Alcohol and Marijuana Control Office
550 W 7th Avenue, Suite 1600
Anchorage, AK 99501
marijuana.licensing@alaska.gov
https://www.commerce.alaska.gov/web/amco
Phone: 907.269.0350

Alaska Marijuana Control Board

Marijuana Handler Permit
Form MJ-10: Education Course Provider Application

What is this form?

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

The course curriculum must cover at least the following topics:

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

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

Applicant Information

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

Applicant:	Medical Marijuana United				
Course Name:	Alaska State Marijuana Handler Certificate Training Program				
Mailing Address:	POBox 90284				
City:	Portland	**State:**	OR	**ZIP:**	97290
Email Address:	info@medicalmarijuanaunited.com	**Phone:**	(888) 510-5524		

In-person Online

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

Signature of Applicant

31MAR16
Date

OFFICE USE ONLY					
Board Meeting Date:		***Approved Y/N?:***		***Course #:***	

Alaska Business License # **1034755**

Alaska Department of Commerce, Community, and Economic Development

Division of Corporations, Business and Professional Licensing
P.O. Box 110806, Juneau, Alaska 99811-0806

This is to certify that

MEDICAL MARIJUANA UNITED

POBOX 90284 PORTLAND OR 97290

owned by

JEREMY BUFFORD

is licensed by the department to conduct business for the period

March 31, 2016 through December 31, 2016
for the following line of business:

61 - Educational Services

This license shall not be taken as permission to do business in the state without having complied with the other requirements of the laws of the State or of the United States.

This license must be posted in a conspicuous place at the business location.
It is not transferable or assignable.

Chris Hladick

Syllabus
Alaska State Marijuana Handler Certificate Program

Format: Online, Self-Directed
Restrictions on Enrollment: None

Instructors: Various, assisted by Jeremy Bufford
Instructor Contact Info: info@medicalmarijuanaunited.com; (888) 510-5524; M-F 9amPST-4pmPST

Required Texts: None, all handouts provided

Course Purpose: To educate and test students on their knowledge of Alaska State laws and rules relating to marijuana, the short and long-term positive and negative effects of cannabinoid therapy, products beneficial to patients and the contraindications for such use, the risks and benefits of various routes of administration, safe handling best practices and strategies to reduce access by minors, risks and warning signs of overuse, abuse and addiction, and ethics.

Course Synopsis: Students will be educated on the proper role for Marijuana Handlers operating with Alaska's marijuana program, fulfilling part of the requirement to become licensed as such. Under AAC 306.700, Marijuana Handler Permit:

(a) A marijuana establishment and each licensee, employee, or agent of the marijuana establishment who sells, cultivates, manufactures, tests, or transports marijuana or a marijuana product, or who checks the identification of a consumer or visitor, must obtain a marijuana handler permit from the board before being licensed or beginning employment at a marijuana establishment.
(b) To obtain a marijuana handler permit, a person must complete a marijuana handler permit education course approved by the board, pass a written test demonstrating an understanding of the course material, and obtain a certificate of course completion from the course provider. The topics that an approved marijuana handler permit education course covers must include
(1) AS 17.37, AS 17.38, and this chapter;
(2) the effects of consumption of marijuana and marijuana products;
(3) how to identify a person impaired by consumption of marijuana;
(4) how to determine valid identification;
(5) how to intervene to prevent unlawful marijuana consumption; and
(6) the penalty for an unlawful act by a licensee, an employee, or an agent of a marijuana establishment.
(c) To obtain a marijuana handler permit, a person who has completed the marijuana handler permit education course described under (b) of this section shall present the course completion certificate to the director. The director shall issue a marijuana handler permit card valid for three years from the date of issue. A person may renew a card issued under this section by passing a written test demonstrating an understanding of the course subjects.
(d) A licensee, employee, or agent of a marijuana establishment shall keep the marijuana handler permit card described in (c) of this section in that person’s immediate possession or a valid copy on file on the premises at times when on the licensed premises of the marijuana establishment.
(e) The board will review an approved marijuana handler permit education course at least once every three years, and may rescind approval of the course if the board finds that the education course contents are insufficient or inaccurate.

Authority: AS 17.38.010 AS 17.38.150 AS 17.38.200 AS 17.38.070 AS 17.38.190 AS 17.38.900 AS 17.38.121

Students will receive additional instruction in a variety of other areas, including patient relationship management, pharmacology of cannabis, and more.

- Unit One: Alaska State laws and rules relating to marijuana (5 Hours)
  - Current Laws and Penalties (3 hours)
  - SB 5052 (2 hours)
- Unit Two: Common conditions and their common symptoms (2 Hours)
  - Cachexia, Cancer, Crohn's disease, Epilepsy, Glaucoma, Hepatitis C, HIV or AIDS, Intractable pain, Muscle spasms, and/or spasticity, Multiple Sclerosis, Nausea, Seizures, other "terminal or debilitating conditions" (1 hour)
  - Case studies: Anticonvulsive, Antispasmodic, Antitumor (1 Hour)
- Unit Three: Short and long-term positive and negative effects of cannabinoid therapy (2 Hours)
  - Cannabinoids and the endocannabinoid system (.5 Hours)
  - Health effects of cannabinoids (1.5 Hours)
- Unit Four: Products beneficial to patients and the contraindications for such use (2 Hours)
  - Beneficial products (1 Hour)
  - Contraindications for use (1 Hour)
- Unit Five: The risks and benefits of various routes of administration (2 Hours)
  - Appropriate delivery mechanisms (.5 Hours)
  - Methods of delivery, Inhalation (smoking vs. vaporization), Oral delivery (Sublingual/Oromucosal vs. Edibles and Beverages), Transdermal delivery (1.5 Hours)
- Unit Six: Safe handling best practices and strategies to reduce access by minors (2 Hours)
  - Budtender (Marijuana Consultant) Operations: Video One (1 Hour)
  - Budtender (Marijuana Consultant) Operations: Video Two (1 Hour)
- Unit Seven: Patient/Consumer privacy and rights (2 Hours)
  - HIPPA Privacy Training (1 Hour)
  - HIPPA Security Training (1 Hour)
- Unit Eight: Risks and warning signs of overuse, abuse and addiction (2 Hours)
  - Chemical Dependancy Video (.75 Hours)
  - Risks Video (.75 Hours)
  - Warning Signs Video (.5 Hours)
- Unit Nine: Ethics (1 Hour)
  - Business Ethics Video One (.5 Hours)
  - Business Ethics Video Two (.5 Hours)

Grading Rubric:

A total of 200 questions comprised of multiple choice, true/false, and matching formats have been added to the question bank for this course, representing 10 questions for each hour of instruction. The final exam consists of 120 randomly chosen questions from this bank. A minimum score of 70% correct answers is required prior to a certificate of completion being issued.

Feedback and Instructor Evaluations:

Upon completion of the course, participants will be emailed a brief survey asking them to evaluate the course and the instructor(s) involved. The survey includes the following:

On a scale of 1-10, with 1 being complete disagreement and 10 being complete agreement, please rate the following statements:

- I feel as though the course was comprehensive related to its subject matter.
- I feel as though the course was easy to navigate and functioned correctly.
- I feel as though my instructor(s) were knowledgeable and helpful.
- I feel as though my time in the course was well spent.

Please use a free response to leave any other ideas, thoughts, or recommendations related to your experience with MMU.

MMU will conduct instructor and course evaluations based on the aggregate of responses from this survey.

MMU will keep records of student activity and test results for 5 years from the date of student enrollment. These records will be stored on an encrypted, cold-stored drive, with monthly backups.

Records requests and inspections may be arranged by emailing info@medicalmarijuanaunited.com.

At the conclusion of the course, qualified participants will receive their certification from MMU.

New licenses are available directly from the Alaska Alcohol and Marijuana Control Office.
Please see: https://www.commerce.alaska.gov/web/amco/MarijuanaApplication.aspx

Introduction - How This Course Works

Welcome to the Alaska State Marijuana Handler Certificate Training Program.
This course is designed to teach the student all of the best practices and standards for workers, management, and owners in marijuana businesses so that they can provide assistance to consumers with selecting products to best meet their needs. This course is designed to be completed over the course of three eight-hour days via self-directed study. Students log into the website, visit the Alaska State section of our Legal Studies Course, and complete each sub-section of required reading and videos. Finally, students take the Certificate Examination. Upon successful completion of the exam, the student will be issued a Certificate of Completion, which may be used according to the instructions below to satisfy the requirements of the Alcohol and Marijuana Control Office.

We have instructors for the program available for email support during the hours of 9am to 5pm PST. To contact an instructor, please send an email to info@medicalmarijuanaunited.com with your name and any questions or comments you have.
The Alaska state website for medical marijuana information can be found at https://www.commerce.alaska.gov/web/amco
This course is self-directed, and at the bottom of this page, and all the others in this course, you will find a link to the next section of the course. When you access each page, be sure to read all the information on it, follow the links to learn more, watch the provided videos, and take notes as appropriate. When you have finished viewing each page, you may attempt the final exam. You may take the final exam as many times as you like, but you must pass with a score of 70% or higher to unlock the certificate of completion. Once you have unlocked your certificate, it will open in a pop up window (so pop ups must be allowed on our domain). You can then print your certificate and/or save it as a pdf to your computer, tablet, or phone. You will need to provide this certificate to the board for final approval and licensing.
Now that we have covered the fundamentals of how the certification process works, you may begin the first section of the course by selecting "SECTION ONE: State Laws and Rules".

