X                |

|   |   |   |   |   |   |   |   |  |   |
|---|---|---|---|---|---|---|---|--|---|
| Anti-psoriatic<br>(treats psoriasis)                                    |   | X |   |   |   |   |   |  |   |
| Antipsychotic<br>(tranquilizing, manages<br>psychosis)                  |   |   | X |   |   |   |   |  |   |
| Antispasmodic<br>(suppresses muscle spasms)                             | X |   | X | X |   |   |   |  | X |
| Anti-viral<br>(kills or slows viruses)                                  |   |   |   |   |   | X |   |  |   |
| Anxiolytic<br>(relieves anxiety)  |   |   | X |   |   |   |   |  |   |
| Appetite Stimulant<br>(stimulates appetite)                             | X |   |   |   |   |   |   |  |   |
| Bone Stimulant<br>(promotes bone growth)                                |   | X |   |   | X | X | X |  |   |
| Immunosuppressive<br>(modulates immune system<br>function)              |   | X |   |   |   |   |   |  |   |
| Intestinal Anti-prokinetic<br>(reduces small intestine<br>contractions) |   | X |   |   |   |   |   |  |   |
| Neuroprotective<br>(prevents nervous system<br>degeneration)            |   | X |   |   |   |   |   |  |   |

**THC** = Tetrahydrocannabinol;

**CBD** = Cannabidiol;

**CBN** = Cannabinol;

**CBG** = Cannabigerol;

**CBC** = Cannabichromene;

**THCv** = Tetrahydrocannabivarin;

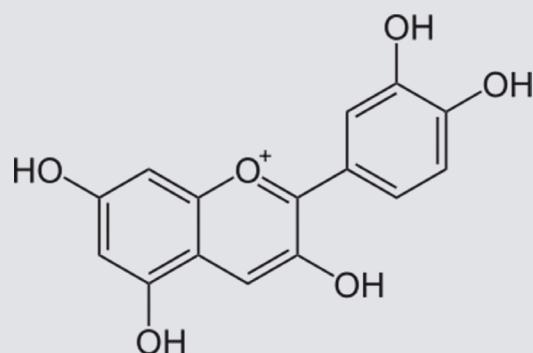
**CBGa** = Cannabigerolic Acid;

**CGCa** = Cannabigerol acid;

**CBCa** = Cannabichromenic Acid;

**THCa** = Tetrahydrocannabinolic Acid;

**CBDa** = Cannabidiolic Acid



## What are Terpenoids and Terpenes?

In addition to the cannabinoids found in cannabis, there are a few other compounds known to have some health effects, including terpenoids and terpenes. Research has identified that Terpenoids and terpenes provide a unique aroma and taste to cannabis, some plants, spices, fruits and herbs. Further research indicates that terpenoids and terpenes may produce meaningful therapeutic benefits if combined with phytocannabinoids. It is estimated that there are over 200 various terpenes and terpenoids in cannabis. The primary terpenes and terpenoids identified in cannabis include limonene, myrcene, linalool, pinene, beta-caryophyllene, nerolidol, caryophyllene oxide, phytol, eucalyptol, and  $\gamma$ -terpinene.

Limonene, an anti-depressant, is also found in citrus fruits. Myrcene, also present in thyme and hops, has anti-inflammatory, muscle relaxing, sedating and analgesic effects, as well as acting as an alfatoxins (cancer-causing) blocker. Linalool, also found in lavender and basil, has anesthetic, anti-anxiety, anti-cancer and anti-convulsing properties. Pinene, which is also found in pine nuts and needles, has anti-inflammatory properties, enhances memory and acts as a bronchodilator. Cannabis also contains Beta- $\gamma$ caryophyllene found in cloves and black pepper. The terpene protects the lining of the GI tract and has anti-malarial and anti-inflammatory properties.

| TERPENE            | FOUND IN CANNABIS and... |   | THERAPEUTIC BENEFITS   |
|--------------------|--------------------------|---|--|
| Limonene           | Citrus                   |   | Anti-depressant  |
| Myrcene            | Hops                     |  | Alfatoxins (cancer-causing) blocker<br>Analgesic<br>Anti-inflammatory<br>Muscle Relaxant<br>Sedating |
| Linalool           | Basil                    |  | Anesthetic (local)<br>Anti-anxiety<br>Anti-cancer<br>Anti-convulsant                                 |
| Pinene             | Pine Needles, Pine Nuts  |  | Aids memory<br>Anti-inflammatory<br>Bronchodilator   |
| Beta-caryophyllene | Black Pepper, Cloves     |  | Anti-inflammatory<br>Anti-malarial<br>Protects lining of GI tract                                    |

Source: <sup>28, 29, 30</sup>



*“Cannabis is the single most versatile herbal remedy, and the most useful plant on Earth. No other single plant contains as wide a range of medically active herbal constituents.”*

~Ethan Russo, MD, Senior Medical Advisor, Cannabinoid Research Institute<sup>31</sup>





# CHOOSING MEDICAL CANNABIS

**There are hundreds of strains of cannabis. While some strains can be similar, no two strains are completely alike. With so many different and unusual names, choosing the right strain of medical cannabis can be confusing for new medical cannabis patients.**

Since strain names are not always representative of the desired medicinal effects, a great way to assess effects is by knowing a strain's cannabinoid and terpene profile. Therefore, a dispensary technician should help patients in choosing the best strains for them.

## Cannabinoid and Terpene Profiling

It is important to note that every cannabis strain has a unique compound profile (cannabinoids and terpenes). This unique compound can be compared to the unique fingerprints in human beings. A specific combination of cannabinoids and terpenes can be used to predict each cannabis strain's effects. Currently, there are no comprehensive federal or state standards for strain profiling. However, many laboratories offer cannabinoid and terpene



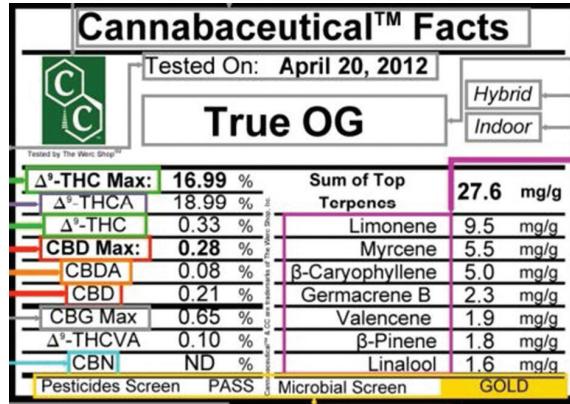
profiling services to medical cannabis growers, processors and dispensaries.

Since there is no method that has been agreed upon for naming strains based on profiles, it is possible to have identical strain names with different cannabinoid and terpene profiles depending on the region, state or dispensary. For example, a sativa-dominant strain called Sour Diesel purchased from a dispensary in Oregon may affect you differently than Sour Diesel acquired in Colorado. This is due to a number of factors, including but not limited to the growing conditions, plant genetics and even issues related to the lack of testing.

Most cannabis testing laboratories do a great job of calculating and reporting compounds in each strain. Essentially, most laboratories base the reports on scientific data and patient review data in an attempt to give a clear picture for the dispensary,

mood, reduces depression, relieves nausea, stimulates/energizes the body and relieves headaches/migraines. This strain is commonly known as “Daytime” cannabis.

The strain characteristics and effects of Indica mainly affect the body, provides



### Sample Labels provided by Laboratories

and ultimately, for the consumer. All laboratories that conduct terpene profiling have to include this information on their labels. In fact, some state laws require this type of labeling. The figures below are sample labels that were provided by the laboratories.

relaxation/reduces stress, aids in sleeping, reduces headaches/migraines, reduces anxiety, reduces muscle spasms, reduces intra-ocular pressure, reduces nausea/stimulates appetite, reduces seizure frequency/anti-convulsant, and reduces pain/inflammation. This strain is commonly known as “Nighttime cannabis.”

The strain characteristics and effects of hybrids can be classified into Sativa-dominant, Even Hybrids (50/50) and

Indica-dominant. For Sativa-dominant, the characteristics and effects include stimulating the appetite and increasing muscle relaxation. The main characteristics and effects of Even Hybrids are the balancing of mind and body effects. Lastly, the main characteristics and effects of Indica-dominant include mind relaxation and pain relief.



The following table is a generalization of the effects of the subspecies of cannabis.

|         | SATIVA  | INDICA  | HYBRID  |
|---------|---|---|---|
| EFFECTS | <ul style="list-style-type: none"> <li>➤ Mainly affects mind</li> <li>➤ Increased focus/creativity</li> <li>➤ Increased sense of well-being</li> <li>➤ Increases appetite</li> <li>➤ Elevates mood</li> <li>➤ Reduces depression</li> <li>➤ Relieves headaches/migraines</li> <li>➤ Relieves nausea</li> <li>➤ Stimulating/energizing</li> <li>➤ Known as “Daytime” cannabis</li> </ul> | <ul style="list-style-type: none"> <li>➤ Mainly affects body</li> <li>➤ Helps sleep/sedating</li> <li>➤ Provides relaxation/reduces stress</li> <li>➤ Reduces anxiety</li> <li>➤ Reduces headaches/migraines</li> <li>➤ Reduces intra-ocular pressure</li> <li>➤ Relaxes muscles/spasms</li> <li>➤ Reduces nausea, stimulates appetite</li> <li>➤ Reduces pain/inflammation</li> <li>➤ Reduces seizure frequency/anti-convulsant</li> <li>➤ Known as “Nighttime” cannabis”</li> </ul> | <p>Sativa-dominant:</p> <ul style="list-style-type: none"> <li>➤ Maintains energy</li> <li>➤ Stimulates appetite</li> <li>➤ Increases muscle relaxation</li> </ul> <p>Even Hybrids (50/50):</p> <ul style="list-style-type: none"> <li>➤ Balance of mind and body affects</li> </ul> <p>Indica-dominant:</p> <ul style="list-style-type: none"> <li>➤ Effective for pain relief</li> <li>➤ Mind relaxation</li> </ul> |

Source: <sup>33</sup>

## High-CBD Strains

Recently, High-CBD strains are another category of strains that are increasing in popularity since they have medicinal properties that come with less psychoactive effects. Some of the medicinal effects of High-CBD strains include anti-anxiety, anti-tumor, anti-seizure, anti-inflammatory, pain relief and cancerous tumor reduction. Essentially, these strains are suitable for patients who want the medicinal benefits without the impairment, especially for patients who need to drive or work.

Cannabinoids are one of more than 60 chemical compounds found in cannabis that makes the CBD. However, CBD stands out since it has various me-

dicinal benefits with less mind-altering effects. Patients who use strains with high CBD and low THC have enjoyed the therapeutic benefits of cannabis without experiencing the feeling of being ‘high’. As a result, breeders are currently working on the creation of different high-CBD cannabis to be used by patients.

In the past, medicinal growers have created two strains that have high levels of CBD. The strains are Charlotte’s Web and Avidekel. Charlotte’s Web is thought to have the highest level of CBD strain since it has 20% CBD and less than 0.5% THC. Avidekel has 15.8 to 16.3% CBD and 0% THC. Research has indicated that Avidekel has been used in the treatment of various illnesses with minimal side effects.

## Product Safety and Quality Standards

In addition to testing for cannabinoids and terpenes, laboratories also test for contaminants such as pesticides, mold and residual solvents. Some states have standards and restrictions for pesticides, microbial contaminants (fungi, bacteria, etc.), and other contaminants. Some states require testing to show compliance.

The American Herbal Products Association (AHPA) Cannabis Committee has developed regulatory guidelines for cannabis cultivation and processing, manufacturing, laboratory analysis and distribution (dispensaries).<sup>34</sup> These

guidelines, combined with the recently released American Herbal Pharmacopoeia (AHP) Cannabis Monograph and Therapeutic Compendium<sup>35</sup>, provide vigorous product safety standards.

Americans for Safe Access (ASA) developed the Patient Focused Certification (PFC) program<sup>36</sup> as a nonprofit, peer-reviewed, third-party certification for the medical cannabis industry. PFC is based on the standards set by the AHPA and AHP. The PFC seal is awarded to cannabis businesses that meet the state and local regulatory standards and the AHPA and AHP standards, as well as the PFC required training components. Businesses and products with the PFC label assure patients that safety and quality have been verified. Therefore, each dispensary will determine its level of participation in product safety and quality standards.

## Dispensary Inventory

### Cannabis Flower

The Dispensary will maintain an inventory of 10-15 of the best quality cannabis strains available. The Operations Director and General Manager are responsible for maintaining an inventory of cannabis and cannabis products which are capable of meeting patient demand. The General Manager will ensure that an ample supply of indica-dominant, sativa-dominant, hybrid and high-CBD varieties of flower are available in the dispensary. It is imperative that the dispensary has a wide variety of strains to serve the broad needs of its patient population. The variety of strains that the Dispensary will aim to have is as follows:

| Strain          | # of Varieties |
|-----------------|----------------|
| Indica-Dominant | 3-4            |
| Sativa-Dominant | 2-3            |
| Hybrid          | 3-4            |
| CBD-Dominant    | 2              |

### Concentrates

Beyond cannabis flower, the Dispensary will also seek to provide its patients with cannabis concentrates and extracts suitable for smoking or vaporizing, such as CO<sub>2</sub> and butane, or ethanol extracted hash oils, hashish and waxes. These products are capable of delivering a concentrated dose of cannabinoids without gestation of the plant material. Additionally, the dispensary will stock smoking accessories such as glass pipes, rolling papers and vaporizers.

