Effect of Medical Marijuana on Neurocognition and Escalation of Use

NCT03224468

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Partners HealthCare System
Research Consent Form

Subject Identification

General Template
Version Date: August 2016

Protocol Title: Effect of Medical Marijuana on Neurocognition and Escalation of Use

Principal Investigator: Jodi Gilman, Ph.D.

Site Principal Investigator:

Description of Subject Population: Adults ages 18-65 who are interested in using medical marijuana for pain, sleep or mood, and/or anxiety

About this consent form

Please read this form carefully. It tells you important information about a research study. A member of our research team will also talk to you about taking part in this research study. People who agree to take part in research studies are called "subjects." This term will be used throughout this consent form.

Partners HealthCare System is made up of Partners hospitals, health care providers, and researchers. In the rest of this consent form, we refer to the Partners system simply as "Partners."

If you have any questions about the research or about this form, please ask us. Taking part in this research study is up to you. If you decide to take part in this research study, you must sign this form to show that you want to take part. We will give you a signed copy of this form to keep.

A description of this clinical trial will be available on *http://www.ClinicalTrials.gov,* as required by U.S. Law. This Web site will not include information that can identify you. At most, the Web site will include a summary of the results. You can search this Web site at any time.

Why is this research study being done?

The purpose of the study is to help us learn about peoples' behavior once they start using medical marijuana (MM). We hope to better understand patterns of use of medical marijuana, as well as any effects of medical marijuana on cognition or on the brain, including the potential for marijuana dependence/addiction.

We are asking you to take part in this research study because you have pain, sleep or mood, and/or anxiety disorder, but are otherwise healthy, and are thinking about obtaining a medical marijuana card.

This study will not give out MM. You will have to get a prescription for MM from your own doctor. You and your health insurance will be responsible for the costs of MM. We can provide information about procedures involved with obtaining a MM card.

About 400 subjects will take part in this research study.

The National Institute on Drug Abuse is paying for this study to be done.

How long will I take part in this research study?

This study consists of seven visits to MGH that will last approximately 2-3 hours, over the course of 12 months. During the visits, you will participate in interviews, fill out questionnaires, and perform some tests on a computer. Some people will also have the option to have an MRI scan.

What will happen in this research study?

If you choose to take part in this study, we will ask you to sign this consent form before we do any study procedures. We will also ask for your permission to send text message reminders to your phone to confirm your study visits.

Visit 1: Screening Visit

The Screening Visit will take about two to three hours to complete. At this visit, we will:

- Ask you for a urine sample.
- Test your urine for certain drugs, including illegal drugs such as cocaine and marijuana. If your urine shows you have taken any illegal drugs (except for marijuana), you can't be in this study. The results of the urine drug test will not become part of your medical record. These test results will, however, remain part of your confidential study record.

- Test your urine for pregnancy, if you are a female able to become pregnant. (People who are pregnant or are planning to become pregnant in the next year can't take part in this research study).
- Ask you to fill out some questionnaires about your general medical/psychiatric health, substance use and symptoms.
- Assess your eligibility and randomize you to either the active study group or the control group.
- If you are assigned to the active study group and choose to take part in the MRI scanning portion of this study, this procedure will be scheduled shortly after this screening visit.

Assignment to study group
If after the screening visit, you qualify to take part in this study, we will assign you by chance to the MM group or the control group. You and the study doctor cannot choose your study group.

We use control groups in research studies to learn if the effects seen in research subjects are truly from a particular treatment.

If you are assigned to the active study group, you will have the option of getting MM card any time. We will also ask you to start keeping track of your marijuana use via an online web platform called Secure Survey starting after the Screening Visit. Additionally, we will call you approximately two weeks after your screening visit to follow up on the status of your medical marijuana application. We will also call you approximately four weeks after and six weeks after the screening visit if you have not made progress on your application. If after six weeks, you still have not made any progress on your application for a medical marijuana card (i.e., made an appointment with a doctor who recommends medical marijuana), we will schedule a three month follow-up visit, which will be your final study visit. Once you get your MM card, we will then schedule more visits at baseline and approximately 2 weeks, 4 weeks, 3 months, 6 months and 12 months after baseline.