SECTION ONE: State Laws and Rules

Alaska Laws & Penalties

Offense	Penalty	Incarceration	Max. Fine
Possession			
Personal Use			
1 oz or less	None	None	$ 0
1 - 4 oz in your residence*	Not classified	N/A	$ 0
1 - less than 4 oz	Misdemeanor	1 year	$ 10,000
4 oz or more	Felony	5 years	$ 50,000
Any amount within 500 feet of school grounds or rec. center**	Felony	5 years	$ 50,000

Public consumption	Violation	None	$ 100
With Intent to Distribute			
Less than 1 oz***	Misdemeanor	1 year	$ 10,000
1 oz or more	Felony	5 years	$ 50,000
* Based on an Alaskan Supreme Court decision, possession in the home for personal use is protected conduct by the right-to-privacy provision in their state constitution.			
** If charged with possession of marijuana in a school zone, an affirmative defense may be raised in court that the conduct took place entirely within a private residence.			
*** The law will change in November 2016 when retail stores are established to sell up to one ounce. Currently, a person may convey up to one ounce to anyone 21 years old or older without compensation.			
Sale or Delivery			
Less than 1 oz	Misdemeanor	1 year	$ 10,000
1 oz or more	Felony	5 years	$ 50,000
To a person under 19 who is 3 years or more younger than the seller.	Felony	10 years	$ 100,000
Cultivation			
Up to 6 plants (no more than 3 mature)	None	None	$ 0
6 - 25 plants in your residence*	Not classified	N/A	$ 0
25 plants or more	Felony	5 years	$ 1,000
To a person under 19 who is 3 years or more younger than the seller.	Felony	10 years	$ 100,000
* Based on an Alaskan Supreme Court decision, possession in the home for personal use is protected conduct by the right-to-privacy provision in their state constitution.			
Hash & Concentrates			
Possession of 3g or less	Misdemeanor	0 - 1 year	$ 10,000
Possession of more than 3g	Felony	0 - 2 years	$ 50,000
Delivery, manufacture, or possessing with intent to distribute any amount	Felony	1 - 3 years	$ 100,000
Civil Asset Forfeiture			
Vehicles and other assets can be seized in a civil proceeding, regardless of whether criminal charges are brought.			
Miscellaneous			
If under 1 ounce of marijuana is gifted	No Liability	None	$ 0
Offense within owned structure	Felony	5 years	$ 500,000
Administrative revocation of license to drive for consumption or possession			

Penalty Details

Marijuana is a Schedule VIA substance under the Controlled Substances chapter of Alaskan criminal law. However, tetrahydrocannabinols, hash, and hash oil are Schedule IIIA substances.

See

- Alaska Stat. § 11.71.160 Web Search
- Alaska Stat. § 11.71.190 Web Search

Possession for Personal Use

Adults may possess up to one ounce of marijuana and/or to grow up to six marijuana plants (no more than three mature) for non-commercial purposes. Sharing or gifting 1 ounce or less, or 6 plants or less for personal use to persons at least 21 years of age quantities of marijuana is also permitted under the new law; however the consumption of cannabis in public remains an offense and is punishable by a fine of up to $100.

See

- Alaska Stat. § 17.38.020 Web Search
- Alaska Stat. § 17.38.040 Web Search

Possession of 1 to less than 4 ounces is a Class A misdemeanor punishable by up to 1 year imprisonment and/or a fine up to $10,000. However, if the use, display, or possession was for personal use and occurred in the confines of the offender's private residence, there is no penalty and this act is protected under the Alaskan constitutional right to privacy.

Possession of 4 or more ounces of marijuana is a class C felony punishable by up to 5 years imprisonment and/or a fine up to $50,000.

See

- Alaska Stat. § 11.71.040 Web Search
- Alaska Stat. § 11.71.050 Web Search
- Alaska Stat. § 11.71.060 Web Search
- Alaska Stat. § 12.55.035 Web Search
- Alaska Stat. § 12.55.125(d), (e) Web Search
- Alaska Stat. § 12.55.135 Web Search
- *Ravin v. State*, 537 P.2d 494 (Alaska 1975) Web Search
- *Noy v. State*, 83 P.3d 545 (Alaska Ct. App. 2003) Web Search

Possession within 500 feet of school grounds, a recreation or youth center, or on a school bus is a class C felony punishable by up to 5 years imprisonment and/or a fine up to $50,000. It is an affirmative defense to this charge that the violation occurred entirely within the confines of a personal residence.

See

- Alaska Stat. § 11.71.040 Web Search
- Alaska Stat. § 12.55.035 Web Search
- Alaska Stat. § 12.55.125(d), (e) Web Search

Possession with Intent to Distribute

It is a class A misdemeanor punishable by up to 1 year imprisonment and/or a fine up to $10,000 to possess with intent to distribute less than 1 ounce of marijuana. Possession with intent to distribute an ounce or more of marijuana is a class C felony punishable by up to 5 years imprisonment and/or a fine up to $50,000.

See

- Alaska Stat. § 11.71.040 Web Search

- Alaska Stat. § 11.71.050 Web Search
- Alaska Stat. § 12.55.035 Web Search
- Alaska Stat. § 12.55.125 Web Search
- Alaska Stat. § 12.55.135 Web Search

Sale/Delivery

Retail sales of cannabis by state-licensed entities to those over the age of 21 are regulated in this state. Marijuana sales by unlicensed entities remain subject to criminal penalties.
It is a class A misdemeanor punishable by up to 1 year imprisonment and/or a fine up to $10,000 to deliver with or without compensation less than 1 ounce of marijuana. Delivery with or without compensation of an ounce or more of marijuana is a class C felony punishable by up to 5 years imprisonment and/or a fine up to $50,000.
See

- Alaska Stat. § 11.71.040 Web Search
- Alaska Stat. § 11.71.050 Web Search
- Alaska Stat. § 12.55.035 Web Search
- Alaska Stat. § 12.55.125 Web Search
- Alaska Stat. § 12.55.135 Web Search

Delivery to a person under the age of 19 by a person at least 3 years his senior is a class B felony punishable by up to 10 years imprisonment and/or a fine up to $100,000.
See

- Alaska Stat. § 11.71.030 Web Search
- Alaska Stat. § 12.55.035 Web Search

Cultivation

Adults may possess up to one ounce of marijuana and/or to grow up to six marijuana plants (no more than three mature) for non-commercial purposes. Cultivation shall be in a location where plants are not subject to public view without use of binoculars, aircraft, or other optical aids. One must take reasonable precautions to ensure the plants are secure from unauthorized access. Cultivation may only occur on property lawfully possessed by the cultivator or with consent from the person in lawful possession. Violation of these rules while otherwise in compliance with AS § 17.38.020 is punishable by a fine of up to $750.
See

- Alaska Stat. § 17.38.030 Web Search

Cultivation of less than 25 plants of marijuana for personal use in a private residence is protected under the right to privacy of the Alaska constitution. Cultivation of 25 plants or more is a class C felony punishable by up to 5 years imprisonment and/or a fine up to $50,000.
See

- Alaska Stat. § 11.71.040 Web Search
- Alaska Stat. § 12.55.035 Web Search
- Alaska Stat. § 12.55.125 Web Search
- *Ravin v. State*, 537 P.2d 494 (Alaska 1975) Web Search
- *Noy v. State*, 83 P.3d 545 (Alaska Ct. App. 2003) Web Search

Hash & Concentrates

Hashish, hashish oil, and any other compound, mixture, or preparation containing THC is a Schedule IIIA substance.
See

- Alaska Stat. §11.71.160(f) Web Search
- Alaska Stat. §11.71.900 Web Search

Possessing less than 3 grams of hashish or concentrate is considered misconduct involving a controlled substance in the fifth degree. Misconduct involving a controlled substance in the fifth degree is a Class A misdemeanor. A Class A misdemeanor conviction is punishable by a fine of up to $10,000 and a sentence of up to 1 year.

See

- Alaska Stat. §11.71.050 Web Search
- Alaska Stat. §12.55.035(b)(5) Web Search
- Alaska Stat. §12.55.135(a) Web Search

Possessing more than three grams or more of hashish or concentrate is considered misconduct involving a controlled substance in the fourth degree. Possessing hashish or concentrates on a school bus or within 500 feet of a school or youth center is also misconduct involving a controlled substance in the fourth degree. Misconduct involving a controlled substance in the fourth degree is a Class C felony. A Class C felony conviction is punishable by a fine of up to $50,000 and a sentence of 0 -2 years, but previous felony convictions will increase the sentence up to 5 years total.

See

- Alaska Stat. §11.71.040 Web Search
- Alaska Stat. §12.55.125(e) Web Search
- Alaska Stat. §12.55.035(b)(4) Web Search

Delivering any amount of a hashish or concentrate to an individual less than 19 years in age and who is at least three years younger than the person delivering the substance is misconduct involving a controlled substance in the first degree. Misconduct involving a controlled substance in the first degree is an unclassified felony which is punishable by a fine of up to $500,000 and a sentence of 5 - 99 years.

See

- Alaska Stat. §11.71.010 Web Search
- Alaska Stat. §12.55.125(b) Web Search
- Alaska Stat. §12.55.035(b)(1) Web Search

Delivering, manufacturing, or possessing hashish or THC concentrates with the intent to deliver is considered misconduct involving a controlled substance in the third degree, which is a Class B felony. A Class B felony conviction is punishable by a fine of up to $100,000 and a sentence of 1 - 3 years, but previous felony convictions will increase the sentence up to 10 years total.

See

- Alaska Stat. §11.71.030 Web Search
- Alaska Stat. §12.55.125(d) Web Search
- Alaska Stat. §12.55.035(b)(3) Web Search

If charged with misconduct involving a controlled substance in the fourth degree due to the crime occurring within 500 feet of a school or youth center then the defendant may raise the affirmative defense that all the activity took place within a private residence. This defense does not prevent a lesser charge from being brought.

See

- Alaska Stat. §12.71.040(b) Web Search

While Alaska does recognize medical affirmative defenses for possession of marijuana, those defenses do not apply to hashish or concentrates.