### Edibles and Infusions

For patients unable or unwilling to smoke cannabis, the dispensary will also offer a full line of edibles, beverages, topicals (salves,

creams, balms, etc.), tinctures and other delivery methods that are available on the market. Products such as these allow patients to administer doses discreetly, without the unpleasant smell of smoke that normally accompanies cannabis consumption.

### Paraphernalia

There are numerous ways to medicate with cannabis; it is generally a personal decision as to how one chooses to do so. Some methods can be more beneficial than others depending on the medical condition. The dispensary will carry a wide variety of non-cannabis related products to cater to the specific needs of all of its patients, making medical cannabis a legitimate option for a larger number of patients suffering from qualifying conditions.

### Miscellaneous Products

Other products related to cannabis consumption will include humidors, infusers and other storage and preparation equipment. In an effort to provide a holistic experience for patients, the dispensary will stock various books on the topics of medical cannabis, healthy lifestyles and other health-related issues.

### Choosing a Strain

There are many factors that impact the effect of medical cannabis, including:

- Strain of cannabis used and method of consumption
- Amount used (dosage)
- Environment and setting
- Experience and history of cannabis use
- Mindset or mood
- Nutrition or diet
- Metabolism

It typically requires a certain amount of trial and error for patients to determine how different strains will affect them and which work best for their condition. The dispensary technician will help the patient to explore a variety of strains. In essence, the dispensary technician will recommend that the patient try small amounts of different strains. However, you should encourage them to keep a log of the strains that they have tried and the effects (see Appendix C). While strain names and varieties vary throughout the country, there are some strains and conditions that will help one patient more than the next. Therefore, each dispensary will determine the type of strain to carry. Several websites (see Appendix D) provide reviews and details of strains, including plant genetics. The following is an example of strains and their reported symptoms/conditions. This list is not an all-inclusive list, but it does provide a starting point to use when discussing strains with the patient or caregiver.

| STRAIN NAME            | SYMPTOM / CONDITION  |
|------------------------|--|
| AK 47                  | Depression, Headache, Insomnia, Nausea, Pain                             |
| Chronic                | Anti-emetic, Appetite Stimulant, Muscle Spasms                           |
| Dynamite               | Asthma, Crohn's, Hepatitis C   |
| East Coast Sour Diesel | ADD/ADHD, Anxiety, Arthritis, Asthma, Edema, Epilepsy, Fibromyalgia, PMS |
| Green Queen            | Epilepsy, Neck/Spine Pain  |
| Medicine Woman         | General Pain, Glaucoma, Muscle Spasms, Seizures                          |
| Super Silver Haze      | Arthritis, Bladder Problems, Restless Leg Syndrome                       |
| Trainwreck             | MS, Neuropathy Pain  |
| White Widow            | Cachexia, Hepatitis C, PT Security Director                              |



# MEDICATING WITH CANNABIS

*“The evidence is overwhelming that cannabis can relieve certain types of pain, nausea, vomiting and other symptoms caused by such illnesses as multiple sclerosis, cancer and AIDS -- or by the harsh drugs sometimes used to treat them with remarkable safety. Indeed, cannabis is less toxic than many of the drugs that physicians prescribe every day.”*

~Joycelyn Elders, former Surgeon General under President Clinton<sup>39</sup>

## Proceed with Caution

The dispensary technician should understand the different types of patients in which to offer the best advice regarding the best strain and method of medicating. First, the dispensary technician should ask whether the patient is a first-time user. In such a case, the dispensary technician should advise the patient to use the medication in a safe and familiar environment. The technician or dispensary technician can advise the patient to invite a trusted friend before the patient starts medicating. Essentially, the dispensary technician should offer advice related to the activities that an individual likes. However, the dispensary technician should emphasize the importance of a relaxed environment for first-time users. Further, the dispensary technician should inform the patients that the onset of effects might take longer than they expect. Conse-

quently, they can recommend a medication log to the patients for tracking the optimal treatment regimen (see Appendix C).

## Conditions Requiring Special Attention

While cannabis is safe by many standards, some conditions require careful consideration before one medicates them with cannabis.

**Anxiety:** Cannabis can either relieve or worsen anxiety. Thus, choosing a strain known to relieve anxiety and using it in low dosages is recommended. Additionally, using the method of medicating with a slower onset of effects can prevent negative side effects.

**Asthma, COPD:** Patients with respiratory-related conditions may not be able to tolerate cannabis if they smoke it. How-

ever, they may tolerate vaporizing. If concerned about lung irritation, cannabis may be ingested or taken sublingually.

**Blood Pressure-related Conditions:** Cannabis can cause an occasional drop in blood pressure. Dizziness may occur in patients with blood pressure-related conditions. Use caution when medicating with cannabis.

**Hepatitis C:** Cannabis can relieve the nausea, pain and other symptoms associated with hepatitis C and the drugs used to treat it. There are differing opinions among experts regarding the therapeutic use of cannabis in treating hepatitis C. However, research does suggest that using a high-CBD strain and medicating in low doses may be beneficial for patients.

**Mental Illness:** Cannabis has been very successful in treating psychiatric conditions, including ADD/ADHD, bipolar disorder, depression and PTSD. However, in some patients, especially those predisposed to psychiatric conditions, cannabis can worsen these conditions. When first medicating with cannabis, patients should do so in a familiar and relaxing environment until the effects are known. It is essential to invite a trusted person to be with you. A high-CBD strain in low doses may decrease the risk of unpleasant side effects.

## Methods of Medicating

There are numerous ways to medicate with cannabis. Each method will have slightly different effects, even when using the same strain of cannabis. Some methods can be more beneficial than others depending on the medical condition. Additionally, each method will differ in the time of onset, the effects, and the duration of effects.

## Inhalation



Inhalation involves smoking or vaporization. One can smoke cannabis as a joint, in a pipe, using a bubbler, with a water pipe or by using a steamroller. Smoking is the easiest way to find and provide immediate relief. Additionally, the paraphernalia (rolling papers and pipes) are inexpensive. Steamrollers provide larger hits, while bubblers and bongs provide filtration with water for smoother hits. However, this method can be harsh and it can agitate asthma and other lung conditions. Furthermore, inhalation leads to the loss of terpenes and cannabinoids, which lowers the economic value of the medicine.

Burning can lead to the inhalation of tar and other carcinogens. It may also lead to the inhalation of butane from lighters or chemicals contained in burning matches. It also exposes one to a possible inhalation of mold spores in case the mechanism of delivery is not cleaned properly.



## Vaporization

Vaporization involves heating cannabis to a high temperature, leading to the vapor-



ization of the medicine. It can be done in fixed and portable vaporizers. The method is economical because a high proportion of the medicine is consumed. Additionally, the medicine takes effect fast and provides relief within 2 to 3 hours. The method also provides an easy way of judging the dosage. It is a healthier alternative to smoking. However, the equipment can be expensive. The relief offered lasts for a shorter period, which demands continued usage. The mechanisms may be hard to clean leading to the possible inhalation of mold spores.

## Ingestion

Ingestion involves the use of edibles/medibles such as oil and butter, baked products, candies, juices, beverages and other miscellaneous foods. It can also include the use of tablets/capsules. The effect of edibles/medibles may be more pronounced than smoked cannabis. An individual should use small amounts in increasing doses. It is a safer method since it causes no health problems associated with smoking. Edibles and medibles can be consumed anywhere without caus-



ing suspicion. The method also provides longer lasting effects. Juicing reduces the psychoactive effects associated with cannabis. However, the products must be kept away from children and may not be suitable for patients experiencing nausea and lack of appetite. One should also consider food allergies while consuming edibles and medibles. The long lasting effect may not be suitable for all situations.

The ingestion of tablets/capsules can involve whole plant or synthetic THC. The method is convenient, has high potency and offers an easy prediction of the dosage. However, capsules can take long to digest/dissolve. The effectiveness of the method depends on metabolism, weight and eating habits. Synthetic THC provides a relaxed feeling, but may induce drowsiness or cause anxiety, nausea and paranoia. Synthetic THC does not elicit effective results as compared to the whole plant.

Oral mucosal or sublingual methods involve the administration of medicine in the mouth or under the tongue by using sprays and tinctures. The method has higher potency and acts as an effective sedative. Additionally, it offers more predictable dosing with immediate effects that last for longer periods of time. The drug can act fast or slow depending on how it is taken. It causes no lung or throat irritation. However, the effectiveness of the method depends on one's metabolism, weight and eating habits. The use of tinctures may conflict with some patient's beliefs since tinctures contain traces of alcohol. Therefore, the taste of tinctures may be unpleasant. Additionally, alcohol can evaporate, thus increasing the strength of the remaining tincture.

## Transdermal or Topical

Transdermal or topical administration involves the application of body oils, salves, lotions and creams. The method is highly effective for skin conditions, muscle stiffness and also muscle and joint pain. Additionally, the method does not cause psychotic effects. However, the potency of the medicine is limited since external application does not treat the conditions that are treatable through ingestion.



| METHOD                  | ONSET OF EFFECTS  | PEAK   | DURATION OF EFFECTS   |
|-------------------------|---|--|---|
| Inhalation              | 1-5 minutes<br>A small graphic of a clock face with the hands pointing to 12 o'clock, indicating immediate onset of effects.                    | 30 minutes<br>A small graphic of a clock face with the hands pointing to 1:00, indicating peak effect at 30 minutes. | 1-4 hours<br>A small graphic of a clock face with the hands pointing to 4:00, indicating duration of effects up to 4 hours. |
| Ingestion               | 1-2 hours<br>A small graphic of a clock face with the hands pointing to approximately 1:30, indicating onset of effects around 1-2 hours.       | 2-3 hours<br>A small graphic of a clock face with the hands pointing to 3:00, indicating peak effect at 2-3 hours.   | 6-8 hours<br>A small graphic of a clock face with the hands pointing to 8:00, indicating duration of effects up to 8 hours. |
| Oral Mucosal/Sublingual | 5-60 minutes<br>A small graphic of a clock face with the hands pointing to approximately 1:30, indicating onset of effects around 5-60 minutes. | 1-2 hours<br>A small graphic of a clock face with the hands pointing to 3:00, indicating peak effect at 1-2 hours.   | 1-6 hours<br>A small graphic of a clock face with the hands pointing to 6:00, indicating duration of effects up to 6 hours. |
| Transdermal/Topical     | Varies  | Varies   | Varies  |

There are pros and cons to all of these methods. It is generally a personal decision as to how one medicates with cannabis. Patients should discuss each of these methods with their healthcare provider and the dispensary staff to help determine which method is best for them.

The table in the next few pages highlights the pros and cons of the different types of devices and mechanisms used by each method of medicating with cannabis. Therefore, you should consult with dispensary staff on how to use and properly care for the devices that you decide to purchase.

| METHOD   | DEVICE(S)   | PROS  | CONS  |
|--|---|---|---|
| <b>INHALATION – Smoking</b>  |   |   |   |
| Cannabis is burned.  | Joint<br>                | <ul style="list-style-type: none"> <li>➤ The easiest way to find the appropriate dosage.</li> <li>➤ Provides immediate relief</li> <li>➤ Rolling papers (chemical-free recommended) are inexpensive</li> </ul>  | <ul style="list-style-type: none"> <li>➤ Can be harsh</li> <li>➤ Can agitate asthma and other lung conditions</li> <li>➤ Burning causes significant loss of terpenes and cannabinoids--less economical</li> </ul>   |
|  | Pipe<br>                 | <ul style="list-style-type: none"> <li>➤ Pipes (glass recommended) are inexpensive</li> <li>➤ Steamrollers provide larger hits</li> <li>➤ Bongs and bubblers provide filtration with water, smoother hits</li> </ul>  | <ul style="list-style-type: none"> <li>➤ Burning can result in the inhalation of tar and carcinogens</li> <li>➤ May result in the inhalation of butane from lighters or chemicals from burning matches</li> <li>➤ Possible inhalation of mold spores, if mechanisms are not cleaned properly</li> <li>➤ Some mechanisms can be difficult to clean—check the instruction manual for cleaning tips</li> </ul> |
|  | Steamroller<br>          |   |   |
|  | Water Pipe<br>           |   |   |
|  | Bubbler<br>            |   |   |
| <p><b>Note:</b> Due to the dangers of tobacco, spliffs (mixed with tobacco) and blunts (rolled with tobacco) are not recommended as a form of medicating.</p>                              |   |   |   |
| <b>INHALATION – Vaporization</b>   |   |   |   |
| Cannabis is heated at a high temperature causing evaporation and creating a vapor.   | Vaporizer<br>          | <ul style="list-style-type: none"> <li>➤ Heats instead of burns</li> <li>➤ Higher proportion of medicine consumed—more economical</li> <li>➤ Quick to take effect</li> <li>➤ Relatively easy to judge dosage</li> <li>➤ Predictable 2 to 3 hours of relief</li> <li>➤ Healthier alternative to smoking</li> </ul> | <ul style="list-style-type: none"> <li>➤ Equipment can be expensive</li> <li>➤ A short relief period may require continued use</li> <li>➤ Mechanisms may be difficult to clean</li> <li>➤ Possible inhalation of mold spores if mechanisms are not cleaned properly—check the instruction manual for cleaning tips</li> </ul>   |
|  | Portable Vaporizer<br> |   |   |
| <p><b>Note:</b> Because the vapor is not felt in the lungs like smoke, it's possible to take too many puffs. Wait a few minutes between puffs until you are accustomed to this method.</p> |   |   |   |