If you are assigned to the control group, you will be asked to wait until you have completed your three-month study visit to get your medical marijuana card. We will ask you to start keeping track of your marijuana use via an online web platform called Secure Survey starting after the Screening Visit and schedule your Baseline Visit (usually within three to four weeks of your screening visit). During the first three months after Baseline, you will come in for additional study visits at approximately 2 weeks, 1 month, 3 months. After three months, you may choose to obtain a MM card. Afterwards, you will come in for 6-month and 12-month visits.

The decision to wait three months, as well as the decision to obtain a MM card after 3 months, should be made in consultation with your prescribing physician.

Visit 2: Baseline Visit:

During this initial study visit we will ask you to:

- Fill out questionnaires about your general medical/psychiatric health, substance use and symptoms
- Answer questions about your medical and psychiatric health
- Provide a urine sample to check for illegal drug use
  (This urine drug screen test result will not become part of your medical record)
- Participate in cognitive testing that will evaluate your memory, attention, inhibitory control, and risk/reward performance

Visits 3 (2 Week), 4 (1 month), 5 (3 months), 6 (6 months): At these study visits, we will ask you to repeat all procedures you completed during your baseline study visit.

Visit 7 (12 month visit):
At your final study visit, you will be asked to complete the following procedures:

- Fill out questionnaires about your general medical/psychiatric health, substance use and symptoms
- Provide a urine sample to check for illegal drug use
- Participate in cognitive testing that will evaluate your memory, attention, inhibitory control, and risk/reward performance
- Complete another MRI scan shortly after this visit, if you previously had an MRI scan at/near your baseline study visit.

Monthly Phone Calls:
On months (2, 4, 5, 7-11 months after the baseline visit) when you do not have a study visit, and 2 years after your baseline study visit, you will receive monthly phone calls from a research coordinator to update:

- New medications or changes to existing medications
- Recent substance use
- Overall physical and mental health

These phone calls take about 10-15 minutes to complete and are important for updating any changes between study visits.

Online Dosing Diaries:
You will be asked to keep track of your marijuana use, as well as ratings of mood, sleep, and pain, every day via an online app called Secure Survey. You will be paid for submitting this data when you come in for your next study visit.

Brain Imaging Assessments:
The MRI portion of the study will investigate possible changes in the brain from those who obtain medical marijuana cards. Therefore, only patients randomized into the active MM group

will be given the option to undergo MRI scanning. If you are selected to undergo MRI procedures and choose to participate, we will take pictures or images of your brain using a 3T MRI machine. These assessments will occur as close as possible to your Baseline Visit and to your One Year Visit, depending on your schedule and availability. These images allow us to see which parts of your brain are active when you move a part of your body, such as your hand or foot, or when you speak. The MRI test will take about 1.5 hours. Your MRI will be done at the MGH MRI Center in the Charlestown Navy Yard.

An MRI uses a strong magnet and radio waves to take these pictures. Since MRI uses a large magnet, people who have certain metal implants cannot have this scan. Also you will be asked to remove all metal items before the scan.

During the MRI, you will lie on a table that slides into a ring-shaped machine a little wider than your body. It is important that your head does not move during the MRI, so we place foam pillows around the back and sides of your head. We will ask you not to move at all, except when we tell you to. During the MRI, you will hear knocking, tapping and buzzing sounds made by the MRI machine. You will be wearing headphones and/or earplugs so the sounds will not be too loud. Part of the time you will be resting. Most of the time, we will ask you to perform a computer task. If at any time you feel uncomfortable and want to stop the task or the MRI, please tell us. We will stop right away.

Do you agree to take part in the MRI portion of the study?

☐ **YES** ☐ **NO** **Initials**_____

Urine Sample Shipments:

We will collect urine samples at every study visit, which will be tested for drugs and pregnancy (in females). With your permission, a small quantity (<10mL) of the urine sample will be shipped to collaborators at a lab who can quantify cannabinoids in the urine. We will only ship your sample if a) you agree to having your samples shipped, AND b) you report using marijuana products since your last study visit, and/or c) your qualitative urine drug test is positive for THC.

Do we have your permission to ship urine samples for quantitative analysis?

☐ **YES** ☐ **NO** **Initials**_____

Information Storage

Study information collected from you will be stored in a password-protected research database on a password-protected computer. This information will not become part of your medical record.