See

- Alaska Stat. §12.71.090 Web Search

Paraphernalia

Alaska does not have any laws punishing the possession, sale, or manufacture of paraphernalia.

Sentencing

The court, after rendering judgment or within 60 days of doing so, may suspend imposition of a sentence or part of a sentence and place the offender on probation. For first time offenders, the court may suspend imposition of a sentence for up to 1 year or for the maximum duration of the sentence that may be imposed, whichever is greater, if it determines that it would be in the interest of justice.

See

- Alaska Stat. § 12.55.080 Web Search
- Alaska Stat. § 12.55.085 Web Search

For violations of the controlled substances chapter of Alaskan criminal law which involve the person's own use of the substance, they may be committed to the Department of Corrections for treatment for up to 1 year. This may be in place of fine or imprisonment, but only if the imprisonment would not have exceeded 1 year.

See

- Alaska Stat. § 11.71.305 Web Search

Presumptive terms of imprisonment increase for subsequent felony convictions.

See

- Alaska Stat. § 12.55.085(d)(3)-(4) Web Search

Forfeiture

Vehicles and other property may be seized for controlled substance violations. Within 20 days of seizure of the property, the commissioner of public safety must notify all persons with an interest in the property. A person has 30 days to respond to this notice with a claim to the property.

See

- Alaska Stat. § 17.30.110 Web Search
- Alaska Stat. § 17.30.112 Web Search
- Alaska Stat. § 17.30.116 Web Search

Miscellaneous

Administrative revocation of license to drive for consumption or possession of alcohol or drugs

The department shall revoke the driver's license or permit, privilege to drive, or privilege to obtain a license of a person not yet 18 years of age for six months when notified of an informal adjustment and shall revoke the person's driver's license or permit... for an additional six months if informed of unsuccessful adjustment.

See

- Alaska Stat. § 28.15.176 Web Search
- Alaska Stat. § 47.12.060(b)(4) Web Search

Knowingly maintaining a structure used for drug offenses

It is a class C felony punishable by up to 5 years imprisonment and/or a fine up to $50,000 to maintain a structure (including vehicles and houses) that the owner knows is used for selling, storing, or using marijuana.

See

- Alaska Stat. § 11.71.040 Web Search
- Alaska Stat. § 12.55.035 Web Search

Civil damages

When a person engages in action that causes civil damages while under the influence of a controlled substance and the intoxication contributed significantly to the damages, the person who sold or gave them the substance is strictly liable to him for the damages.

See

- Alaska Stat. § 09.65.205 Web Search

CONDITIONAL RELEASE

The state allows conditional release or alternative or diversion sentencing for people facing their first prosecutions. Usually, conditional release lets a person opt for probation rather than trial. After successfully completing probation, the individual's criminal record does not reflect the charge.

LEGALIZATION

This state has legalized marijuana for personal use.

MEDICAL MARIJUANA

This state has medical marijuana laws enacted. Modern research suggests that cannabis is a valuable aid in the treatment of a wide range of clinical applications. These include pain relief, nausea, spasticity, glaucoma, and movement disorders. Marijuana is also a powerful appetite stimulant and emerging research suggests that marijuana's medicinal properties may protect the body against some types of malignant tumors, and are neuroprotective.

Please continue to SECTION TWO: Common Conditions and Common Symptoms

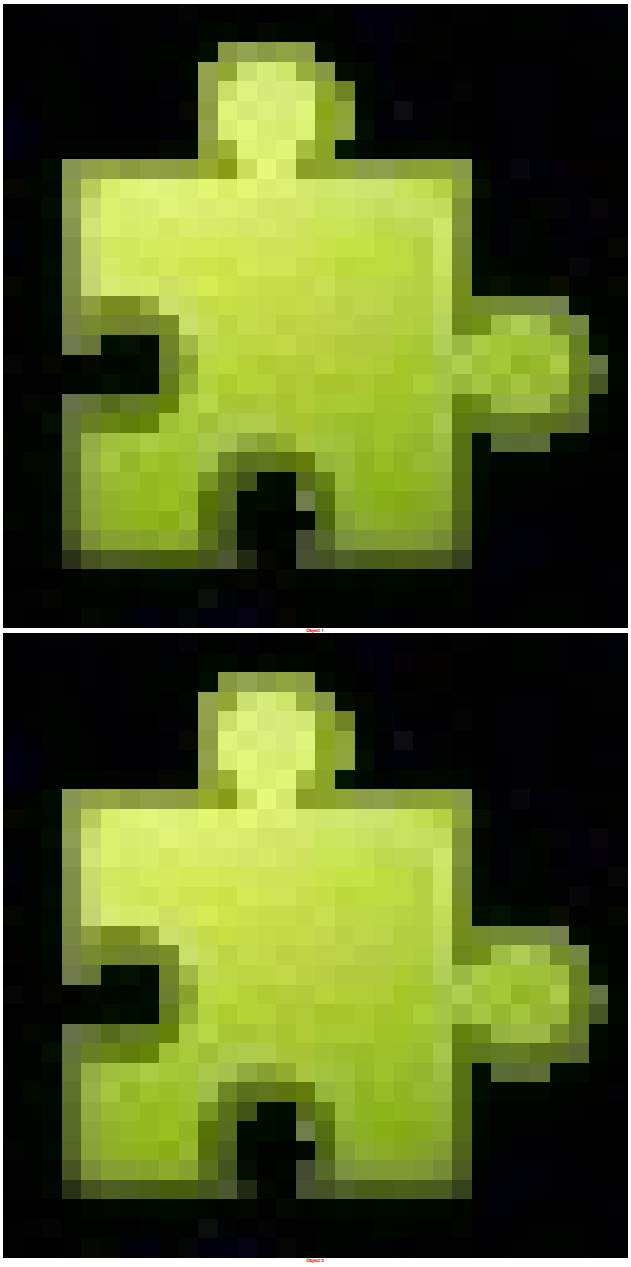
SECTION TWO: Common Conditions and Common Symptoms

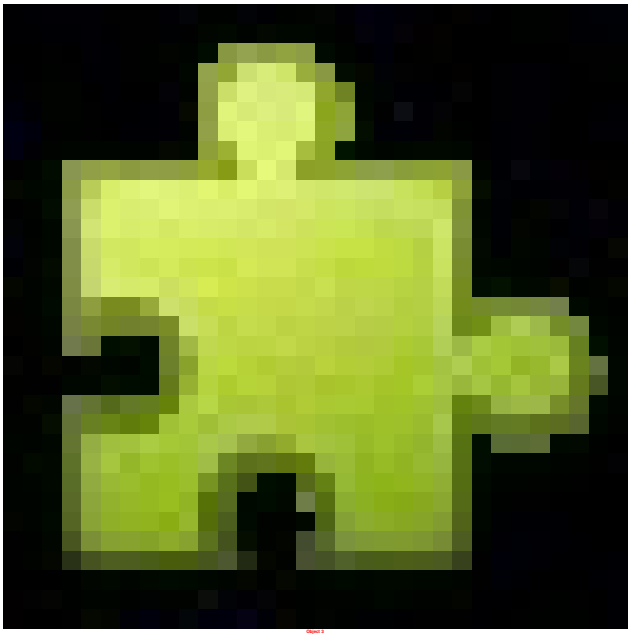
This section is designed for two hours of instruction.

The purpose of the this section is to help you become familiar with the various conditions which may cause a patient to consider cannabis therapy. Please click on the following conditions to learn more about each one:

Cachexia
Cancer
Crohn's disease
Epilepsy
Glaucoma
Hepatitis C
HIV or AIDS
Intractable pain
Muscle spasms, and/or spasticity
Multiple Sclerosis
Nausea
Seizures

Let's look now at three videos which discuss some of the most common indications for cannabis therapy, as an anti-convulsive, an anti-spasmodic, and an anti-tumor agent.

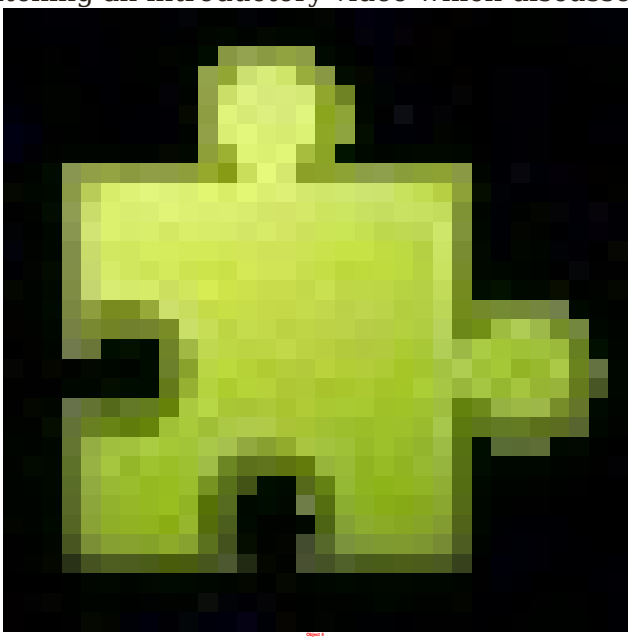




Please continue to "SECTION THREE: Short and Long-Term Effects of Cannabinoids".

SECTION THREE: Short and Long-Term Effects of Cannabinoids

This section is designed for two hours of instruction.
Let's begin by watching an introductory video which discusses the endocannabinoid system.



As we learned, there are several constituent parts of the cannabis plant known as cannabinoids. Each play a different role in cannabis therapy, and may be combined in different ways.