**WARNING:** The proper cleaning of inhalation devices is critical to prevent mold spores and other contaminants. ALWAYS follow manufacturer's instructions.

| METHOD   | DEVICE(S)  | PROS   | CONS  |
|--|--|--|---|
| <b>INGESTION – Edibles/Medibles</b>  |  |  |   |
| ➤ Effects may be more pronounced than smoked cannabis, both physically and mentally.               | Oil and Butter<br>                          | ➤ Safer method to utilize medicinal aspects<br>➤ None of the known health problems associated with smoking                                     | ➤ Longer to take effect<br>➤ Difficult to gauge dosage<br>➤ Slow onset can lead patients to consume more than is needed<br>➤ Elevated doses can be uncomfortable, causing panic or vomiting   |
| ➤ Small amounts should be ingested and then increased gradually until proper dosing is determined. | Baked Goods<br>                             | ➤ Can be consumed anywhere without being conspicuous<br>➤ Longer lasting effects: doesn't require continued dosing throughout the day or night | ➤ Food allergies must be taken into consideration   |
|  | Candy<br>                                   | ➤ Juicing provides some benefits without the psychoactive effects  | ➤ May not be suitable for patients experiencing nausea or lack of appetite  |
|  | Beverages<br>                               |  | ➤ Edibles often contain large quantities of sugar, fat, and other highly processed ingredients.   |
|  | Misc. Foods<br>                           |  | ➤ Long lasting effect (6-10 hours) may not be suitable for every situation  |
|  | Juicing<br>                               |  | ➤ Edibles must be kept away from children or others who may unknowingly consume the cannabis.   |
| <b>INGESTION – Tabs/Capsules</b>   |  |  |   |
| ➤ Swallowed  | Whole Plant<br>                           | ➤ Convenient<br>➤ Higher potency<br>➤ More predictable dosing<br>➤ Marinol is legal in all 50 states<br>➤ Relaxed calm feeling                 | ➤ Capsules can take longer to digest/dissolve<br>➤ Effectiveness depends on weight, metabolism, and eating habits.<br>➤ Not as effective as the whole plant<br>➤ Can cause social anxiety and mild paranoia<br>➤ Induces drowsiness |
|  | Synthetic THC<br>Dronabinol (Marinol)<br> |  |   |

| METHOD                                     | DEVICE(S)  | PROS  | CONS  |
|--|--|---|---|
| <b>ORAL MUCOSAL/SUBLINGUAL</b>             |  |   |   |
| ➢ Applied in mouth or under the tongue     | Sprays<br><br>          | ➢ Higher potency<br>➢ Effective as a sedative<br>➢ More predictable dosing<br>➢ Discreet<br>➢ Provide immediate relief<br>➢ Long-lasting effects<br>➢ Fast or slow onset depending on how it is taken<br>➢ No throat and lung irritation from smoking<br>➢ Easy to measure doses once the required number of drops is known | ➢ Effectiveness depends on weight, metabolism, and eating habits.<br>➢ May conflict with some patients' beliefs as tinctures contain some amount of alcohol<br>➢ Some consider the taste to be quite unpleasant<br>➢ Alcohol can evaporate, increasing the strength of the remaining tincture |
|  | Tincture<br><br>        |   |   |
| <b>TRANSDERMAL/TOPICAL</b>                 |  |   |   |
| ➢ Applied to and absorbed through the skin | Body Oil/Salve<br><br> | ➢ Effective for skin disorders, muscle stiffness and muscle and joint pain<br>➢ Least likely to cause psychoactive effects<br>➢ One will not experience the euphoric "high" feeling, rather, only local pain relief.  | ➢ The potency is limited<br>➢ External application will not treat certain symptoms treatable only by the ingestion of cannabis<br>➢ Local pain relief without euphoric "high"   |
|  | Lotion/Cream<br><br>  |   |   |

**WARNING:** Due to slow onset of effects when consuming medical cannabis as an edible, capsule, spray, or tincture, one should take in small amounts gradually increasing to determine proper dosing. Ingesting too much at once may cause unpleasant side effects.

## Concentrates

Concentrates, also known as resins and extracts, are created through different techniques. They are extracted from the resin-filled glands that form on the cannabis plant called trichomes. These trichomes contain the majority of the THC in a cannabis plant. Modern technology has enabled refined methods of creating products with very high THC content. Concentrates are extremely potent.

### Types of Concentrates:

KIEF is powder sifted from loose, dry flowers. Cold pressed is a compressed puck

of the powder. These can be smoked, vaporized or used in edibles.

Hashish, also known as hash, is compressed or concentrated resin glands (trichomes). They can be smoked, vaporized or used in edibles.

Hash oil/Honey oil is a mix of essential oils and resins extracted from mature cannabis plants. This oil can be smoked, vaporized, used in edibles or simply rubbed on the gums.

Ear Wax is hash oil that has been whipped to add more oxygen. It is a more stable and highly potent concentrate. These are best used when vaporized.

## TYPES OF CONCENTRATES

**KIEF** – powder sifted out from loose, dry flowers. Cold pressed is a compressed puck of the powder.

Can be smoked, vaporized or used in edibles.



**Hash oil/Honey oil** – a mix of essential oils and resins extracted from a mature cannabis plant.

Can be smoked, vaporized, used in edibles or simply rubbed on the gums.



**Hashish or hash** – compressed or concentrated resin glands (trichomes).

Can be smoked, vaporized or used in edibles.



**Ear Wax** – hash oil that has been whipped to add more oxygen. A more stable, highly potent concentrate.

The best method is vaporization.



**WARNING:** Concentrates are extremely potent. Great care should be used in consuming them. It is easy to consume too much, which can lead to unpleasant side effects.

## The Different Kinds of Users

### The Reoccurring User

A reoccurring user refers to a repeat client. Essentially, one moves from a first-time user to a reoccurring user. Reoccurring users usually understand their conditions and the strains that they require. Consequently, the dispensary technician does not have to explain to them the different strains available in the dispensary.

### Re-sensitization

Low doses of cannabis lead to the sensitization and up-regulation of the cannabinoid system. However, at high doses the system down-regulates and the person becomes tolerant. Therefore, consuming excessive medical cannabis may overstimulate the cannabinoid receptors, which desensitizes them to high doses. Desensitization means that the person may not experience the intended benefits of the medication. Re-sensitization refers to the reversion of the receptor's stimulation. Therefore, a re-sensitized user is one who has undergone tolerance but regained sensitivity to the medication after a tolerance break (T-break).

### Tolerance

Tolerance refers to the situation in which an individual's brain adapts to the continued presence of a drug. This results in the individual requiring higher subsequent doses in order to acquire the effects similar to those of the initial dose. Classically, tolerance is associated with dependence, and withdrawal symptoms reflect the inability to function without the drug.

Although cannabis use can cause tolerance, medical cannabis is rarely associated with the condition. This is partly

because the use of medical cannabis is highly regulated. In addition, the use of cannabis in high dosages rarely occurs, meaning that dispensaries don't often deal with such cases. However, patients should understand that tolerance among patients varies. Therefore, a dispensary technician should identify a tolerant user in order to recommend the best way to reduce tolerance.

Since it is hard to lower tolerance beyond the original base level, a tolerant user can lower tolerance to cannabis. The best advice a dispensary technician should offer the patient entails cutting the amount and frequency of cannabis intake. Further, the dispensary technician can direct the patient back to the doctor who can then review the situation and make recommendations. A doctor may recommend a tolerance break (T-break) or complete withdrawal from the treatment if the medication is causing other problems.

### Dosing

Cannabis has a wide margin of safety, which means that it has a low risk of causing deaths due to overdose. However, dosing is essential to achieving the optimal effect for the targeted condition. Different methods of administration (inhalation, sublingual delivery, topical application and oral ingestion) require different dosing. An experienced cannabis user can titrate or regulate the dose to obtain the desired effect while minimizing the side effects. Oral administration of medical cannabis has different pharmacokinetics as compared to inhalation since it has a delayed onset of action.



When evaluating THC as the desired active compound, some clinicians have come up with recommendations for the daily dosage as illustrated below:

| Strength of Cannabis<br>(assuming negligible<br>canabidiol) | Daily dosage<br>of cannabis<br>corresponding to 2.5<br>- 90 mg of THC |
|---|---|
| 10% THC   | .15 g. 5.55g  |
| 15% THC   | .12 g. 3.69g  |
| 20% THC   | .08 g. 2.79g  |
| 25% THC   | .04 g. 2.25g  |
| 30% THC   | .01 g. 1.86g  |

However, smoking does not have a reliable dosage. For this reason the dispensary technician should not recommend any dosage because the dosage depends largely on the individual's medical condition and tolerance to any side effects.

### The Role of Recommendation

In medical cannabis, it is worth distinguishing between a prescription, recommendation and a medical cannabis card. Often, people carrying medical cannabis cards or recommendations call that a prescription for the use of medical cannabis. However, this is incorrect. Since cannabis is illegal under federal law, doctors are prohibited from prescribing it as a drug. In contrast, doctors should recommend it to patients if they feel that it will benefit them. In essence, the doctor should write a letter explaining that the diagnosis of the patient shows that the use of medical cannabis would be beneficial over other forms of treatment. Such a recommendation stays valid as long as the doctor continues treating the patient. The regulations on holding such recom-

mendations vary from one state to another. In some states, the patient should register with the state government to acquire a medical cannabis card for use in the acquisition of medical cannabis from dispensaries. Essentially, patients should know that the recommendation or medical cannabis card is the only avenue for the acquisition of medical cannabis. Therefore, any incidence of a clinic or doctor claiming to write medical cannabis prescriptions should be treated as fraud. The recommendation should be renewed yearly and should be carried everywhere in case that the patient remains in possession of cannabis.

### Product Care

The potency of medical cannabis may decline with poor handling. Therefore, the dispensary technician should understand the dos and don'ts in the care of the product. Safe handling of the products maintain the quality and potency of cannabis. Therefore, the dispensary technician should clean his or her hands thoroughly before handling medical cannabis. In addition, handlers should cover their mouths with a tissue or at least their elbow when sneezing or coughing while in proximity to the product. A dispensary technician with an infectious disease should avoid handling any medical cannabis product because he or she could pass the disease to the co-workers or patients. Afterwards, technicians should always remember to wash their hands.

Some edibles require refrigeration since they may spoil under normal conditions. Other products such as tinctures require storage in food-safe containers in dark and dry conditions away from direct sunlight. The glass jars that hold medical

cannabis should not be left open while on display. Additionally, the containers that remain unused for prolonged periods should be vacuum-sealed. When it comes to product care, the dispensary should also ensure appropriate packaging which includes a childproof container. Childproofing ensures that children below the age of five cannot open the container.

Medical cannabis requires the uttermost cleanliness. Therefore, the dispensary technician should ensure the highest standards of cleanliness for the equipment used in handling medical cannabis. Shelves and counters in which the dispensary technician places the products should be dust-free. Safe handling is crucial in maintaining the quality and potency of the product. The surfaces and equipment used for handling medical cannabis products should be thoroughly cleaned.

### **Recommendations and Methods of Use for Specific Conditions**

Different strains of medical cannabis elicit dissimilar effects on the users. The strain varieties may vary from one state to another despite having the same name. The variety depends on the breeders who bred it. Some of the common strains include AK 47, Sour Diesel, Green Queen, Medicine Woman, Super Silver Haze, Trainwreck, Blueberry, Jack Herer, Gas, Skunk and Chocolate Chunk among others. Strain names and varieties vary from one state to another. However, some common strains have been identified in relation to the conditions that they treat.