We will assign all information a unique code. The key to the code will be kept on a password-protected computer. Only the researchers from our research study will be able to use the computer. The code linking test results to subject identity will only be accessible to study staff. If you decide to drop out of this research study at a later time, please contact one of the research coordinators for this study:
Aly Dechert: (617) 643-7611; adechert@mgh.harvard.edu
Billy Schmitt: (617) 724-0367; waschmitt@mgh.harvard.edu
Grace Wheeler: (617) 643-4692; gwheeler@mgh.harvard.edu
Rachel Plummer: (617) 724-0382; rplummer1@mgh.harvard.edu

What are the risks and possible discomforts from being in this research study?

Risk of MRI Scans:
MRIs use powerful magnets to make images. There are no known radiation risks associated with MRI. However, persons with metal implants, such as surgical clips, or pacemakers should not have an MRI. All credit cards and other items with magnetic strips should also be kept out of the MRI room. People who feel uncomfortable in confined spaces (claustrophobia) may feel uncomfortable in the narrow tube. The MRI makes loud banging noises as it takes images. Earplugs can be used to reduce the noises. The MRI can be stopped at any time at your request. If you are or suspect you are pregnant, you should not participate in this study. The MRI has the potential, during normal routine use, to cause localized warming of your skin and the underlying tissues. You should immediately inform us if you experience discomfort due to warming and the procedure will be stopped.

Some people experience dizziness or rarely nausea when going into an MRI scanner and these sensations may be more common in scans with higher magnetic fields. In most cases, these symptoms only last a short time. However, some people may experience them throughout the scan and/or continue to experience them for a short period of time after; generally, less than half an hour. No case of permanent problems is known.

Risk of incidental findings on the MRI
We are doing the MRI in this study to answer research questions, not to give you medical care. The information created by this study will not usually become part of your hospital record. This MRI is not the same as one that your own doctor would order. It may or may not show problems that would be found on a standard MRI.

If we do see something that looks like a medical problem, we will ask a radiologist (a doctor who specializes in x-rays/scans/test results of this sort) to review the results. If the radiologist thinks there might be a problem, we will tell you and help you get follow-up care. If the radiologist thinks that you might have a medical problem, but it turns out that you don't, we may have caused you to worry needlessly about your health.

Loss of confidentiality
We will not share your identity with anyone outside the Partners institutions. However, we cannot guarantee your confidentiality.

We will numerically code all data and remove all personal identifiers from the data. We will store all data in password protected databases. Subject information will be accessible only to research staff. Information about study participants will not leave our institution in any form that would identify individual subjects.

Medical Marijuana:
The cardiovascular effects of marijuana largely depend on several factors, including dose, frequency, route of administration, and duration of use. THC can have diverse effects on heart rate and blood pressure, and although present knowledge about the relationship between marijuana or medical marijuana use and cardiovascular disease outcomes is still limited.

There may be other risks of medical marijuana that are not known yet.

What are the possible benefits from being in this research study?

You will not directly benefit from taking part in this research study. Others taking MM in the future may benefit from what we learn in this research study.

What other treatments or procedures are available for my condition?

You do not have to take part in this study to be treated for pain, sleep disorders, or mood/ anxiety disorders. Other treatments or procedures that are available to treat these conditions, which should be discussed with your doctor, include:

- Pain: A number of over-the-counter medications including acetaminophen, aspirin, ibuprofen, and naproxen. For more severe pain doctors may prescribe muscle relaxants, anti-anxiety drugs, antidepressants like Valium, prescription anti-inflammatory drugs like Celebrex, or short acting painkillers such as codeine, fentanyl, oxycodone and hydrocodone. In the most severe cases, steroid injections at the site of pain in the most severe cases may be used.
- Sleep disorders: Psychotherapy and changes in sleeping habits can be effective in reducing symptoms depending on the type of sleeping disorder. The most commonly prescribed medications to treat insomnia include Ambien, Lunesta, and Rozerem.
- Mood and anxiety disorders: Psychotherapy and/or medications can be effectively used to treat mood and anxiety disorders. Common medications used to treat these disorders include Prozac, Zoloft, Paxil, Celexa and Cymbalta.