Regardless of purpose, cannabis has immediate, short-term effects when used. When smoked, the short-term effects of cannabis manifest within seconds and are fully apparent within a few minutes, typically lasting for 1–3 hours, varying by the person and the strain of cannabis. After oral ingestion of cannabis, the onset of effect is delayed relative to smoking, taking 30 minutes to 2 hours, but the duration is prolonged due to continued slow absorption. The duration of noticeable effects has been observed to diminish due to prolonged, repeated use and the development of a tolerance to cannabinoids.

Psychoactive effects

The psychoactive effects of cannabis, known as a "high", are subjective and can vary based on the person and the method of use.

When THC enters the blood stream and reaches the brain, it binds to cannabinoid receptors. The endogenous ligand of these receptors is anandamide, the effects of which THC emulates. This agonism of the cannabinoid receptors results in changes in the levels of various neurotransmitters, especially dopamine and norepinephrine; neurotransmitters which are closely associated with the acute effects of cannabis ingestion, such as euphoria and anxiety. Some effects may include a general alteration of conscious perception, euphoria, feelings of well-being, relaxation or stress reduction, increased appreciation of humor, music (especially discerning its various components/instruments) or the arts, joviality, metacognition and introspection, enhanced recollection (episodic memory), increased sensuality, increased awareness of sensation, increased libido, and creativity.

Abstract or philosophical thinking, disruption of linear memory and paranoia or anxiety are also typical. Anxiety is the most commonly reported side effect of smoking marijuana. Between 20 and 30 percent of recreational users experience intense anxiety and/or panic attacks after smoking cannabis, however, some report anxiety only after not smoking cannabis for a prolonged period of time. Inexperience and use in an unfamiliar environment are major contributing factors to this anxiety. Cannabidiol (CBD), another cannabinoid found in cannabis in varying amounts, has been shown to ameliorate the adverse effects of THC, including anxiety, that some consumers experience.

Cannabis also produces many subjective and highly tangible effects, such as greater enjoyment of food taste and aroma, an enhanced enjoyment of music and comedy, and marked distortions in the perception of time and space (where experiencing a "rush" of ideas from the bank of long-term memory can create the subjective impression of long elapsed time, while a clock reveals that only a short time has passed). At higher doses, effects can include altered body image, auditory and/or visual illusions, pseudo-hallucinatory, and ataxia from selective impairment of polysynaptic reflexes. In some cases, cannabis can lead to dissociative states such as depersonalization and derealization.

Any episode of acute psychosis that accompanies cannabis use usually abates after 6 hours, but in rare instances heavy users may find the symptoms continuing for many days. If the episode is accompanied by aggression or sedation, physical restraint may be necessary.

While many psychoactive drugs clearly fall into the category of either stimulant, depressant, or hallucinogen, cannabis exhibits a mix of all properties, perhaps leaning the most towards hallucinogenic or psychedelic properties, though with other effects quite pronounced as well. THC is typically considered the primary active component of the cannabis plant; various scientific studies have suggested that certain other cannabinoids like CBD may also play a significant role in its psychoactive effects.

Somatic effects

Some of the short-term physical effects of cannabis use include increased heart rate, dry mouth, reddening of the eyes (congestion of the conjunctival blood vessels), a reduction in intraocular pressure, muscle relaxation and a sensation of cold or hot hands and feet. Electroencephalography has shown somewhat more persistent alpha waves of slightly lower frequency than usual. Cannabinoids produce a "marked depression of motor activity" via activation of neuronal cannabinoid receptors belonging to the CB1 subtype.

Duration

Inhaled

Peak levels of cannabis-associated intoxication occur approximately 30 minutes after smoking and last for several hours. The total short-term duration of cannabis use when smoked is based on the potency, method of smoking, and how much is smoked. Peak levels of intoxication typically last several hours.

Ingested

When taken orally (in the form of capsules, food or drink), the psychoactive effects take longer to manifest and generally last longer, typically lasting for 4–10 hours after consumption. Very high doses may last even longer.

Neurological effects

The areas of the brain where cannabinoid receptors are most prevalently located are consistent with the behavioral effects produced by cannabinoids. Brain regions in which cannabinoid receptors are very abundant are the basal ganglia, associated with movement control; the cerebellum, associated with body movement coordination; the hippocampus,

associated with learning, memory, and stress control; the cerebral cortex, associated with higher cognitive functions; and the nucleus accumbens, regarded as the reward center of the brain. Other regions where cannabinoid receptors are moderately concentrated are the hypothalamus, which regulates homeostatic functions; the amygdala, associated with emotional responses and fears; the spinal cord, associated with peripheral sensations like pain; the brain stem, associated with sleep, arousal, and motor control; and the nucleus of the solitary tract, associated with visceral sensations like nausea and vomiting.
Experiments on animal and human tissue have demonstrated a disruption of short-term memory formation, which is consistent with the abundance of CB1 receptors on the hippocampus, the region of the brain most closely associated with memory. Cannabinoids inhibit the release of several neurotransmitters in the hippocampus such as acetylcholine, norepinephrine, and glutamate, resulting in a major decrease in neuronal activity in that region. This decrease in activity resembles a "temporary hippocampal lesion."
In in-vitro experiments involving THC at extremely high concentrations, which could not be reached with commonly consumed doses, caused competitive inhibition of the AChE enzyme and inhibition of β-amyloid peptide aggregation, implicated in the development of Alzheimer's disease. Compared to currently approved drugs prescribed for the treatment of Alzheimer's disease, THC is a considerably superior inhibitor of A aggregation, and this study provides a previously unrecognized molecular mechanism through which cannabinoid molecules may impact the progression of this debilitating disease.

Effects on driving

While several studies have shown increased risk associated with cannabis use by drivers, other studies have not found increased risk. Cannabis usage has been shown in some studies to have a negative effect on driving ability. The British Medical Journal indicated that "drivers who consume cannabis within three hours of driving are nearly twice as likely to cause a vehicle collision as those who are not under the influence of drugs or alcohol".
In Cannabis and driving: a review of the literature and commentary, the United Kingdom's Department for Transport reviewed data on cannabis and driving, finding "Cannabis impairs driving behaviour. However, this impairment is mediated in that subjects under cannabis treatment appear to perceive that they are indeed impaired. Where they can compensate, they do, for example ... effects of driving behaviour are present up to an hour after smoking but do not continue for extended periods". The report summarizes current knowledge about the effects of cannabis on driving and accident risk based on a review of available literature published since 1994 and the effects of cannabis on laboratory based tasks. The study identified young males, amongst whom cannabis consumption is frequent and increasing, and in whom alcohol consumption is also common, as a risk group for traffic accidents. The cause, according to the report, is driving inexperience and factors associated with youth relating to risk taking, delinquency and motivation. These demographic and psychosocial variables may relate to both drug use and accident risk, thereby presenting an artificial relationship between use of drugs and accident involvement.
Other studies show similar results, with laboratory studies examining the effects of cannabis on skills utilised while driving showing impairments in tracking, attention, reaction time, short-term memory, hand-eye coordination, vigilance, time and distance perception, and decision making and concentration. Another review concluded that "the acute effect of moderate or higher doses of cannabis impairs the skills related to safe driving and injury risk", specifically "attention, tracking and psychomotor skills". Some studies conclude that there is evidence of dose-dependent impairments in cannabis-affected drivers' ability to

control a vehicle in the areas of steering, headway control, speed variability, car following, reaction time and lane positioning. The researchers note that "even in those who learn to compensate for a drug's impairing effects, substantial impairment in performance can still be observed under conditions of general task performance (i.e. when no contingencies are present to maintain compensated performance)."

An extensive 2013 review of 66 studies regarding crash risk and drug use found that cannabis was associated with minor, but not statistically significant increased odds of injury or fatal accident. The estimated fatal crash odds for cannabis (1.26) were lower than: opiates (1.68), antianxiety medications (2.30), zopiclone (sleep medicine) (2.60), cocaine (2.96), and amphetamines (5.17). The estimated injury odds for cannabis (1.10) were lower than: antihistamines (1.12), penicillin (1.12), antianxiety meds (1.17), antidepressants (1.35), antiasthmatics (1.31), zopiclone (sleep medicine) (1.42), cocaine (1.66), and opiates (1.91). The study concluded: "By and large, the increase in the risk of accident involvement associated with the use of drugs must be regarded as modest...Compared to the huge increase in accident risk associated with alcohol, as well as the high accident rate among young drivers, the increases in risk associated with the use of drugs are surprisingly small."

A report from the University of Colorado, Montana State University, and the University of Oregon found that on average, states that have legalized medical cannabis had a decrease in traffic-related fatalities by 8-11%. The researchers hypothesized "it's just safer to drive under the influence of marijuana than it is drunk....Drunk drivers take more risk, they tend to go faster. They don't realize how impaired they are. People who are under the influence of marijuana drive slower, they don't take as many risks". Another consideration, they added, was the fact that users of marijuana tend not to go out as much.

In the largest and most precisely controlled study of its kind carried out by the U.S. Department of Transportation's National Highway Traffic Safety Administration to research the risks of cannabis and driving, it was found that other "studies that measure the presence of THC in the drivers' blood or oral fluid, rather than relying on self-report tend to have much lower (or no) elevated crash risk estimates. Likewise better controlled studies have found lower (or no) elevated crash risk estimates". The study found that "after adjusting for age, gender, race and alcohol use, drivers who tested positive for marijuana were no more likely to crash than those who had not used any drugs or alcohol prior to driving". The study however cautions that " these results do not indicate that drug use by drivers is risk-free."

Cardiovascular effects

Short-term (one to two hours) effects on the cardiovascular system can include increased heart rate, dilation of blood vessels, and fluctuations in blood pressure. There are medical reports of occasional infarction, stroke and other cardiovascular side effects. Marijuana's cardiovascular effects are not associated with serious health problems for most young, healthy users. Researchers reported in the International Journal of Cardiology, "Marijuana use by older people, particularly those with some degree of coronary artery or cerebrovascular disease, poses greater risks due to the resulting increase in catecholamines, cardiac workload, and carboxyhemoglobin levels, and concurrent episodes of profound postural hypotension. Indeed, marijuana may be a much more common cause of myocardial infarction than is generally recognized. In day-to-day practice, a history of marijuana use is often not sought by many practitioners, and even when sought, the patient's response is not always truthful".