#### **For example:**

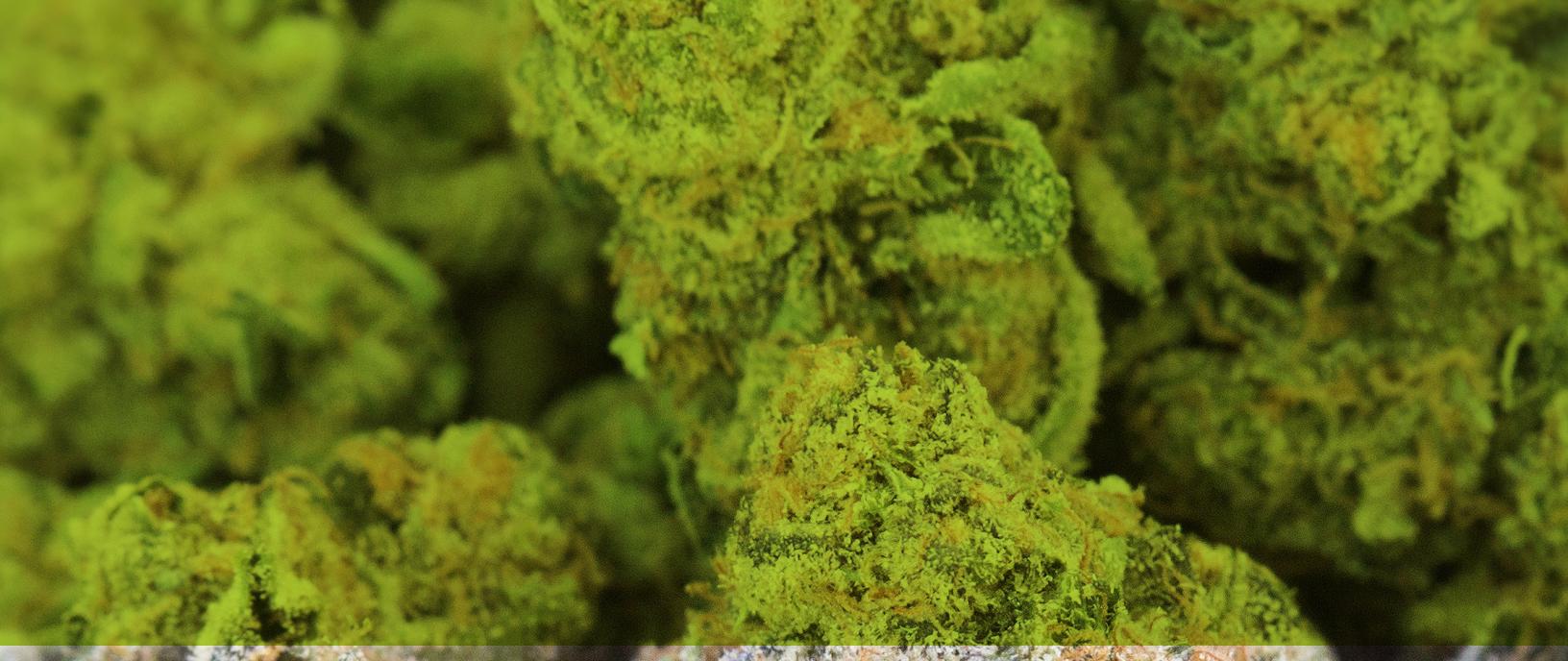
AK 47 helps in the treatment of depression, insomnia, pain and nausea.

Chronic acts as an anti-emetic, appetite stimulant and prevents muscle spasms. Dynamite is commonly used in the treatment of Hepatitis C, Crohn's syndrome and asthma. The East Coast Sour Diesel commonly treats arthritis, ADD/ADHD, anxiety, edema, asthma, epilepsy, PMS and fibromyalgia. Green Queen helps in the treatment of neck and spine pain, as well as epileptic conditions. Medicine Woman treats glaucoma, general pain, muscle spasms, and seizures. Super Silver Haze treats bladder problems, arthritis, and rest leg syndrome.

Trainwreck helps in the treatment of neuropathy pain and MS. White Widow helps hepatitis C, Cachexia and Post-traumatic stress disorder. Girl Scout is a polyhybrid often used in baked products, has high cerebral effects and is commonly used in the treatment of insomnia, anxiety and inducing appetite. The Northernberry, an indica-dominant strain, is usually administered through inhalation and treats insomnia, pain and induces appetite.

Gas, a sativa-dominant strain, is an A+ strain with a strong fruity smell. The strain suits the treatment of cancer, AIDS, nausea and vomiting. Administration through edibles is discouraged because most of the conditions it treats are related to vomiting. The Sleestck X Skunk strain is a sativa-dominant variety whose potency is effective in treating anxiety, nausea, chronic pain and has been found highly effective for Chron's patients.

In the classification and recommendation of different strains, the dispensary technician should explain whether the strain is indica-dominant or sativa-dominant. The two varieties have different effects that help in treating specific conditions.



# SIDE EFFECTS

*“[E]xcept for the harms associated with smoking, the adverse effects of cannabis use are within the range of effects tolerated for other medications.”*

~The 1999 Institute of Medicine Report<sup>45</sup>

**Like all medicines, medical cannabis may cause certain side effects.** However, cannabis side effects are much milder and more manageable than those that come with traditional medicines. In rare cases, after consuming large doses of cannabis by food or drink, individuals may experience acute complications such as anxiety attacks, temporary psychosis or convulsions. However, unlike thousands of other medicines, there has never been a death attributed solely to cannabis overdose.<sup>46</sup>

## Common Negative Side Effects

When comparing the side effects commonly associated with pharmaceuticals to the side effects of cannabinoids, it is clear that cannabinoids are more easily tolerated by the human body.<sup>47, 48, 49</sup>



## Managing Negative Effects

Most of the negative effects of cannabis are mild and short-term. Additionally, it is common for the psychoactive effects to decrease with prolonged use. Many negative effects can be reduced or eliminated by adjusting dosage, changing the delivery method or using another strain. There are also many other simple ways to alleviate unwanted side effects.

| COMMON PHARMACEUTICALS* | COMMON NEGATIVE SIDE EFFECTS       | CANNABINOIDs  |
|-------------------------|------------------------------------|---------------|
| X                       | Dizziness                          | X             |
| X                       | Drowsiness                         | X             |
| X                       | Dry Mouth or Thirst                | X             |
| X                       | Giddiness                          | X             |
| X                       | Heart palpitations                 | X             |
| X                       | Hunger                             | X             |
| X                       | Insomnia                           | X             |
| X                       | Loss of appetite                   | X             |
| X                       | Red Eyes                           | X             |
| X                       | Respiratory Issues                 | X (if smoked) |
| X                       | Short-Term Memory Loss             | X             |
| X                       | Uneasiness or Anxiety              | X             |
| X                       | Aggression                         |               |
| X                       | Candidiasis                        |               |
| X                       | Constipation or Diarrhea           |               |
| X                       | Headache                           |               |
| X                       | Hearing Loss                       |               |
| X                       | Hypotension                        |               |
| X                       | Increased Bleeding                 |               |
| X                       | Kidney or Liver Damage             |               |
| X                       | Muscle cramps, spasms, or weakness |               |
| X                       | Nausea or vomiting                 |               |
| X                       | Shortness of Breath                |               |
| X                       | Suicidal Thoughts                  |               |

\*Vicodin, OxyContin, Prozac, Zoloft, Paxil, Xanax, Ambien, aspirin, acetaminophen, ibuprofen

| SIDE EFFECT            | REMEDY/SOLUTION  |
|------------------------|--|
| Drowsiness             | Consume in the evening or before you go to bed. Try a different strain (sativa-dominant).        |
| Dry Mouth or Thirst    | Drink non-carbonated, sugarless fluids.  |
| Giddiness              | Adjust medication times to not interfere with activities where giddiness would be inappropriate. |
| Hunger                 | Keep healthy food nearby. Avoid unhealthy snacks.  |
| Insomnia               | Reduce dosage. Avoid taking before bedtime. Try a different strain (indica-dominant).            |
| Red Eyes               | Will disappear on its own. Use eye drops if desired.   |
| Respiratory Issues     | Use a vaporizer or medicate with edibles.  |
| Short-term Memory Loss | Adjust medication times.   |
| Uneasiness or Anxiety  | Use in a comfortable, familiar environment. Reduce dosage.                                       |

Source: <sup>50</sup>

## Drug Interactions

Cannabis should not be used in combination with alcohol, sedatives or sleeping pills, as it will increase sedation. However, research indicates that cannabis may enhance the effects of opioids, which can lead to lower opioid doses to achieve pain relief.<sup>51</sup> The *Complete Guide to Prescription and Nonprescription Drugs* (H. Winter Griffith, MD) is an excellent resource for help in determining how cannabis might interact with other drugs (see Appendix D). Therefore, patients using prescription drugs should discuss cannabis use with their doctor.

## Medication Log

Using a medication log is an effective way to determine the best cannabis treatment plan. The recording of your experience with different strains, doses and methods of delivery will also help in identifying what works best to reduce any negative side effects. It may be helpful to review your log with your doctor or healthcare provider and the dispensary. A medication log is included in Appendix C.





# OVERDOSE AND ADDICTION

*"We can speculate ourselves into all kinds of fears about abuse, but if that was the case, we wouldn't allow OxyContin, Vicodin and all other prescription drugs. They're abused more widely and more lethally than cannabis would ever be. No one has died of an overdose of cannabis that I know of ever. However, people have died from OxyContin, Vicodin and all these other drugs that are legal."*

~ Illinois Senator William Haine, D-Alton, IL<sup>52</sup>

**Although the U.S. Centers for Disease Control and Prevention have listed alcohol and other drugs as a cause of death, it has never listed cannabis.** Several studies have shown that cannabis has relatively low toxicity and lethal doses are impossible to reach.<sup>53, 54</sup>

Prescription drugs have become one of the leading causes of accidental death in the U.S. When comparing the potential for overdose of prescription drugs to cannabis, it is clear that cannabis is the safer drug. Since 1990, drug overdose death rates in the United States have more than tripled. In 2010, the number of drug overdose deaths in the U.S. reached 38,329 with prescription painkillers being responsible for 16,651 of those overdose deaths.<sup>55</sup>

In toxicology, several terms are used to describe drugs and other substances. Such terms include:

- Median Lethal Dose or LD50 - refers to the point where 50% of test subjects exposed to a substance would die. This is a general indicator of a substance's acute toxicity.
- Median Effective Dose or ED50 - refers to the effective dose for 50% of people receiving the drug. This is a general indicator of reasonable expectancy of a drug's effect.
- Therapeutic Ratio or Safety Ratio – refers to the ratio of the effective dose (ED50) to the lethal dose (LD50). A high safety ratio is an indicator of a substance's relative safety.

## COMPARING CANNABIS'S SAFETY RATIO TO OTHER FAMILIAR SUBSTANCES

| SUBSTANCE  | RATIO    |             |
|--|----------|-------------|
| Cannabis   | 1:20,000 | Least Toxic |
| Nitrous Oxide<br>(anesthesia commonly used in dentistry) | 1:150    |             |
| Fluoxetine<br>(Prozac)                                   | 1:100    |             |
| Aspirin  | 1:20     |             |
| Codeine  | 1:20     |             |
| Cocaine  | 1:15     |             |
| Alcohol  | 1:10     |             |
| Dextro-methorphan<br>(cough suppressant)                 | 1:10     |             |
| Nutmeg   | 1:7      |             |
| Heroin   | 1:5      | Most Toxic  |

Sources: <sup>56, 57, 58, 59</sup>

As the chart above indicates, in order to induce death by cannabis, one would have to smoke 20,000 times as much cannabis as is contained in a single cannabis cigarette (joint).<sup>60</sup>

### Addiction

There are several studies on addiction. Two well-known studies by Dr. Jack E. Henningfield of the National Institute on Drug Abuse, and Dr. Neal L. Benowitz of the University of California at San Francisco, developed a ranking system consisting of five criteria (effects). The effects were then applied to six commonly abused drugs as seen in the following tables (prescription drugs were not included). In these ratings, 1 equals the highest capacity to cause the effect and 6 equals the lowest capacity to cause the effect.

**Henningfield Ratings**

| Substance | Withdrawal | Reinforcement | Tolerance | Dependence | Intoxication |
|-----------|------------|---------------|-----------|------------|--------------|
| Nicotine  | 3          | 4             | 2         | 1          | 5            |
| Heroin    | 2          | 2             | 1         | 2          | 2            |
| Cocaine   | 4          | 1             | 4         | 3          | 3            |
| Alcohol   | 1          | 3             | 3         | 4          | 1            |
| Caffeine  | 5          | 6             | 5         | 5          | 6            |
| Cannabis  | 6          | 5             | 6         | 6          | 4            |

**Benowitz Ratings**

| Substance | Withdrawal | Reinforcement | Tolerance | Dependence | Intoxication |
|-----------|------------|---------------|-----------|------------|--------------|
| Nicotine  | 3*         | 4             | 4*        | 1          | 6            |
| Heroin    | 2          | 2             | 2         | 2          | 2            |
| Cocaine   | 3*         | 1             | 1         | 3          | 3            |
| Alcohol   | 1          | 3             | 4*        | 4          | 1            |
| Caffeine  | 4          | 5             | 3         | 5          | 5            |
| Cannabis  | 5          | 6             | 5         | 6          | 4            |

\*Given equal rating

## Definition of effects:

Withdrawal – Presence and severity of characteristic withdrawal symptoms.

Reinforcement – Substance's ability to get users to take it repeatedly.

Tolerance – Amount needed to satisfy increasing cravings and the level of plateau that is reached.

Dependence – Difficulty in ending the use of a substance, relapse rate, percentage of people who become addicted, addicts self-reporting the degree of need for substance and continued use in face of evidence that it causes harm.

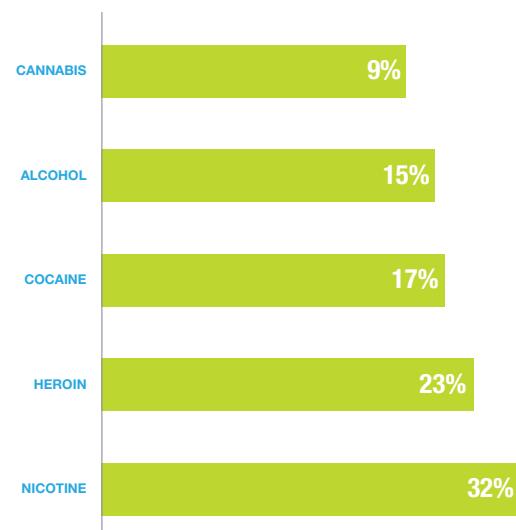
Intoxication – Level of intoxication relative to addiction such as the personal and social damage that it causes.