Can I still get medical care within Partners if I don't take part in this research study, or if I stop taking part?

Yes. Your decision won't change the medical care you get within Partners now or in the future. There will be no penalty, and you won't lose any benefits you receive now or have a right to receive.

Taking part in this research study is up to you. You can decide not to take part. If you decide to take part now, you can change your mind and drop out later. We will tell you if we learn new information that could make you change your mind about taking part in this research study.

What should I do if I want to stop taking part in the study?

If you take part in this research study, and want to drop out, you should tell us. We will make sure that you stop the study safely. We will also talk to you about follow-up care, if needed.

Also, it is possible that we will have to ask you to drop out of the study before you finish it. If this happens, we will tell you why. We will also help arrange other care for you, if needed.

Will I be paid to take part in this research study?

You will be paid following each study visit via check that will be mailed to you. You will be paid $20 for the screening visit, and $60 after each study visit. You will also be paid an additional $40 for completing the 6 month visit and an additional $60 for completing the 12

month visit. You will be paid an additional $10 for completing two questionnaires related to the Covid-19 pandemic. You will be paid $20 each week if you complete the online dosing diary ($2/day, with a $6 bonus for completing the whole week). If you choose to participate in the brain scanning sessions, you will be paid $50 for each brain scan. Additionally, they may be paid for pre-baseline daily diary entries for a maximum of five weeks ($20 per week, $100 total). If you come to all study visits, complete all surveys, and complete all diaries, you will be paid a total of $820. If you come to all study visits, complete all surveys, complete all diaries, AND participate in brain scans, you will be paid a total of $920. If you undergo the screening but do not participate in the study, you will be paid for the screening only ($20). **Please see the table below for a description of all payments. In accordance with Partners Policy, to receive payment each participant is asked to provide us their Social Security Number or Tax ID number. All payments will be made via check following each study visit.**

Visit #	Active Study Group		Waitlist Control Group	
1	Screening	$20	Screening	$20
2	Baseline	$60	Baseline	$60
3	2 weeks	$60	2 weeks	$60
4	1 month	$60	1 month	$60
5	3 months	$60	3 months	$60
	Dosing Diaries (13 weeks x $20/week)	$260	Dosing Diaries (13 weeks x $20/week)	$260
6	6 months	$100	6 months	$100
	Monthly phone calls 2, 4, 7-11 months (7 x $10 each)	$70	Monthly phone calls 2, 4, 7-11 months (7 x $10 each)	$70
	Covid19 Questionnaires	$10	Covid19 Questionnaires	$10
12	12 months	$120	12 months	$120
Total		$820	Total	$820
Scan (Optional)	Baseline	$50		
	12 months	$50		
Total		$910		

What will I have to pay for if I take part in this research study?

There is no cost to you for taking part in this study. The cost of all of the tests and procedures done for research will be paid for by study funds.

You/your health insurer will be responsible for the cost of the MM because this would be needed for your care even if you are not in the study.

Charges for any ongoing or routine medical care you receive outside this study will be billed to you or to your insurance company in the usual way. You will be responsible for any deductibles or co-payments required by your insurer for your routine medical care.

What happens if I am injured as a result of taking part in this research study?

We will offer you the care needed to treat any injury that directly results from taking part in this research study. We reserve the right to bill your insurance company or other third parties, if appropriate, for the care you get for the injury. We will try to have these costs paid for, but you may be responsible for some of them. For example, if the care is billed to your insurer, you will be responsible for payment of any deductibles and co-payments required by your insurer.

Injuries sometimes happen in research even when no one is at fault. There are no plans to pay you or give you other compensation for an injury, should one occur. However, you are not giving up any of your legal rights by signing this form.

If you think you have been injured or have experienced a medical problem as a result of taking part in this research study, tell the person in charge of this study as soon as possible. The researcher's name and phone number are listed in the next section of this consent form.

If I have questions or concerns about this research study, whom can I call?

You can call us with your questions or concerns. Our telephone numbers are listed below. Ask questions as often as you want.

Jodi Gilman, PhD, is the person in charge of this research study. You can call her at 617-643-7293 Monday through Friday 9AM to 5PM with questions about this research study.