A 2013 analysis of 3,886 myocardial infarction survivors over an 18-year period showed "no statistically significant association between marijuana use and mortality".

A 2008 study by the National Institutes of Health Biomedical Research Centre in Baltimore found that heavy, chronic smoking of marijuana (138 joints per week) changed blood proteins associated with heart disease and stroke.
A 2000 study by researchers at Boston's Beth Israel Deaconess Medical Center, Massachusetts General Hospital and Harvard School of Public Health found that a middle-age person's risk of heart attack rises nearly fivefold in the first hour after smoking marijuana, "roughly the same risk seen within an hour of sexual activity".
Cannabis arteritis is a very rare peripheral vascular disease similar to Buerger's disease. There were about 50 confirmed cases from 1960 to 2008, all of which occurred in Europe.

Combination with other drugs

A confounding factor in cannabis research is the prevalent usage of other recreational drugs, especially alcohol and nicotine. Such complications demonstrate the need for studies on cannabis that have stronger controls, and investigations into alleged symptoms of cannabis use that may also be caused by tobacco. Some critics question whether agencies doing the research make an honest effort to present an accurate, unbiased summary of the evidence, or whether they "cherry-pick" their data to please funding sources which may include the tobacco industry or governments dependent on cigarette tax revenue; others caution that the raw data, and not the final conclusions, are what should be examined.
The Australian National Household Survey of 2001 showed that cannabis in Australia is rarely used without other drugs. 95% of cannabis users also drank alcohol; 26% took amphetamines; 19% took ecstasy and only 2.7% reported not having used any other drug with cannabis. While research has been undertaken on the combined effects of alcohol and cannabis on performing certain tasks, little research has been conducted on the reasons why this combination is so popular. Evidence from a controlled experimental study undertaken by Lukas and Orozco suggests that alcohol causes THC to be absorbed more rapidly into the blood plasma of the user. Data from the Australian National Survey of Mental Health and Wellbeing found that three-quarters of recent cannabis users reported using alcohol when cannabis was not available.

Memory and learning

Studies on cannabis and memory are often hindered by small sample sizes, confounding drug use, and other factors. The strongest evidence regarding cannabis and memory focuses on its temporary negative effects on short-term and working memory.
In a 2001 study looking at neuropsychological performance in long-term cannabis users, researchers found "some cognitive deficits appear detectable at least 7 days after heavy cannabis use but appear reversible and related to recent cannabis exposure rather than irreversible and related to cumulative lifetime use". On his studies regarding cannabis use, lead researcher and Harvard professor Harrison Pope said he found marijuana is not dangerous over the long term, but there are short-term effects. From neuropsychological tests, Pope found that chronic cannabis users showed difficulties, with verbal memory in particular, for "at least a week or two" after they stopped smoking. Within 28 days, memory problems vanished and the subjects "were no longer distinguishable from the comparison group". Researchers from the University of California, San Diego School of Medicine failed to show substantial, systemic neurological effects from long-term recreational use of cannabis. Their findings were published in the July 2003 issue of the Journal of the International Neuropsychological Society. The research team, headed by Dr Igor Grant, found that cannabis use did affect perception, but did not cause permanent brain damage. Researchers looked at data from 15 previously published controlled studies involving 704

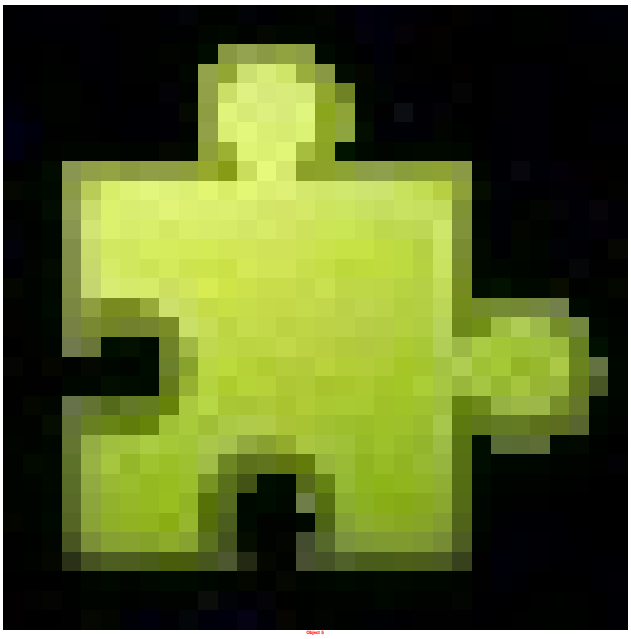
long-term cannabis users and 484 nonusers. The results showed long-term cannabis use was only marginally harmful on the memory and learning. Other functions such as reaction time, attention, language, reasoning ability, perceptual and motor skills were unaffected. The observed effects on memory and learning, they said, showed long-term cannabis use caused "selective memory defects", but that the impact was "of a very small magnitude". A study at Johns Hopkins University School of Medicine showed that very heavy use of marijuana is associated with decrements in neurocognitive performance even after 28 days of abstinence.

Appetite

The feeling of increased appetite following the use of cannabis has been documented for hundreds of years, and is known colloquially as "the munchies" in the English-speaking world. Clinical studies and survey data have found that cannabis increases food enjoyment and interest in food. Scientists have claimed to be able to explain what causes the increase in appetite, concluding that "endocannabinoids in the hypothalamus activate cannabinoid receptors that are responsible for maintaining food intake". Rarely, chronic users experience a severe vomiting disorder, cannabinoid hyperemesis syndrome, after smoking and find relief by taking hot baths.

Endogenous cannabinoids ("endocannabinoids") were discovered in cow's milk and soft cheeses. Endocannabinoids were also found in human breast milk. It is widely accepted that the neonatal survival of many species "is largely dependent upon their suckling behavior, or appetite for breast milk" and recent research has identified the endogenous cannabinoid system to be the first neural system to display complete control over milk ingestion and neonatal survival. It is possible that "cannabinoid receptors in our body interact with the cannabinoids in milk to stimulate a suckling response in newborns so as to prevent growth failure".

In review, let's watch this informative documentary focused on the health impacts of cannabis use.

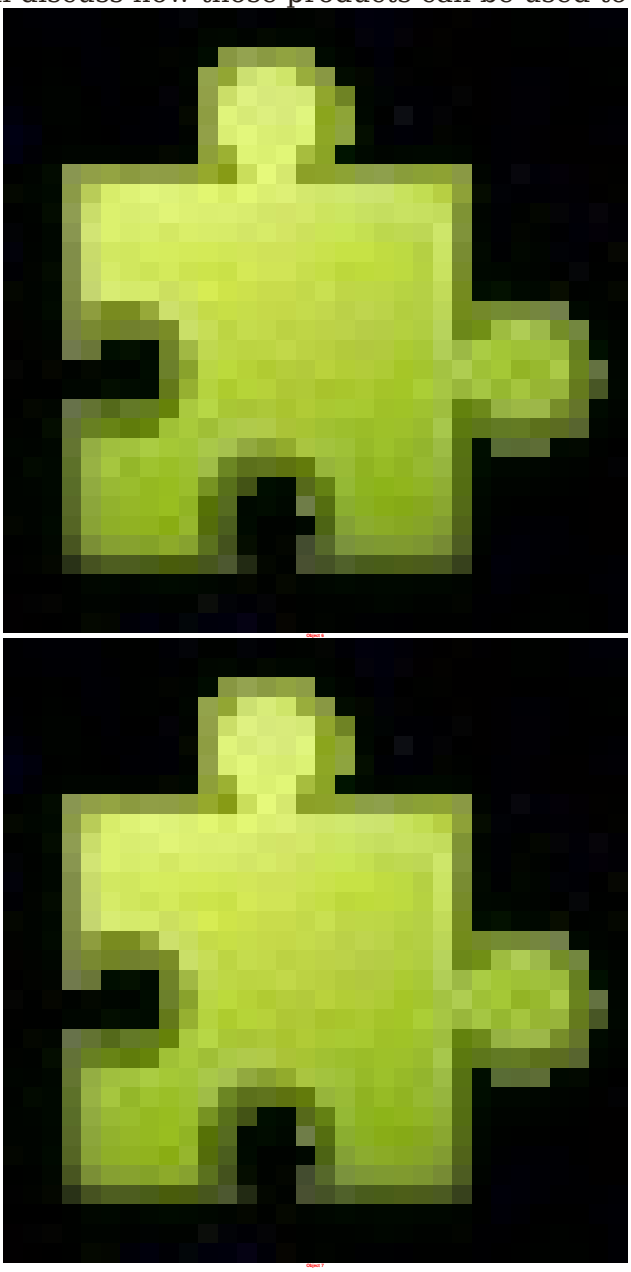


Please continue to "SECTION FOUR: Beneficial Products for Qualified Patients".