## Recognizing Substance Abuse

Although the risk of addiction is low for cannabis, substance abuse is a serious concern. Cannabis use should contribute to, rather than detract from, a patient's health and well-being, work relationships and social obligations. Someone is abusing cannabis or other medications if they intentionally use more than is needed to treat their condition or begin combining it with alcohol and/or other drugs to get high. In essence, some of the signs of substance abuse include failure to fulfill major role obligations, physically hazardous situations, legal problems and the persistent or recurrent social or interpersonal problems caused or exacerbated by the use.<sup>63</sup>

The dependence on cannabis means that the person needs to use cannabis just to feel "normal." In order to be diagnosed as cannabis dependent, a person needs to experience at least three of the following in one year<sup>64</sup>:

Cannabis is the least addictive when compared to other substances both legal and illegal. As reported in the *Scientific American* article, "Experts Tell the Truth about Pot," researchers found that of those who had tried cannabis at least once, about 9 percent became addicted. This chart shows the corresponding figures for other common substances considered addictive.<sup>62</sup>



- Need for increased amounts of cannabis to achieve the desired effect or markedly diminished effect with continued use of the same amount of cannabis;
- Using more cannabis than what was intended;
- Persistent desire to stop taking cannabis or to cut down and being unsuccessful at this;
- Spending lots of time obtaining, using or recovering from the use of cannabis;
- Giving up important activities in favor of using cannabis;
- Using cannabis even when it is known that it causes problems; and/or
- Withdrawal from the effects of cannabis;

Withdrawal is the most common symptom of cannabis dependence. Withdrawal symptoms include:

- Anxiety/Nervousness;
- Reduced appetite;
- Irritability/ restlessness;
- Sleep difficulties, including strange dreams;

Even though these symptoms are not life threatening, they can be distressing enough for the person who is trying to stop smoking cannabis to start using again.

There are a number of treatment options available for cannabis-dependent people to help them cut down or quit. Although the intensity of treatment depends on the individual, some individuals may respond well to general education and information on managing their cravings. However, some individuals need only a few sessions with a counselor to help decrease their level of use and increase their wellbeing. Other individuals may need inpatient management. See Appendix D for information on help for cannabis dependency.

### **Using Cannabis Responsibly**

It is important to take appropriate precautions when using and possessing cannabis. Therefore, you should follow these guidelines for safe and responsible cannabis use:

- Keep medicine away from children and pets. Store the medications in a secure and dry place. Do not leave the medications in a visible place. Therefore, consider using a lock box.

➤ Do not share your medication. Like many other medications, cannabis has different effects on different people. Therefore, your medication is for you and you only.

➤ Dispose of unused or expired medications properly. Check your local and state laws on disposal habits. When disposing in household trash, mix medicine with an unpleasant substance, such as kitty litter or expired food, and place the mixture in a container such as a sealed plastic bag.

➤ Do not sell your medicine. To avoid the appearance of the intent to sell, patients should keep their medicine in the original container.

➤ Do not possess cannabis near a school bus or on school grounds.

➤ Do not possess cannabis in federal buildings or federal property.

➤ Do not smoke cannabis where smoking is prohibited.

➤ When transporting medicine in your vehicle, keep it in a secure, sealed and tamper-proof container in the trunk. If there is no trunk, keep the medicine out of sight and out of reach of the driver to prevent any suspicion of DUI.

➤ Do not transport cannabis across state lines.

➤ Do not drive or operate machinery under the influence of cannabis.

*“Withdrawal is the most common symptom of cannabis dependence.”*

## **Patients' Rights**

Americans for Safe Access (ASA) is the nation's largest medical cannabis patient advocacy organization. ASA brings the patient's voice to the table and raises the real concerns of patients: legal access to medicine and patients' civil rights. The following rights were developed by ASA to ensure that medical cannabis providers are held to the highest standards.

### **ASA Medical Cannabis Patient's Bill of Rights<sup>67</sup>**

#### ➤ **Respect and Nondiscrimination:**

You have a right to receive considerate, respectful and nondiscriminatory care from your physician, designated caregiver(s) and dispensary.

#### ➤ **Access to Physicians:** You have the right to see a physician, discuss the use of cannabis as a medical treatment and expect that your physician comply with established standards of practice to ensure the validity of your recommendation.

#### ➤ **Confidentiality of Health Information:** You have the right to talk in confidence with providers and to have your health care information protected under the law.

#### ➤ **Information Disclosure:** You have the right to receive and easily understand information about local, state and federal laws and regulations.

#### ➤ **Self-Sufficiency:** You have the right to produce your own medicine if you are willing and able to do so. If a caregiver(s) produces cannabis for you,

then you have the right to claim, move or inspect those plants.

➤ **Quality Control:** You have the right to cannabis and cannabis products that are free of mold, mildew, pesticide, adulterants and pests. Moreover, you have the right to know how your cannabis was produced.

➤ **Choice of Providers:** You have the right to a choice of dispensaries that are sufficient to give you safe access to a variety of quality cannabis and non-smoking alternatives.

➤ **Safety:** You have the right to obtain your medication in a safe environment, which includes but is not limited to adequate security, health and safety protocols, as well as legal business practices.

➤ **Input:** You have the right to make a complaint at your dispensary, without the fear of losing access. This includes complaints about waiting times, operating hours, the conduct of personnel and the adequacy of the facilities.

➤ **Accuracy:** You have the right to medication that has been labeled and weighed accurately. No dispensary should deliberately mislead a patient about the quantity or variety of medication being provided.

➤ **Fair Price:** You have the right to pay a fair and reasonable price for your cannabis or cannabis-based products.

➤ **Representation:** You have the right to weigh in on laws and regulations that affect your life.

## The goal of the patient education plan is to:

Foster relationships between patients and dispensary staff;

Encourage active and full participation of patients and caregivers in determining their medical cannabis needs;

Improve patient skills in self-management of symptoms and side effects; and

Improve communication between patients and their physicians about their treatment needs.

The Patient Education plan is divided into three general phases: Introductory Education, Follow-up Education and On-Going Education. Patient Education will include written and one-on-one verbal communication, as well as educational seminars and online learning. Teaching methods will be appropriate for the patient's age and education level, and, when possible, in his or her first language.

## Patient Education will cover the following:

Patient Rights

Patient Responsibilities

Basics of medical cannabis and the different strains available

Safe and responsible use of cannabis

Expected action of cannabis and possible side effects

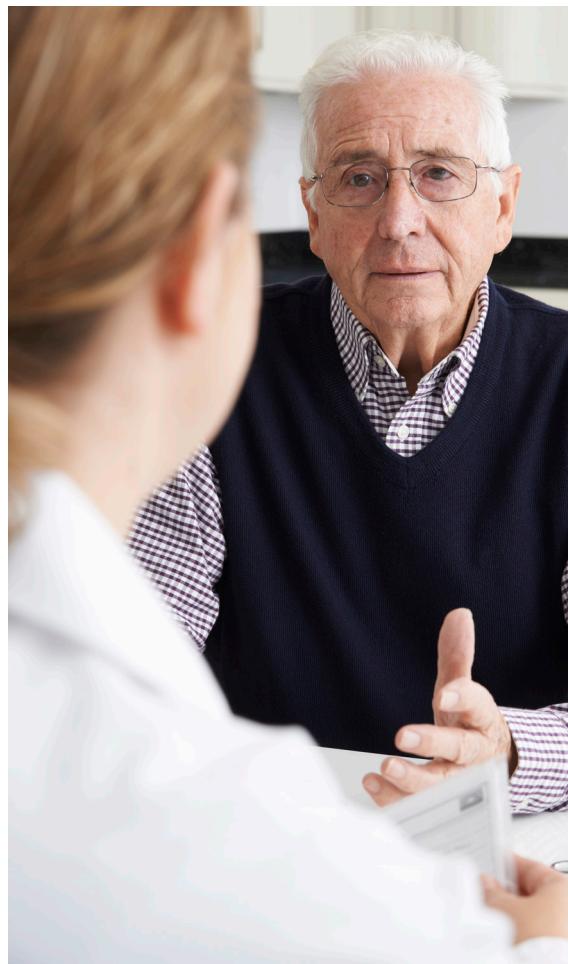
Proper storage, expiration and disposal

Equipment and supplies needed to medicate

Substance abuse information

Condition-specific information

Community Resources



## Medical Cannabis Patient Handbook

This handbook covers the following topics:

History of cannabis and the proponents of medical cannabis

Federal and state laws and a patient's legal rights

Medicinal properties and benefits of cannabis

Choosing medical cannabis

Medicating with cannabis

Side effects, overdose and addiction

Recognizing substance abuse

Using cannabis responsibly

The doctor-patient relationship

Patient's rights

Medication Log

Strain Log

## Patient Education Materials

### Americans for Safe Access's (ASA) Condition-based Booklets

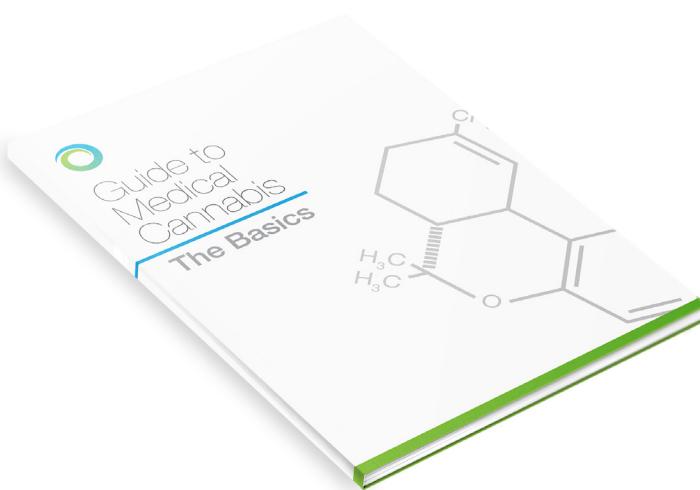
These guides provide information about recent research on using medical cannabis to treat a variety of conditions.

### Community Resources

This tri-fold brochure will list local and national resources for substance abuse prevention and treatment programs, as well as condition-specific support groups.

### Website

The dispensary's website will be a repository of medical information designed to help educate patients on a host of cannabis topics and supplement their cannabis consumption with other healthy activities such as exercising, eating right and maintaining a low-stress lifestyle. In addition, patients will be able to access



education modules and medication and strain log sheets.

## Patient Education Procedures

### Introductory Patient Education

The initial visit with the patient or caregiver will include an orientation on the policies and procedures of the Dispensary, the patient responsibilities, an initial assessment of the patient's needs and concerns, as well assess the patient's previous knowledge about cannabis.

Medical cannabis will be clearly discussed including basic information regarding the purpose of the medication, directions for use, beneficial effects and potential side effects.

### Mode

One-on-one with the patient or caregiver

### Materials

Dispensary-specific policies and patient forms; Guide to the [State] Medical Cannabis Program; Medical Cannabis Patient Handbook; ASA Condition-based Booklet; Community Resources; and dispensary website.

### Process Guidelines

This is the time to work on developing a good relationship with the patient or caregiver. It is important to remember that patients are coming to the dispensary because they need relief from their pain or other symptoms. Some may seem agitated or upset while others may be reluctant, timid or defensive. The first time visit may be especially difficult for some patients. Additionally, keep in mind that patients or

caregivers will have various cultural and religious backgrounds.

Cultural and religious traditions are extensive and complex. It is impossible to predict how any one patient or caregiver may understand or apply them in the context of visiting a dispensary, in receiving patient education, or in their opinion of medical cannabis and its use. Therefore, patients and caregivers should be encouraged to share their cultural and religious values indicating how they may be pertinent to their personal needs, their interaction with staff and in the decisions about medicating with cannabis.

After the patient/caregiver verification and intake documentation is complete, conduct a patient assessment to identify the patient's educational needs and barriers to learning, including:

### **Physical needs**

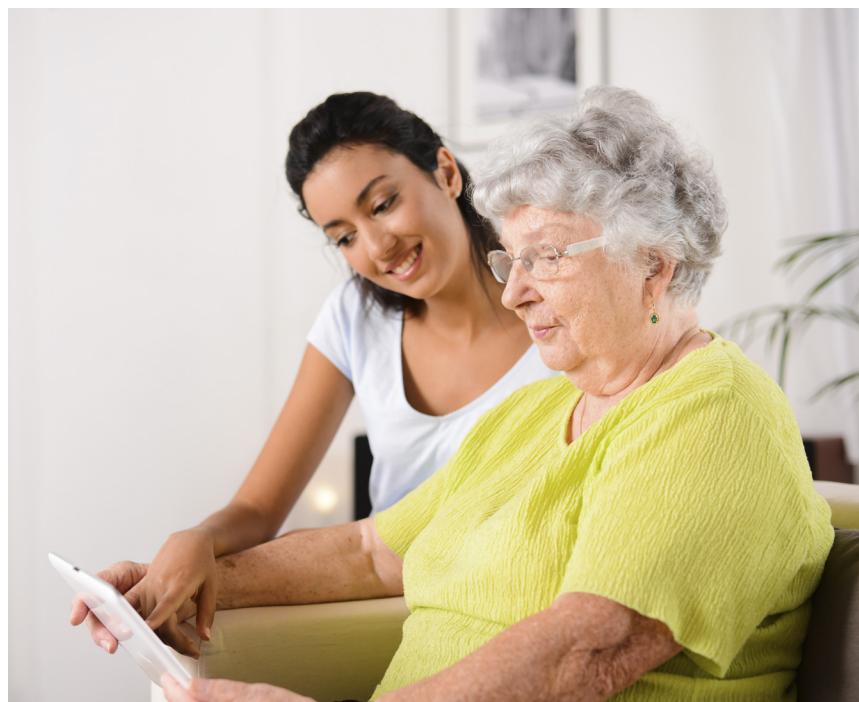
- What kind of care does the patient need at home (i.e., care for themselves, or if there is a Designated Caregiver providing support)?
- Can the patient hear clearly or read small printed materials?