If you have questions about the scheduling of appointments or study visits, please contact one of the research coordinators for this study:

Aly Dechert: (617) 643-7611; adechert@mgh.harvard.edu
Billy Schmitt: (617) 724-0367; waschmitt@mgh.harvard.edu
Grace Wheeler: (617) 643-4692; gwheeler@mgh.harvard.edu
Rachel Plummer: (617) 724-0382; rplummer1@mgh.harvard.edu

If you want to speak with someone **not** directly involved in this research study, please contact the Partners Human Research Committee office. You can call them at 857-282-1900.

You can talk to them about:
- Your rights as a research subject
- Your concerns about the research
- A complaint about the research

Also, if you feel pressured to take part in this research study, or to continue with it, they want to know and can help.

If I take part in this research study, how will you protect my privacy?

During this research, identifiable information about your health will be collected. In the rest of this section, we refer to this information simply as "health information." In general, under federal law, health information is private. However, there are exceptions to this rule, and you should know who may be able to see, use, and share your health information for research and why they may need to do so.

In this study, we may collect health information about you from:

- Past, present, and future medical records
- Research procedures, including research office visits, tests, interviews, and questionnaires

Who may see, use, and share your identifiable health information and why they may need to do so:

- Partners research staff involved in this study
- The sponsor(s) of this study, and the people or groups it hires to help perform this research
- Other researchers and medical centers that are part of this study and their ethics boards
- A group that oversees the data (study information) and safety of this research

- Non-research staff within Partners who need this information to do their jobs (such as for treatment, payment (billing), or health care operations)
- The Partners ethics board that oversees the research and the Partners research quality improvement programs.
- People from organizations that provide independent accreditation and oversight of hospitals and research
- People or groups that we hire to do work for us, such as data storage companies, insurers, and lawyers
- Federal and state agencies (such as the Food and Drug Administration, the Department of Health and Human Services, the National Institutes of Health, and other US or foreign government bodies that oversee or review research)
- Public health and safety authorities (for example, if we learn information that could mean harm to you or others, we may need to report this, as required by law)
- Other:

Some people or groups who get your health information might not have to follow the same privacy rules that we follow and might use or share your health information without your permission in ways that are not described in this form. For example, we understand that the sponsor of this study may use your health information to perform additional research on various products or conditions, to obtain regulatory approval of its products, to propose new products, and to oversee and improve its products' performance. We share your health information only when we must, and we ask anyone who receives it from us to take measures to protect your privacy. The sponsor has agreed that it will not contact you without your permission and will not use or share your information for any mailing or marketing list. However, once your information is shared outside Partners, we cannot control all the ways that others use or share it and cannot promise that it will remain private.

Because research is an ongoing process, we cannot give you an exact date when we will either destroy or stop using or sharing your health information.

The results of this research study may be published in a medical book or journal, or used to teach others. However, your name or other identifying information **will not** be used for these purposes without your specific permission.

Your Privacy Rights

You have the right **not** to sign this form that allows us to use and share your health information for research; however, if you don't sign it, you can't take part in this research study.

You have the right to withdraw your permission for us to use or share your health information for this research study. If you want to withdraw your permission, you must notify the person in charge of this research study in writing. Once permission is withdrawn, you cannot continue to take part in the study.

If you withdraw your permission, we will not be able to take back information that has already been used or shared with others.

You have the right to see and get a copy of your health information that is used or shared for treatment or for payment. To ask for this information, please contact the person in charge of this research study. You may only get such information after the research is finished.

Informed Consent and Authorization

Statement of Person Giving Informed Consent and Authorization

- I have read this consent form.
- This research study has been explained to me, including risks and possible benefits (if any), other possible treatments or procedures, and other important things about the study.
- I have had the opportunity to ask questions.
- I understand the information given to me.

Signature of Subject:

I give my consent to take part in this research study and agree to allow my health information to be used and shared as described above.

_____	_____	_____
Subject	Date	Time

Signature of Study Doctor or Person Obtaining Consent:

Statement of Study Doctor or Person Obtaining Consent

- I have explained the research to the study subject.
- I have answered all questions about this research study to the best of my ability.

Study Doctor or Person Obtaining Consent	Date	Time

Consent Form Version: 04/15/2020