SECTION FOUR: Beneficial Products for Qualified Patients

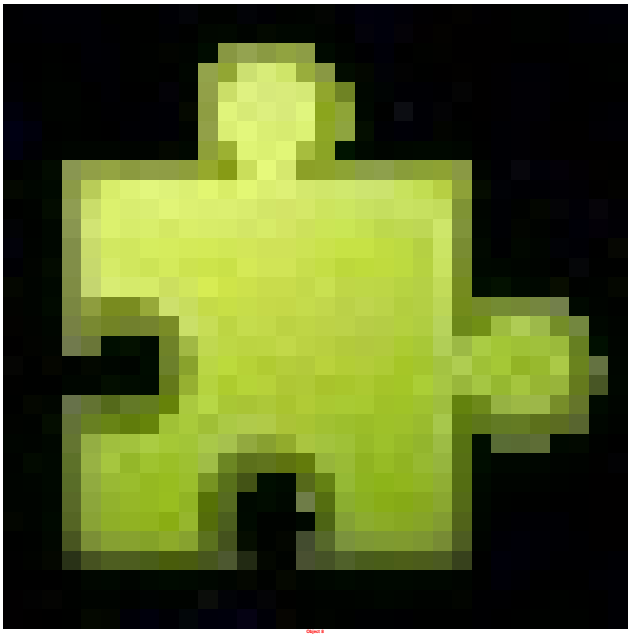
This section is designed for two hours of instruction.

There are many products available that are beneficial to medical marijuana patients. In the next section, we'll discuss how those products can be used to treat a variety of conditions.



Contraindications for use

Not everyone is a good candidate for cannabis therapy. Let's take a look at this video discussing the most common contraindications for use

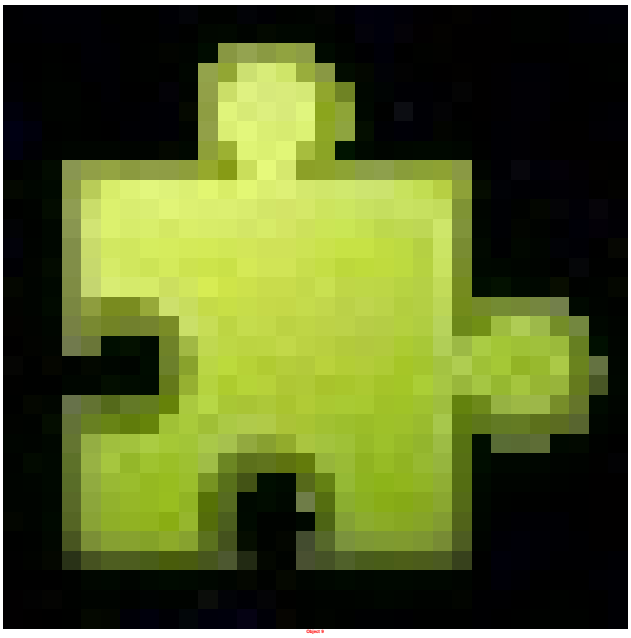


Please continue to "SECTION FIVE: The Risks and Benefits of Various Routes of Administration".

SECTION FIVE: The Risks and Benefits of Various Routes of Administration

This section is designed for two hours of instruction.

Video - Appropriate Delivery Mechanisms (30 minutes)



Methods of Delivery

- Inhalation
- Oral
- Transdermal

Notes: Each of these methods can employ various techniques that are appropriate for different occasions.
Due to the psychoactive effects of THC many ways of ingesting cannabis have traditionally been to accentuate, prolong, or induce quickly the psychoactive effects.
Oral Ingestion is the most effective for diseases discussed in this presentation with the exception of colon cancer.

Inhalation

- Smoking and Vaporization
- Currently the most common method of consumption
- The majority of cannabinoids enter the body through the lungs where they are passed directly into the bloodstream
- Overall has the shortest time effect of all delivery methods
- **Least effective** for treating more serious illnesses

Notes: In a study done by Huestis and colleagues on cannabinoid pharmacokinetics, subjects who consumed cannabis via inhalation reported feeling the effects of the medication within minutes, with peak effects around the hour mark and total duration of effects around two hours. It is important to point out that there can be significant variation in these times due to factors such as cannabinoid content, depth and length of inhalation (a.k.a. smoking style), and previous cannabis exposure (tolerance)".

Inhalation Methods - Smoking

- Joints - Rolled marijuana cigarettes
- Blunts - Marijuana rolled in the leaf wrap of a hollowed out cigar
- Hand Pipes - Operate by trapping the smoke produced from burning cannabis, which is then inhaled by the user
- Water pipes (Bongs or Bubblers)

Notes: Smoking is the most expedient method of consumption, with almost immediate effect and dosage controlled by the patient.
Although results from clinical trials have been contradictory, many researchers believe herbal marijuana contains toxins and carcinogens that lead to increased risk of respiratory diseases and cancer. The health benefits associated with the addition of water using Bongs or Bubblers are up for debate. Water cools the smoke, but it's uncertain whether it acts as an effective filter for harmful constituents.

Inhalation Methods – Vaporization

- A healthier alternative method of inhalation
- The cannabis plant is heated slowly, causing the cannabinoids to evaporate without reaching the point of combustion, releasing a much lower proportion of the harmful components that come from smoking
- Offers the same therapeutic benefits of smoking without exposure to harmful toxins

Inhalation Methods – Summary

- Currently the most common form of consumption
- Least effective form of treatment for most serious illnesses which require a more direct and potent dose of CBD
- Vaporization provides a healthier alternative to smoking

Oral Delivery Methods

- Oral delivery methods include all techniques that are administered through the mouth, including tinctures, ingestible oils, and infused edibles and drinks.
- Subjects who consume cannabis orally usually report feeling the effects within thirty

minutes, with peak effects around the one hour mark and total duration of effects ranging as long as six hours.
- The reasons for this can be attributed to the process of digestion, in which edibles have to be broken down from their original food state to a molecular cannabinoid state in order to be absorbed. The gradual nature of the digestion process accounts for the longer effects of this method of consumption.
- Factors such as the amount of food consumed prior to medicating, strength of the product and even a person's metabolism can all affect the overall experience.

Notes: To treat an illness with cannabinoids it is best to get the cannabinoids as close to the infected areas as possible. The most effective way to treat most diseases discussed in this course is to ingest the concentrated oil of cannabis.

Oral Delivery – Sublingual/Oromucosal

- Under the tongue and within the mouth there are a large number of blood vessels which can absorb cannabinoids.
- Common examples of these types of medications include dissolvable strips, sublingual sprays, medicated lozenges or tinctures.
- Examples: Real Scientific Hemp Oil (RSHO)™, Sativex™ & Epidiolex™

Notes: The sublingual (under the tongue) or oromucosal (in the oral cavity) delivery method introduces CBD to the oral mucosa which contains small micro-capillaries allowing the compound to be absorbed directly into the bloodstream for an almost immediate effect. As the remaining CBD rich-oil is swallowed it enters the digestive system and is directed to the liver by the hepatic portal system. The liver will then metabolize the remaining CBD which will later enter the bloodstream to provide a delayed but longer lasting effect.

Real Scientific Hemp Oil (RSHO) - a concentrated form of high CBD-rich hemp oil with concentrations between 15%-25%. Not to be confused with Rick Simpson "Hemp" Oil which has a higher THC content.

Sativex & Epidiolex – from GW Pharmaceuticals based in the UK.

Sativex - an oromucosal spray made from extracts of their specialized marijuana plant strains. The spray is standardized for a roughly 1:1 ratio of THC and cannabidiol, or CBD, but contains other plant-derived chemicals that are believed to contribute to the therapeutic effects. Approved in 11 countries total, it remains in clinical trials in the U.S., for its primary indication of cancer pain in patients where opioids either fail to provide relief or produce intolerable side effects. On April 28 of this year, FDA granted Fast Track designation for Sativex as it's the only non-opioid pain medicine currently in phase 3 trials.

Epidiolex - A liquid formulation of highly purified Cannabidiol (CBD) extract, as a treatment for various orphan pediatric epilepsy syndromes, for which Orphan Drug Designation has been granted by the FDA in the treatment of Dravet syndrome

Oral Delivery – Edibles & Beverages

- Cannabis infused foods/liquids take extra time to be broken down because they pass through the gastrointestinal tract and liver before entering the bloodstream.
- Cannabis can be infused into butter or oil that is then cooked in food.
- Doses can be difficult to judge, so it is recommended to eat only small portions of an edible at a time, and wait at least an hour to assess its effects so you do not over-medicate.
- Edibles will kick in significantly faster if eaten on an empty stomach, rather than after a meal.
- In general, the therapeutic effects last much longer than other consumption methods,

often up to four hours or more, and then slowly begin to wear off.
- Many patients report that this method provides more of a relaxing body effect than the cerebral high that is often accompanied with vaporizing and smoking.

Oral Delivery – Summary

- Most effective for serious illnesses such as Cancer, Parkinsons, Multiple Sclerosis, Epilepsy.
- Recommended dosage for adults by current distributers of the medication in medical marijuana states say that a gram a day is proper dosage.
- Proper dosage for young epileptic children is two doses a day of 3-4 milligrams of oil per pound of body weight.

Transdermal Delivery

- Cannabinoids combined with a penetrating topical cream can enter the skin and body tissues and allow for direct application to affected areas (e.g. allergic skin reactions, post-herpes neuralgia, muscle strain, inflammation, swelling, etc.).
- Fast Acting, Localized effect.
- No psychoactive effect.