### **Feelings (Can affect the patient's readiness or ability to learn)**

- Is the patient having difficulty accepting his/her condition?
- Does the patient feel overwhelmed, afraid, angry or depressed?

### **Cultural and religious practices**

- Do the patient's beliefs affect how information should be delivered?
- Do the patient's beliefs affect his/her decision about which method of medicating with cannabis is acceptable?



### **Learning needs**

- Does patient or caregiver understand English or does he/she need materials in another language?
- What is the patient or caregiver's reading level?
- What circumstances may make it difficult for the patient or caregiver to learn?
- What helps the patient or caregiver to overcome these difficulties?

If the patient is new to using medical cannabis, allow time for the patient to process the information that is being presented and to ask questions. With patients who have previously used medical cannabis, ask what they know about medical cannabis and then work from that knowledge base.

Once the patient assessment is complete, review the print materials with the patient or caregiver and discuss the strains, products and services available to the patient. After purchase, explain to the patient or caregiver the best methods of storing the

cannabis to preserve its strength, identity and quality.

Using the Medical Cannabis Patient Handbook, review the methods used when medicating with cannabis and the medication time chart. With the patient, review the common side effects and the ways to cope with them.

Using the Medication and Strain Logs in the Medical Cannabis Patient Handbook, review how to complete them. While explaining how to use the logs, review the sample sheets and complete another sample with the patient to help him/her gain a good understanding of how to use the form. Encourage the patient to use these logs and provide extra copies or show them where they can download them from the website.

Emphasize to the patient or caregiver that these are important tools to help the patient become more aware of his/her symptoms and the effects of cannabis on those symptoms. Stress to the patient that the value of his/her feelings and observations are greater than accurate completion of the form. The involvement of family or other significant individuals in the patient's life should be encouraged when feasible by explaining to the patient that sometimes patients do not notice side effects or improvements, while family

members or friends may notice. Therefore, you should tell the patient that other people's involvement could be helpful in their treatment.

It is important to inform the patient or caregiver that bringing the completed logs to the next visit is a good way of informing the dispensary how medical cannabis has been working for him/her. Essentially, it will help the dispensary suggest adjustments to dosing or recommendations for different strains or methods of medicating.

Provide the patient with the appropriate ASA Condition-Based Booklet. It is recommended that you briefly review the booklet with the patient. Accordingly, encourage the patients to read the material when they get home and to share the material with caregivers and family members. Additionally, suggest to the patient that he/she may want to share this information with his/her doctor and other healthcare providers.

Finally, review with the patient or caregiver the proposed educational plan and recommend a visit to the website for additional educational opportunities. If time permits, browse the internet with the patient to help them in familiarizing themselves with the website. Upon completion of the session, you should document the patient's education activity log.

***“It is important to remember that patients are coming to the dispensary because they need relief from their pain or other symptoms. Some may seem agitated or upset while others may be reluctant, timid or defensive.”***

## Individual Patient Follow-Up

### Purpose

To assess the patient's experience with medical cannabis and to provide enough additional information to ensure that the patient understands how to use medical cannabis to treat his/her condition.

### Mode

One-on-one with patient or caregiver.

### Materials Used

Medication and Strain Logs; additional education materials may be necessary.

### Process Guidelines

When the patient returns to the dispensary, review the patient's Medication and Strain Logs. Further, discuss any changes in symptoms and expectations about his/her treatment regimen and any side effects and how they can be managed. You should encourage the patient to ask questions regarding his/her treatment regimen. Furthermore, you should determine if the patient would benefit from support groups. Lastly, suggest appropriate educational seminars that would reinforce or increase the patient's knowledge with respect to benefits of treatment and the importance of self-monitoring.

## On-Going Education

### Purpose

As the patient's symptoms improve and the patient becomes more comfortable with medicating with cannabis, additional educational components will foster a therapeutic alliance with the dispensary and help patients improve quality of life.

### Modes

One-on-one with patient or caregiver, family education sessions, seminars, emails/texts/phone calls and online learning.

### Materials Used

Additional in-depth print materials, hands-on training equipment and/or videos

### Process Guidelines

At each visit, and in additional scheduled education sessions, patients will receive more information on medicating with cannabis, including cooking with cannabis. Patients should be encouraged to attend dispensary-sponsored seminars on lifestyle management topics include exercising, eating right and maintaining a low-stress lifestyle.

Encourage patients to sign up to receive periodic emails, texts or phone calls about various updates to the State's medical cannabis programs, events and seminars being hosted by the dispensary and other information concerning the use of medical cannabis.

Be aware of patients who made need referral to the dispensary's medical director, support group, and/or substance abuse treatment center. Make the referrals when deemed appropriate and necessary.







# APPENDIX A – GLOSSARY

**Acquired Immune Deficiency Syndrome (AIDS):** As a syndrome, it is a complex illness with a wide range of complications and symptoms. The immune system is badly damaged and at risk for opportunistic infections. Medical intervention and treatment are needed to prevent death.

**Access Point:** A medical access point is an authorized location where patients can find and purchase medical cannabis. It can also be called a pick-up location, and while medication should be fairly easy to obtain, the facility must follow state guidelines so authorization, paperwork, and a store process should be expected. In the medical cannabis community, an access point is often synonymous with a dispensary depending on individual state legislation, guidelines and regions.

**Agitation of Alzheimer's disease:** Uncontrollable, distressing behaviors in patients with Alzheimer's disease including, but not limited to irritability, anger outbursts, aggression, sleep disruption, pressured pacing and restlessness, and uncooperativeness with necessary care.

**Amyotrophic Lateral Sclerosis (ALS):** It is also known as Lou Gehrig's disease. It is a rapidly progressive, invariably fatal neurological disease that attacks the nerve cells (neurons) responsible for controlling voluntary muscles. The disease belongs to a group of disorders known as motor neuron diseases, which are characterized by the gradual degeneration and death of motor neurons. The nerve cells affected are the ones reaching from the brain to the spinal cord (upper motor neurons) and the spinal cord to the peripheral nerves (lower motor neurons) that control muscle movement. This leads to a progressive loss of the ability to move virtually any of the muscles in the body.

**Arachnoiditis:** A neuropathic disease caused by inflammation of the arachnoid, one of the membranes that surround and protect the nerves of the central nervous system, including the brain and spinal cord. The arachnoid can become severely inflamed because of adverse reactions to chemicals and infection from bacteria or viruses, as the result of direct injury to the spine, chronic compression of spinal nerves, or complications from spinal sur-

gery or other invasive spinal procedures. Inflammation can sometimes lead to the formation of scar tissue and adhesion that can make the spinal nerves “stick” together. This can be extremely painful, especially in last stage adhesive arachnoiditis.

**Arnold-Chiari Malformation:** Occurs in the region where the brain and the spinal cord join. In this disorder, the portion of the brain called the cerebellum and/or brainstem lies lower than usual. Often, a portion of the cerebellum called the cerebellar tonsils protrudes out of the base of the skull into the spinal canal. This protrusion causes pressure in the brain, contributing to the symptoms such as headaches, especially at the base of the skull, dizziness, double vision, weakness in the arms, and/or difficulty walking.

**Aroma:** Aroma is a term used to describe the general smell and/or taste of a certain plant or flower. Because consumers’ individual definition of aromas (such as “earthy,” “skunky,” or “citrus”) can differ somewhat, aroma descriptions are meant as a basic guideline.

**Backcross (BX):** A hybrid plant that has been bred with one of its parents (or a plant that is genetically similar) in order to create offspring that is closer to that of the original parent. For example, a grower could breed a plant with its own father to make sure the baby has its dad’s height. This is often done to maintain rarer strains or strengthen those with desired recessive genes.

**BHO:** BHO stands for butane hash oil and is a potent concentrate of cannabinoids made by dissolving cannabis in its plant form in a solvent (usually butane). The resulting product has very high THC levels

(generally more than flowers or hashish) and is a thick, sticky oil. BHO is also referred to as honey oil, “dabs” or “dabbing,” earwax, or shatter, depending on the manufacturing method.

**Bud:** Bud refers to the actual flower of the cannabis plant. See Flower.

**Cachexia/Wasting Syndrome:** A condition characterized by dramatic weight loss associated with chronic fever and diarrhea. A clinical complex associated with chronic renal insufficiency, which is attributed to a combination of poor nutrition, endocrine dysfunction, catabolic stresses—e.g., infection, uremia, dialysis. Wasting is also related to anorexia and protein catabolism secondary to infection. This dramatic weight loss and muscle atrophy is seen in patients with chronic illness including type I diabetes, multiple sclerosis, HIV, cancer, and in individuals with age-associated ‘failure to thrive’ syndrome.

**Cancer:** It is a group of over 200 diseases involving unregulated cell growth. In cancer, cells divide and grow uncontrollably, forming malignant tumors, which may invade nearby parts of the body. If the cell growth is not controlled, cancer can result in death. The most common cancers are skin cancer, lung cancer, colon cancer, breast cancer and prostate cancer. In addition, cancer of the kidneys, ovaries, uterus, pancreas, bladder, rectum and blood and lymph node cancer (leukemias and lymphomas) are also included among the 12 major cancers that affect most Americans.

**Cannabinoids:** It is a class of diverse chemical compounds that act on cannabinoid receptors in the cells that repress

neurotransmitter release in the brain. These receptor proteins include the endocannabinoids (produced naturally in the body by humans and animals), the phytocannabinoids (found in cannabis and some other plants), and synthetic cannabinoids (manufactured chemically).

**Cannabis:** Cannabis is a plant genus that produces three species of flowering plants: Cannabis sativa, Cannabis indica, and Cannabis ruderalis. Cannabis sativa and Cannabis indica are used to produce both recreational and medical cannabis. Cannabis ruderalis is rarely farmed due to its natural lower THC content and small stature, but with ruderalis's unique ability to auto-flower rather than mature based on light, there is potential for this variety to grow in popularity. Cannabis is native to Asia, but grows almost anywhere and has long been cultivated both for the production of hemp and to be used as a drug.

**Causalgia:** Refers to a chronic pain condition most often affecting one of the limbs (arms, legs, hands, or feet), usually after an injury or trauma to that limb. Causalgia is now classified as CRPS-II and is believed to be caused by damage to, or malfunction of, the peripheral and central nervous systems. CRPS is characterized by prolonged or excessive pain and mild or dramatic changes in skin color, temperature, and/or swelling in the affected area. CRPS-II is the term used for patients with confirmed nerve injuries.

**CBD:** CBD is the abbreviation for Cannabidiol. It provides medicinal relief without the psychoactive effects (the “high” or “stoned” feeling) associated with THC.

**Concentrates:** Concentrates are a potent consolidation of cannabinoids that

are made by dissolving cannabis in its plant form into a solvent. The resulting product has very high THC levels (generally more than flowers or hashish), and can produce varying products that range from thick sticky oils (BHO) to moldable goo (wax) to resinous bits (shatter). Referred to by a variety of slang terms, the classification of concentrates is often dependent on the manufacturing method and the consistency of the final product.

**Cross (genetics):** A cross (referring to crossbreeding) is the result when two different plant strains are bred together. For example, Blue Dream is a cross between Blueberry and Haze strains.

**Chronic Inflammatory Demyelinating Polyneuropathy:** A neurological disorder characterized by progressive weakness and impaired sensory function in the legs and arms. The disorder, which is sometimes called chronic relapsing polyneuropathy, is caused by damage to the myelin sheath (the fatty covering that wraps around and protects nerve fibers) of the peripheral nerves. It often presents with symptoms that include tingling or numbness (beginning in the toes and fingers), weakness of the arms and legs, loss of deep tendon reflexes (areflexia), fatigue and abnormal sensations. Closely related to Guillain-Barre syndrome, it is considered the chronic counterpart of that acute disease.

### **Complex Regional Pain Syndromes**

**Type I (CPRS-I):** A chronic pain condition most often affecting one of the limbs (arms, legs, hands or feet), usually after an injury or trauma to that limb. CRPS is believed to be caused by damage to, or malfunction of, the peripheral and central nervous systems. CRPS is characterized

by prolonged or excessive pain and mild or dramatic changes in skin color, temperature, and/or swelling in the affected area. Unlike CRPS-II, nerve injury is not confirmed.

### **Complex Regional Pain Syndromes**

**Type II (CRPS-II):** Refers to a chronic pain condition most often affecting one of the limbs (arms, legs, hands, or feet), usually after an injury or trauma to that limb. CRPS is believed to be caused by damage to, or the malfunction of, the peripheral and central nervous systems. CRPS is characterized by prolonged or excessive pain and mild or dramatic changes in skin color, temperature, and/or swelling in the affected area. CRPS-II is the term used for patients with confirmed nerve injuries.

**Crohn's Disease:** It is a type of inflammatory bowel disease (IBD), resulting in swelling and dysfunction of the intestinal tract. Crohn's disease is a chronic disorder.

**Cultivation Center:** A facility operated by an organization or business that is authorized to grow and harvest medical cannabis for dispensing organizations (Dispensaries)

**Dab/Dabbing:** A dab is a slang term used to refer to a dose of BHO received through butane combustion and inhalation. The act of “dabbing” refers to partaking in dabs.

**Dispensary:** A general term used to refer to any location where a patient or consumer can legitimately and safely access cannabis, whether the business is technically an access point, pick-up location, co-op, collective or any other version of a legal cannabis distributor.

**Dystonia:** It is a state of sustained muscle contractions in certain muscle groups or repetitive, involuntary movements with painful spasms and fixed postures. It can lead to an abnormal body position and problems with walking or performing other voluntary movements. Often, this is caused by a disturbance in a deep area of the brain called the basal ganglia. This area controls the basic tension (rigidity) of the muscles and coordination of movements.

**Edibles/Medibles:** Edibles and medibles are medicated edible goods that have been infused with cannabis extracts. They are commonly baked goods such as cookies and brownies, but options as varied as flavored coffee drinks, breads, and candies exist as well. Dispensaries also often sell cannabis-infused butters or oils for patients or consumers to make their own edibles. Consuming edibles means the active components from the extracts require longer to take effect as they need to be absorbed through the digestive system.

**Epilepsy:** Refers to a brain disorder that causes people to have recurring seizures. The seizures happen when clusters of nerve cells, or neurons, in the brain send out the wrong signals. Seizures can be strange sensations and emotions or they can be violent muscle spasms and can cause a loss of consciousness.

**Fibrous Dysplasia:** A condition characterized by the fibrous displacement of the osseous tissue within the bones affected. The distinct kinds of fibrous dysplasia are monostotic fibrous dysplasia, polyostotic fibrous dysplasia, and polyostotic fibrous dysplasia with associated endocrine disorders. Any bone may be affected with

monostotic fibrous dysplasia. The polyostotic type usually displays a segmental distribution of the involved bones, all of which show varying degrees of the characteristic fibrous replacement of the osseous tissue. The initial signs may be a limp, a pain, or a fracture on the affected side. Pathologic fractures are frequently associated with this process, and angulation deformities may follow. The involved extremity may be shortened, and the classic “shepherd’s crook” deformity is common.

**Flower:** It is the reproductive organ of the female cannabis plants. Cannabis flowers are the hairy, sticky, crystal-covered bits that are harvested and dried to be used as medication. When they are allowed to be fertilized by male plants, these flowers will produce cannabis seeds. If not, they will continue to produce the resin that contains their active cannabinoids until they are harvested or begin to die.

**Glaucoma:** They are a group of eye diseases characterized by damage to the optic nerve usually due to excessively high intraocular pressure (IOP). This increased pressure within the eye, if untreated can lead to optic nerve damage resulting in progressive, permanent vision loss, starting with unnoticeable blind spots at the edges of the field of vision, progressing to tunnel vision, and then to blindness.

**Hash/Hash Oil:** Short for hashish, which is derived from cannabis plants and can be used for consumption or medication. Production involves the removal of the plant’s trichomes by sieving or filtering. Once the cannabinoid-laden powder has been collected, it is typically pressed and ready to be used. Hash ranges in potency, but is generally stronger than straight flowers since everything but the active part of the

plant has been removed. A similar concentrated product can also be produced chemically using a solvent; however, this product is commonly referred to as hash oil or “honey oil.”

**Heirloom:** It refers to a cannabis strain that was taken from its native homeland and propagated in another geographical location.

**Hemp:** Refers to a fibrous product that can be produced from the male cannabis plant and can be used in the manufacture of rope, paper, beauty products, and a vast array of other products. Hemp plants have no value as a drug since they are males. However, they are still considered illegal in the United States.

**Hybrid:** Refers to a plant that is genetically a cross between one or more separate strains of cannabis. Hybrids can happen unintentionally, but they are usually bred specifically to combine desired traits of the original plants. Most cannabis on the market today is some form of hybrid.

**Hydroponics:** Refers to a system of gardening that does not use soil. Plants are grown in water and receive their nutrients from the addition of solutions rather than soil. For growers, hydroponic advantages include more control over nutrient intake and stability. In terms of cannabis production, plants grown hydroponically are sometimes said to have cleaner, more distinct flavors.

**Hepatitis C:** Refers to a form of liver inflammation that causes primarily a long-lasting, chronic liver disease.

**Human Immunodeficiency Virus (HIV):** A virus that weakens the immune system by destroying important cells that fight

disease and infection. It attacks and destroys key disease fighting cells, T-cells or CD4 cells. HIV infection can lead to AIDS.

**Hydrocephalus:** An abnormal expansion of cavities (ventricles) within the brain that is caused by the accumulation of cerebrospinal fluid. The fluid can increase pressure on the soft tissues of the brain. This squeezes and distorts them. This process also results in damage to these tissues

**Hydromyelia:** Involves an abnormal collection of fluid within the spinal cord. As fluid builds up, it puts pressure on the spinal cord and can damage nerve cells and their connections. The cavity that forms is connected to the fourth ventricle (normal fluid space in the brain). Symptoms include weakness of the extremities, pain or a heavy sensation in the neck, headaches, loss of sensation in the hands and feet, walking difficulty, problems with bladder control, stiffness in the legs, and visual disturbances.

**Indica:** Refers to the less scientific name for the Cannabis indica species of cannabis. Generally these plants originated in the Middle East and Asia and include both of the famous kush and Afghan lineages. Compared to their sativa counterparts, the plants are shorter, bushier and have more of a compact flower structure. This species tends to produce more relaxing physical effects and can have a sedative quality.

**Interstitial Cystitis:** A chronic condition characterized by a combination of uncomfortable bladder pressure, bladder pain and sometimes pain in the pelvis, which can range from mild burning or discomfort to severe pain.

**Joint:** Term used for a cannabis cigarette, cannabis flower rolled in paper.

**Kief:** A collected amount of trichomes that have been separated from the rest of the cannabis flower. Kief is known to be extremely potent. Kief is sometimes mistakenly referred to as pollen and is the primary ingredient in hashish production.

**Kush:** Refers to a line of cannabis plants that hail from the Hindu Kush Mountains in Afghanistan and Pakistan. Kush strains are indicas and have a unique aroma. Specific breeds and plants are unique, but their aroma is generally described as “earthy” and often piney combined with citrus or sweet.

**Lupus:** Refers to a disorder of the immune system. The body thinks that its own cells are foreign organisms and releases antibodies to attack these cells the way it would attack bacteria and viruses. This causes tissues to become inflamed (red and swollen).

**Medibles/Edibles:** Medibles and edibles are medicated edible goods that have been infused with cannabis extracts. They are commonly baked goods such as cookies and brownies, but options as varied as flavored coffee drinks, breads, and candies exist as well. Dispensaries also often sell cannabis-infused butters or oils for patients or consumers to make their own edibles. Consuming edibles means the active components from the extracts require longer to take effect as they need to be absorbed through the digestive system.

**Multiple Sclerosis (MS):** A chronic autoimmune disorder affecting movement, sensation and bodily functions. It is caused by destruction of the myelin insulation covering nerve fibers (neurons) in the central nervous system (brain and spinal cord).

**Muscular Dystrophy:** Refers to a group of inherited disorders in which strength and muscle bulk gradually decline. There are nine types of muscular dystrophies that are generally recognized: Duchenne muscular dystrophy (DMD), Becker muscular dystrophy (BMD), Emery-Dreifuss muscular dystrophy (EDMD), Limb-girdle muscular dystrophy (LGMD), Facioscapulohumeral muscular dystrophy (FSH), Myotonic dystrophy (also known as Steinert's disease), Oculopharyngeal muscular dystrophy (OPMD), Distal muscular dystrophy (DD), Congenital muscular dystrophy (CMD).

**Myasthenia Gravis:** An autoimmune disease that causes muscle weakness. It affects the neuromuscular junction, interrupting the communication between nerve and muscle, and thereby causing weakness.

**Myoclonus:** Refers to a movement disorder that typically affects the upper half of the body. Individuals with this condition experience quick, involuntary muscle jerking or twitching (myoclonus) that usually affects their arms, neck, and trunk. Less frequently, the legs are involved as well. More than half of affected individuals also develop dystonia, which is a pattern of involuntary muscle contractions that causes twisting and pulling movements of specific body parts.

**OG:** A term originally used to describe Southern California's Ocean Grown Kush, which was shortened to OG Kush. It's now used to describe many strains, most are different variations of the original OG Kush genetics or ocean grown on the West Coast.

**Nail-Patella Syndrome:** Also known as Fong Disease, Hereditary Onycho-Osteo-

dysplasia (H.O.O.D.), Iliac Horn Disease, and Turner-Kieser syndrome. A genetic disease of the connective tissue that produces defects in the fingernails, knee caps and kidneys. Other common abnormalities include elbow deformities, abnormally shaped pelvis bone (hip bone) and kidney (renal) disease.

**Neurofibromatosis:** It is also known as von Recklinghausen disease. This is a genetic disease in which patients develop multiple soft tumors (neurofibromas). These tumors occur under the skin and throughout the nervous system.

**Parkinson's disease:** Refers to a disease of the central nervous system that causes problems with body motions including tremor (shakiness), rigidity (muscle stiffness), slowed body movements, unstable posture and difficulty walking. It happens when nerve cells (neurons) in a part of the brain, called the substantia nigra gradually die. These cells normally produce a chemical called dopamine that helps to relay messages between areas of the brain that control body movement. The death of cells in this area of the brain leads to abnormally low levels of dopamine, which makes it difficult for a person with Parkinson's disease to control muscle tension and muscle movement, both at rest and during periods of activity.

**Pharmacopeia:** Refers to a book containing an official list of medicinal drugs together with articles on their preparation and use.

**Post-Traumatic Stress Disorder (PTSD):** A type of anxiety disorder. It can occur after one has experienced an extreme emotional trauma that involved the threat of injury or death.

**Pre-roll:** Refers to a pre-rolled cannabis cigarette, commonly called a joint. Many dispensaries have pre-rolls available for purchase.

**Reflex Sympathetic Dystrophy (RSD):** Refers to a chronic pain condition most often affecting one of the limbs (arms, legs, hands, or feet), usually after an injury or trauma to that limb. RSD is now classified as CRPS-I and is believed to be caused by damage to, or malfunction of, the peripheral and central nervous systems. It is characterized by prolonged or excessive pain and mild or dramatic changes in skin color, temperature, and/or swelling in the affected area. Unlike CRPS-II, nerve injury is not confirmed.

**Residual Limb Pain:** It is associated with amputation. “Phantom” pains emanate from the amputated portion of the limb.

**Rheumatoid Arthritis (RA):** Refers to a chronic autoimmune disease that causes inflammation and deformity of the joints. Other problems throughout the body (systemic problems) may also develop, including inflammation of blood vessels (vasculitis), the development of bumps (called rheumatoid nodules) in various parts of the body, lung disease, blood disorders and weakening of the bones (osteoporosis).

**Sativa:** It is the less scientific name for the Cannabis sativa species of cannabis plant. In general, these plants originated outside of the Middle East and Asia and includes strains that are from areas such as South America, the Caribbean, Africa, and Thailand. These strains tend to grow taller as plants (usually over 5 feet), are lighter in color and take longer to flower. When consumed, sativas tend to produce more cerebral as opposed to physical and

sedative effects.

**Strain:** Refers to a specific variety of a plant species. Strains are developed to produce distinct desired traits in the plant and are usually named by their breeders. Strain names often reflect the plant's appearance, its promised effects, or its place of origin.

**Severe Fibromyalgia:** A neurosensory disorder characterized by widespread muscle pain, joint stiffness, and fatigue. The condition is chronic, but pain comes and moves about the body.

**Sjogren's Syndrome:** A disorder of the immune system. The mucous membranes and moisture-secreting glands of the eyes and mouth are affected resulting in decreased production of tears and saliva.

**Spinal Cord Disease:** A result of diverse pathologic processes including trauma that leads to significant impairment of motor, sensory, or autonomic function.

**Spinal Cord Injury:** Refers to the damage to the spinal cord that causes loss of sensation and motor control.

**Spinocerebellar Ataxia (SCA):** It is a form of genetically inherited disorder that is characterized by abnormalities in the person's brain functioning. It is a degenerative condition that affects the cerebellum, which is located behind the brain stem. Symptoms include progressive atrophy, or muscle wasting leading to spasticity and the inability to coordinate movement.

**Syringomyelia:** Involves an abnormal collection of fluid within the spinal cord. As fluid builds up, it puts pressure on the spinal cord and can damage nerve cells and their connections. The cavity that forms does not communicate with

any other fluid spaces, and occurs primarily in adults who have experienced spinal cord trauma. Symptoms include weakness of the extremities, pain or a heavy sensation in the neck, headaches, loss of sensation in the hands and feet, walking difficulty, problems with bladder control, stiffness in the legs, and visual disturbances.

**Tarlov Cysts:** Cysts are fluid-filled sacs that affect the nerve roots of the spine, especially near the base of the spine (sacral region). Multiple cysts of varying size may affect individuals. Symptoms sometimes caused by Tarlov cysts include pain in the area served by the affected nerves, numbness and altered sensation, an inability to control bladder and bowel movements, impotence, and, rarely, weakness in the legs.