Notes: Cannabis-infused lotions work because of the body's own endogenous cannabinoid system, which forms the biological basis for marijuana's therapeutic effect. When you apply an infused lotion or salve to help relieve neuropathic pain, itchiness and other ailments, the cannabinoids in the topical bind to CB2 receptors in your skin, which absorb them in a way that helps cells regenerate, allowing wounds to heal faster and easing painful chronic conditions like eczema and psoriasis. Cannabis-infused topicals cover a pretty wide myriad of conditions. Depending on the carrier oil used in formulating the body-care product, the cannabinoids penetrate deeply enough into the skin to relieve muscle pain and arthritis inflammation, but not so deep that THC enters the bloodstream or central nervous system. Additional anecdotal reports on topical treatment efficacy include:

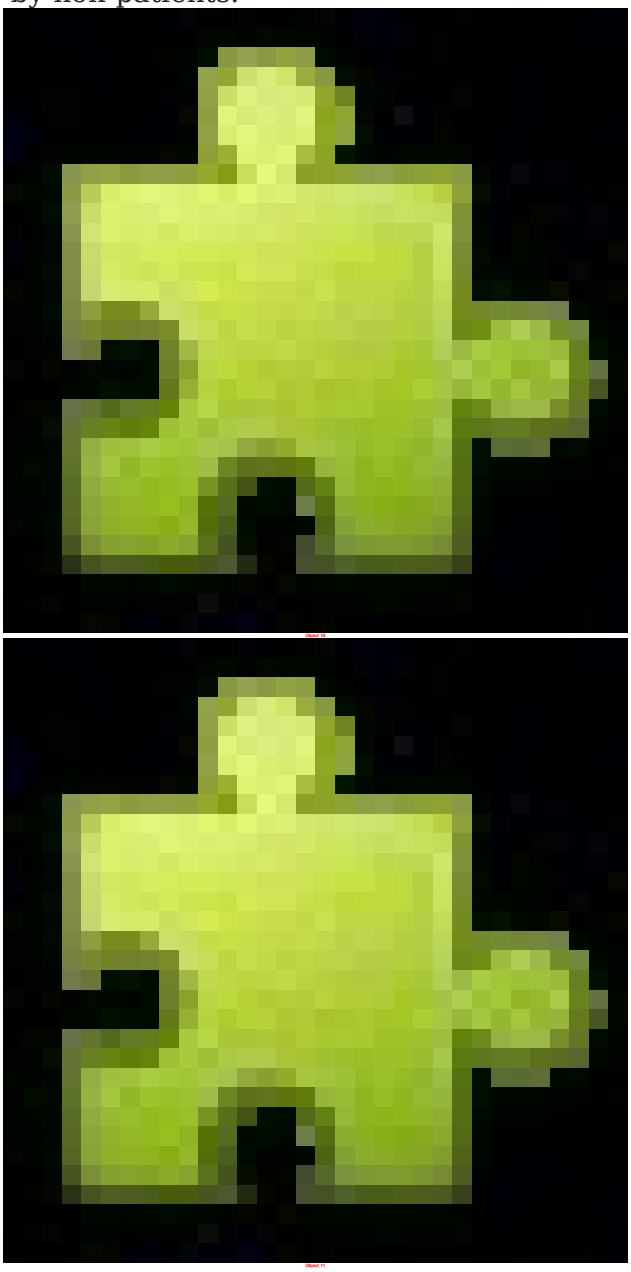
- Certain types of dermatitis (including atopic) and psoriasis.
- Balm for lips, fever blisters, herpes.
- Superficial wounds, cuts, acne pimples, furuncles, corns, certain nail fungus.
- Rheumatism and arthritic pains (up to the 2nd degree of arthritis).
- Torticollis, back pains, muscular pains and cramps, sprains and other contusions.
- Phlebitis, venous ulcerations.
- Hemorrhoids.
- Menstruation pains.
- Cold and sore throat, bronchitis.
- Asthmatic problems with breathing.
- Chronic inflammation of larynx (application in the form of a Priessnitz compress).
- Migraine, head pains, tension headaches.
- Pharmaceutical Cannabis or Cannabinoids.

Please continue to "SECTION SIX: Safe Handling of Marijuana Products and Limiting Access to Minors".

SECTION SIX: Safe Handling of Marijuana Products and Limiting Access to Minors

This section is designed for two hours of instruction.

Content
In this section we will discuss your role as a Medical Marijuana Consultant, often referred to as a 'Budtender' in the first two classes of our Budtender Program. These videos will include information about safe handling, dealing with various types of consumers, and preventing unauthorized use by non-patients.

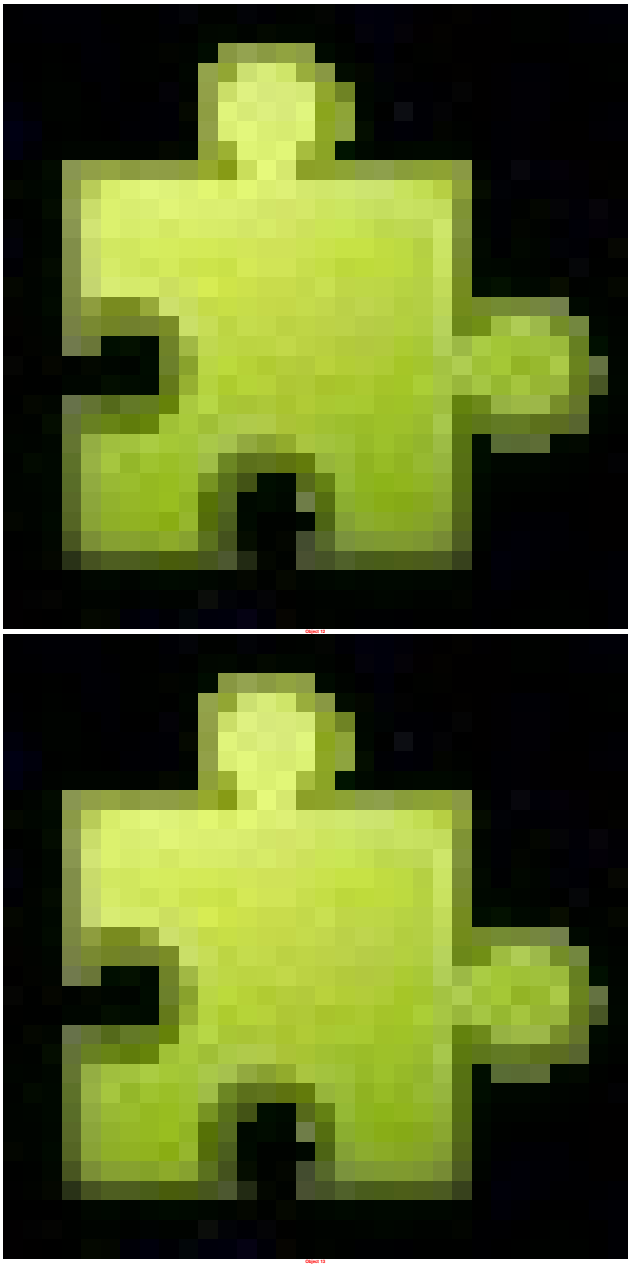


Please continue to "SECTION SEVEN: Customer Privacy and Rights".

SECTION SEVEN: Customer Privacy and Rights

This section is designed for two hours of instruction.
For our exploration of privacy issues, we'll turn to Peter Verlezza, who has prepared an outstanding presentation on HIPAA. While HIPAA does not specifically apply to the cannabis industry today, it is our belief at Medical Marijuana United that HIPAA compliance should be

an industry best practice, and as such, you should strongly consider implementing it in your dispensary.



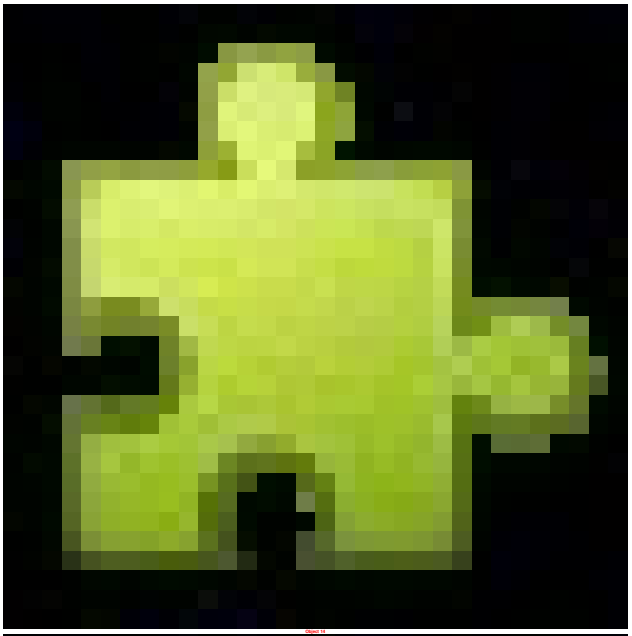
Please continue to "SECTION EIGHT: The Risks and Warning Signs of Overuse, Abuse, and Addiction".

SECTION EIGHT: The Risks and Warning Signs of Overuse, Abuse, and Addiction

This section is designed for two hours of instruction.

Content

Let's turn to Joseph Lunievicz, BA, RYT (Director of Training, NDRI) for an enlightening survey of chemical dependency, its risks and warning signs.