**Terpenes:** Refers to a large and diverse class of organic compounds produced by a variety of plants, including cannabis. Many terpenes are aromatic hydrocarbons and thus are believed to have a protective function. Terpenes are the primary constituents of the essential oils of many types of plants and flowers. Terpenes affect the aroma and flavor of cannabis.

**Terpenoids:** Naturally occurring organic chemicals similar to terpenes. Terpenoids are widely found in plants and can form cyclic structures such as sterols.

**THC:** This is an abbreviation for delta-9-tetrahydrocannabinol. It is the most well-known and abundantly available cannabinoid in cannabis. It is responsible for the psychoactive effects, or the “high.”

**Tincture:** A liquid cannabis extract usually made with alcohol or glycerol that is often taken with a dropper.

**Topical:** A type of cannabis product where the active properties of the flowers have been extracted and added to a product such as a lotion or a cream that's applied to the skin.

**Tourette's Syndrome:** A disorder of the nervous system, characterized by a variable expression of unwanted movements and noises (tics). Other symptoms can include obsessive-compulsive disorder, attention deficit disorder, self-injuring behavior, depression and anxiety.

**Traumatic Brain Injury and Post-Concussion Syndrome:** It is caused by a head injury. The condition can cause a variety of physical, cognitive, emotional and behavioral symptoms, including, but not limited to: memory or concentration problems persistent headaches dizziness or loss of balance, sensory problems, mood swings, fatigue, difficulty sleeping, convulsions or seizures, difficulty remembering new information, loss of appetite, the inability to control eating or to regulate body temperature.

**Trichomes:** Refers to the fine outgrowths or appendages on plants. They are the sticky crystals that contain the vast majority of the plant's cannabinoids.

**Vape Pen:** A portable device used to consume cannabis. It heats either flowers or cannabis-infused oils to a temperature that produces a cannabinoid-laced vapor to inhale.

**Vaporizer:** A device used to consume cannabis. It heats either flowers or cannabis-infused oils to a temperature that produces a cannabinoid-laced vapor to inhale.

**Wax:** This is a form of cannabis concentrate.

**Weed:** Slang term for cannabis.



# APPENDIX B – REFERENCES AND RESEARCH LINKS

## References

1. <http://medicalcannabis.procon.org/view.timeline.php?timelin4eID=000026>
2. [http://www.americanscientist.org/libraries/documents/200645104835\\_307.pdf](http://www.americanscientist.org/libraries/documents/200645104835_307.pdf)
3. <http://medicalcannabis.procon.org/view.timeline.php?timelin4eID=000026>
4. <http://www.druglibrary.org/schaffer/hemp/history/first12000/1.htm>
5. American Medical Association Policy H-95.952 Cannabis for Medicinal Use ([www.ama-assn.org](http://www.ama-assn.org))
6. <http://www.nejm.org/doi/full/10.1056/NEJMclde1300970>
7. <http://www.nejm.org/doi/full/10.1056/NEJMclde1305159>
8. <http://www.mpp.org/reports/medical-cannabis-endorsements-and-statements-of-support.html>
9. <http://www.fda.gov/regulatoryinformation/legislation/ucm148726.htm>
10. [http://www.huffingtonpost.com/steph-sherer/the-federal-government-re\\_b\\_6341244.html](http://www.huffingtonpost.com/steph-sherer/the-federal-government-re_b_6341244.html)
11. <http://www.cnn.com/2013/08/08/health/gupta-changed-mind-cannabis/>
12. <http://norml.org/library/item/introduction-to-the-endocannabinoid-system>
13. <http://www.leafly.com/knowledge-center/cannabis-101/terpenes-the-flavors-of-cannabis-aromatherapy>
14. <http://sensiseeds.com/en/blog/medicinal-properties-terpenes-terpenoids/>
15. <http://onlinelibrary.wiley.com/doi/10.1111/j.1476-5381.2011.01238.x/pdf>

16. <http://www.projectcbd.org/plant/terpenses/>
17. <http://sensiseeds.com/en/blog/medicinal-properties-terpenes-terpenoids/>
18. <http://www.ncbi.nlm.nih.gov/pubmed/19040575>
19. <http://sensiseeds.com/en/blog/medicinal-properties-terpenes-terpenoids/>
20. <http://www.leafly.com/knowledge-center/cannabis-101/cannabis-genotypes-and-phenotypes-what-makes-a-strain-unique>
21. <http://www.medicaljane.com/2013/06/28/cannabis-indica-vs-cannabis-sativa-differences/#>
22. [www.herbal-ahp.org/](http://www.herbal-ahp.org/)
23. <http://patientfocusedcertification.org/>
24. <http://www.nature.com/cddis/journal/v2/n6/full/cddis201152a.html>
25. <http://norml.org/library/item/hepatitis-c>
26. <http://medicalcannabis.com/experts/expert/title.cfm?artID=44>
27. <http://www.drugwarfacts.org/cms/Overdose#Cannabis>
28. <http://www.activistpost.com/2011/12/5-popular-but-harmful-drugs-that-can-be.html>
29. [http://www.evaluationtoday.com/news\\_medical\\_cannabis\\_sideeffects.html](http://www.evaluationtoday.com/news_medical_cannabis_sideeffects.html)
30. <http://www.medscape.com/viewarticle/755388>
31. <http://illinoistimes.com/article-11388-physician-claims-prescription-drugs-worse-than-cannabis.html>
32. <http://rgable.files.wordpress.com/2012/02/toxicity-addiction-offprint2.pdf>
33. <http://nutritionfacts.org/2013/10/31/nutmeg-toxicity/>
34. <http://rgable.files.wordpress.com/2012/02/toxicity-addiction-offprint2.pdf>
35. <http://www.ndsn.org/august94/nicotine.html>
36. <http://lifeprocessprogram.com/lp-blog/library/cannabis-is-addictive-so-what/>
37. <http://www.chrisconrad.com/expert.witness/conant.htm>

## **Additional Research and Related Links**

- <http://www.calgarycmmc.com/indexofcannabisresearch.htm>
- <http://cancerres.aacrjournals.org/content/68/2/339.abstract>
- <http://www.cannabis-med.org/studies/study.php?search=extended&sort=year>
- <http://www.expert-reviews.com/doi/abs/10.1586/14737175.8.1.37>
- <http://www.icrs.co/>
- <http://medicalcannabis.procon.org/view.answers.php?questionID=000638>
- <http://www.mpp.org/issues/research/>
- <http://www.ncbi.nlm.nih.gov/pubmed/16804518>
- <http://norml.org/component/zoo/category/recent-research-on-medical-cannabis>



# APPENDIX C – MEDICATION LOG?

**Every medical cannabis patient is unique and has their own needs when it comes to medicating.** If you are a new patient, selecting strains and product types can be a challenging task. This medication log is designed to help you track your cannabis consumption

throughout the day so that you can determine what strains, amounts and delivery methods work best for you. By using this log and reviewing it with your doctor or healthcare provider, you will be able to determine the effective dosage to treat symptoms.

### Sample Daily Log Entry

| <b>Time</b>                        | <b>Method Used</b>        | <b>Medication Type</b> | <b>Amount Consumed</b> | <b>Reason for Medicating</b> | <b>Relief Obtained</b> | <b>Duration of Relief</b> |
|------------------------------------|---------------------------|------------------------|------------------------|------------------------------|------------------------|---------------------------|
| 11:50 am                           | Smoking – pipe            | AK-47 Flower           | 2 puffs                | Nausea                       | Yes<br>Nausea reduced  | 1h 15m                    |
| <b>Side Effects:</b>               | A little sleepy           |                        |                        |                              |                        |                           |
| <b>Other Medication-Time/Dose:</b> | None                      |                        |                        |                              |                        |                           |
| <b>Meal-Time/Food:</b>             | 9:00 am - cereal and milk |                        |                        |                              |                        |                           |

### Sample Personal Strain Log Entry

| <b>Strain Name</b>            | <b>Strain Type</b>      | <b>Medication Type</b> | <b>Method Used</b> |
|-------------------------------|-------------------------|------------------------|--------------------|
| AK-47                         | Sativa-Dominant Hybrid  | Flower                 | Smoking – pipe     |
| <b>Benefits:</b>              | Relieved nausea quickly |                        |                    |
| <b>Negative Side Effects:</b> | A little drowsiness     |                        |                    |

## DAILY LOG

Today's Date: \_\_\_\_\_

| Time                               | Method Used | Medication Type | Amount Consumed | Reason for Medicating | Relief Obtained | Duration of Relief |
|------------------------------------|-------------|-----------------|-----------------|-----------------------|-----------------|--------------------|
|                                    |             |                 |                 |                       |                 |                    |
| <b>Side Effects:</b>               |             |                 |                 |                       |                 |                    |
| <b>Other Medication-Time/Dose:</b> |             |                 |                 |                       |                 |                    |
| <b>Meal-Time/Food:</b>             |             |                 |                 |                       |                 |                    |

| Time                               | Method Used | Medication Type | Amount Consumed | Reason for Medicating | Relief Obtained | Duration of Relief |
|------------------------------------|-------------|-----------------|-----------------|-----------------------|-----------------|--------------------|
|                                    |             |                 |                 |                       |                 |                    |
| <b>Side Effects:</b>               |             |                 |                 |                       |                 |                    |
| <b>Other Medication-Time/Dose:</b> |             |                 |                 |                       |                 |                    |
| <b>Meal-Time/Food:</b>             |             |                 |                 |                       |                 |                    |

| Time                               | Method Used | Medication Type | Amount Consumed | Reason for Medicating | Relief Obtained | Duration of Relief |
|------------------------------------|-------------|-----------------|-----------------|-----------------------|-----------------|--------------------|
|                                    |             |                 |                 |                       |                 |                    |
| <b>Side Effects:</b>               |             |                 |                 |                       |                 |                    |
| <b>Other Medication-Time/Dose:</b> |             |                 |                 |                       |                 |                    |
| <b>Meal-Time/Food:</b>             |             |                 |                 |                       |                 |                    |

## PERSONAL STRAIN LOG

| Strain Name                   | Strain Type | Medication Type | Method Used |
|-------------------------------|-------------|-----------------|-------------|
| Benefits:                     |             |                 |             |
| <b>Negative Side Effects:</b> |             |                 |             |

| Strain Name                   | Strain Type | Medication Type | Method Used |
|-------------------------------|-------------|-----------------|-------------|
| Benefits:                     |             |                 |             |
| <b>Negative Side Effects:</b> |             |                 |             |

| Strain Name                   | Strain Type | Medication Type | Method Used |
|-------------------------------|-------------|-----------------|-------------|
| Benefits:                     |             |                 |             |
| <b>Negative Side Effects:</b> |             |                 |             |

| Strain Name                   | Strain Type | Medication Type | Method Used |
|-------------------------------|-------------|-----------------|-------------|
| Benefits:                     |             |                 |             |
| <b>Negative Side Effects:</b> |             |                 |             |

# APPENDIX D – ADVOCACY AND ADDITIONAL RESOURCES

## Advocacy Groups



Americans for Safe Access: [www.safeaccessnow.org](http://www.safeaccessnow.org)



Cannabis Policy Project: [www.mpp.org](http://www.mpp.org)



NORML: [www.norml.org](http://www.norml.org)



National Cannabis Industry Association:  
<http://thecannabisindustry.org/>



Veterans for Medical Cannabis Access:  
[www.veteransformedicalcannabis.org](http://www.veteransformedicalcannabis.org)



Medical Cannabis Declaration:  
[www.medical-cannabis-declaration.org](http://www.medical-cannabis-declaration.org)

## **Additional Resources**

Complete Guide to Prescription and Nonprescription Drugs 2015:

<http://www.penguin.com/book/complete-guide-to-prescription-and-nonprescription-drugs-2015-by-h-winter-griffith/9780399171345>

Cannabis Drug Interactions: <http://www.drugs.com/drug-interactions/cannabis-index.html>

Know Your Rights – ACLU: <https://www.aclu.org/national-security/know-your-rights-when-encountering-law-enforcement>

Know Your Rights – ASA: [http://www.safeaccessnow.org/law\\_enforcement\\_encounters\\_know\\_your\\_rights](http://www.safeaccessnow.org/law_enforcement_encounters_know_your_rights)

NORML Foundation Freedom Card: [http://norml.org/component/zoo/item/freedom-card?category\\_id=742](http://norml.org/component/zoo/item/freedom-card?category_id=742)

Patients Like Me: [www.patientslikeme.com](http://www.patientslikeme.com)

Patients Out of Time: [www.medicalcannabis.com](http://www.medicalcannabis.com)

Project CBD: [www.projectcbd.org](http://www.projectcbd.org)

Strain Guide – Leafly: <http://www.leafly.com/explore>

Strain Guide – Medical Cannabis Strains: <http://www.medicalcannabisstrains.com/strain-guide/>

Substance Abuse: <http://www.samhsa.gov/treatment/substance-use-disorders>



The ***Dispensary Technician Handbook*** provides in-depth education about medical cannabis, the medical cannabis industry, and best practices for properly dispensing cannabis to patients.

Topics include:

- The history of cannabis
- Medicinal benefits of cannabis
- Methods of medicating with cannabis
- Choosing your medical cannabis
- Dispensary daily operations
- Patient education
- Overdose and addiction



[www.cannabisadvisorsinstitute.com](http://www.cannabisadvisorsinstitute.com)



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