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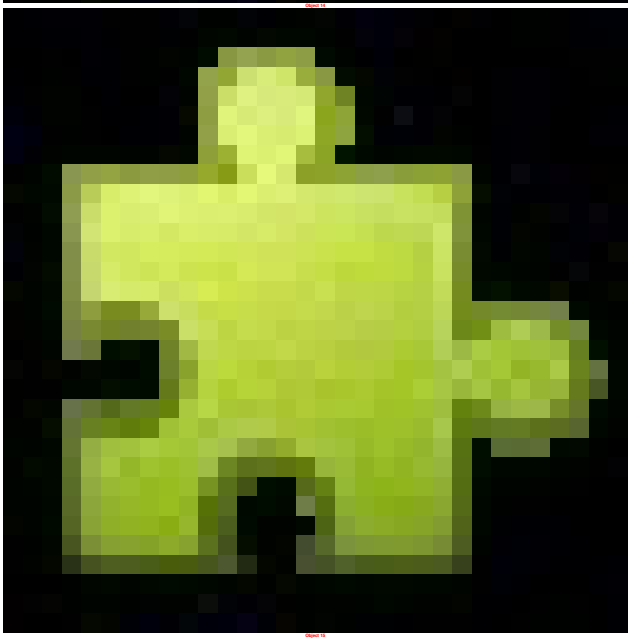

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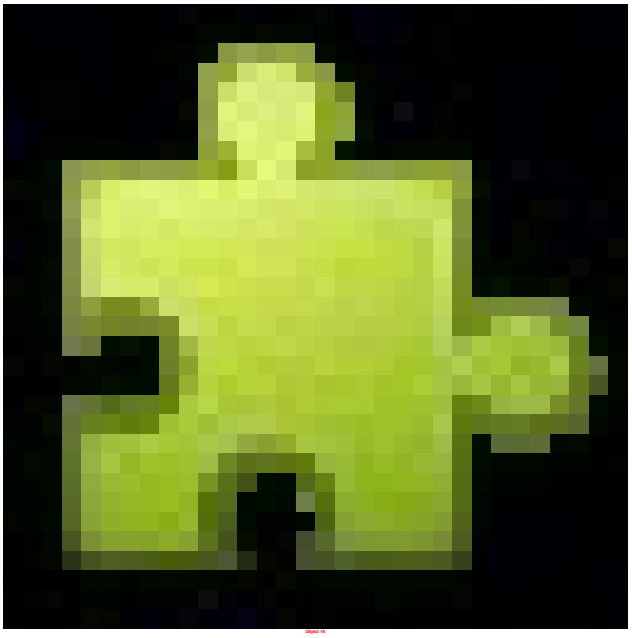


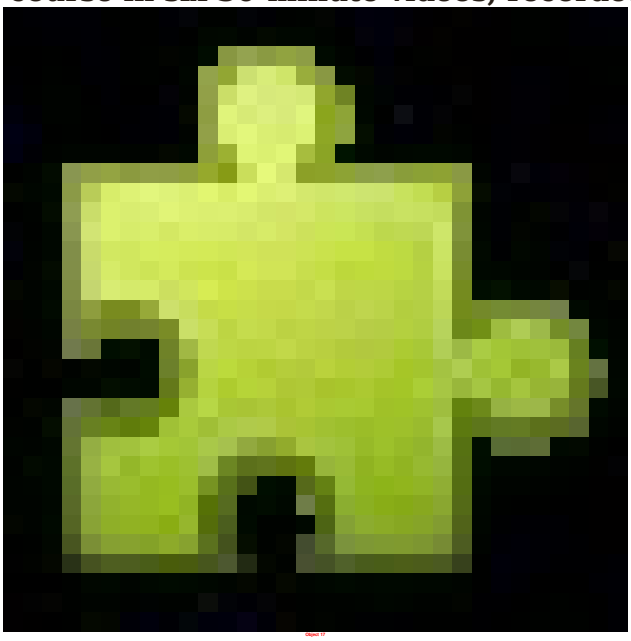
Please continue to "SECTION NINE: Ethics".

SECTION NINE: Ethics

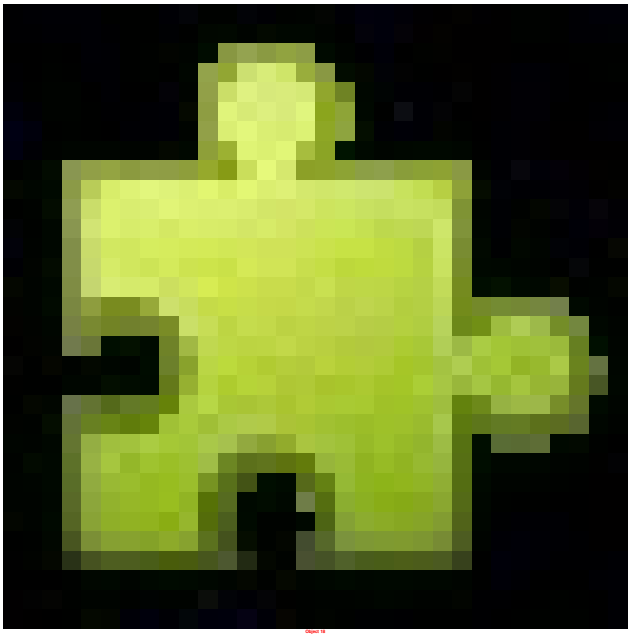
This section is designed for one hour of instruction.

In collaboration with the Arthur Andersen Case Study Library, MMU offers the following course of ethics instruction presented in video and transcript formats. Sessions One through Three are required, Sessions Four through Six are optional.

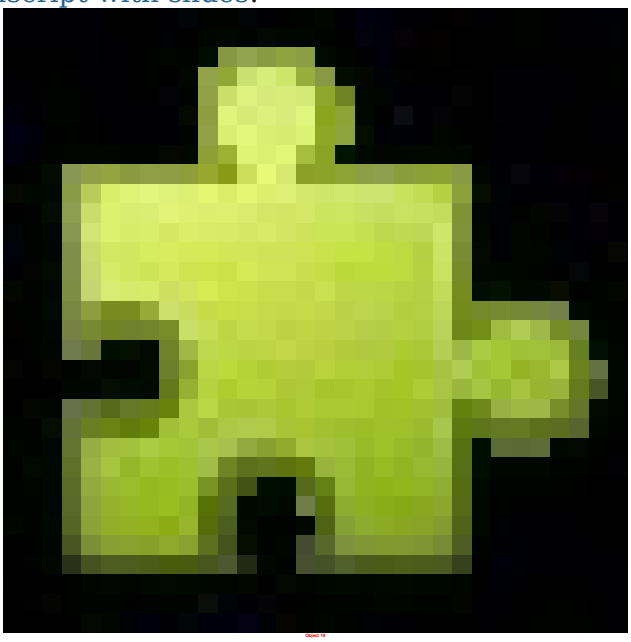
Business ethics course in six 30-minute videos, recorded by John Hooker.



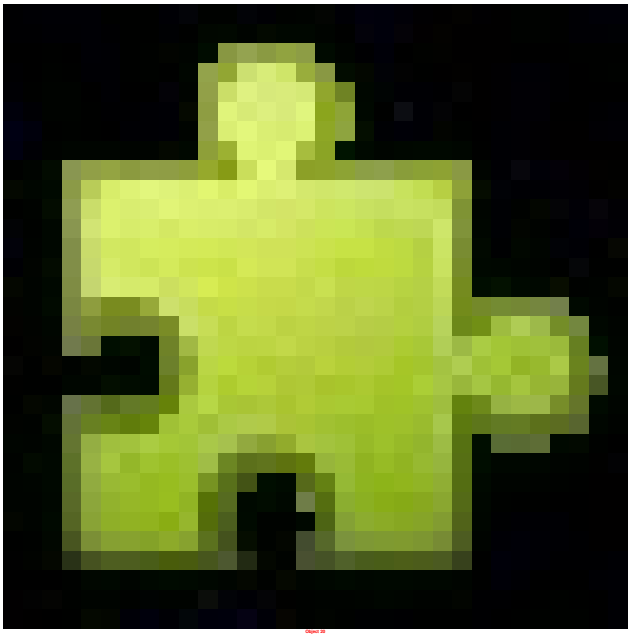
Session One Transcript with slides.



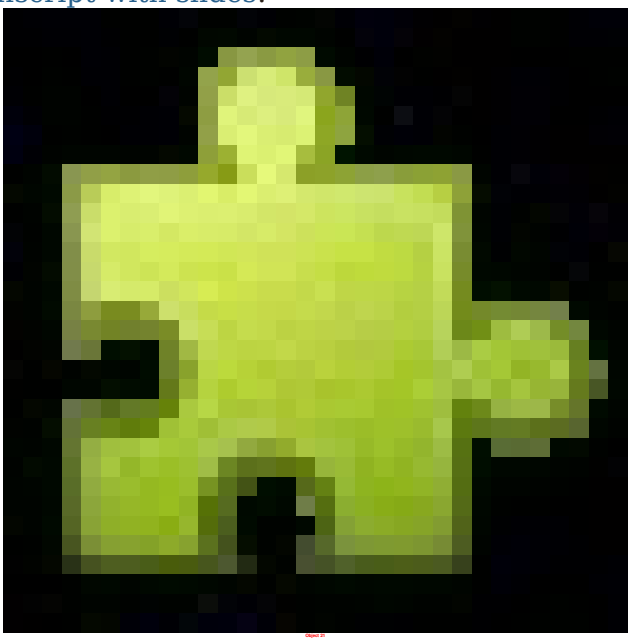
Session Two Transcript with slides.



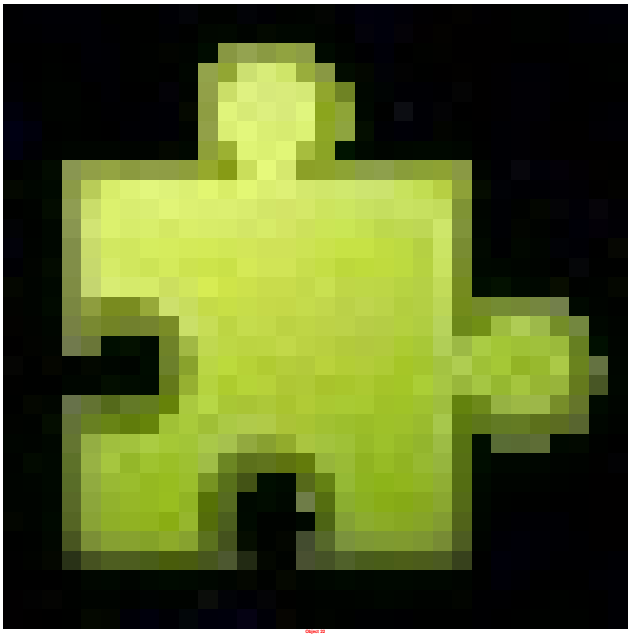
Session Three Transcript with slides.



Session Four Transcript with slides.



Session Five Transcript with slides.



Session Six Transcript with slides.
Please continue to our Final Exam.