Study Consent

Official Title: Effects of Amygdala Neurofeedback on Depressive Symptoms and Processing Biases

ClinicalTrials.gov ID (NCT number): NCT02709161

Consent Date: 10/05/2021

UPMC | University of Pittsburgh Medical Center

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CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Effects of Amygdala Neurofeedback on Depressive Symptoms and Processing Biases

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Source of support National Institute of Mental Health (NIMH)

This study examines whether neurofeedback can improve outcomes of cognitive behavioral therapy for depression. You will undergo two brain imaging sessions where we will show you how active a region of your brain is while you recall happy memories from your life and ask you to increase the level of activity in that region. You will then receive 10 weeks of cognitive-behavioral therapy for depression. We will ask you to complete ratings of your symptoms at various points during this period. At the end of the 10 weeks of therapy, you will be referred to a community therapist to continue your treatment if you desire to do so.

How many participants will take part in this study?

About 60 adult participants with major depressive disorder will take part in this study.

RESEARCH ACTIVITIES

The study involves three separate laboratory visits and 10 weekly therapy sessions. The first three visits can be scheduled at your convenience, and will take place over approximately two weeks. 10 weekly therapy sessions will then be provided to you at no cost, and can be scheduled at your convenience but must occur within a continuous 12-week period. This study does not involve any blood draws or medications. Furthermore, if you are assigned to receive neurofeedback from a control brain region not involved in

emotion, you will have the option to come back for a final visit in which you undergo the procedure again but with neurofeedback from the brain region involved in emotion.

In the first visit we will do additional in-person screening interviews to confirm your eligibility to participant in the study and assess your well-being and mental health history, and you will be asked to complete a few questionnaires. This visit will last approximately 2 hours.

We may videotape or audiotape your interviews or testing sessions. These may be reviewed by study personnel and investigators for quaility assurance, training purposes, or analysis. Physical tapes are kept in locked filing cabinets and are labeled with subject identification number and date only. Electronic video or audio files will be stored on a password-protected server which only study personnel can access. Video and audio recordings will be kept indefinitely and may later be reviewed by other researchers. If, for any reason, you want your tapes destroyed, or you do not want to be recorded, you may request this by writing to Dr. Young.

During visits 2 and 3, you will be asked to complete two tasks using Functional Magnetic Resonance Imaging (fMRI). You will undergo the following procedures: 1) entering a room in which a large magnet is located, 2) lying on a narrow bed and being slid into a small tunnel approximately 6 feet long and 25 inches wide; a finger cuff and belt will be attached to you to measure heart rate and respiration in the scanner and a mirror will be placed above your head to measure the diameter of your pupil, 3) completing two tasks. During the neurofeedback task, you will receive information about activity (or blood oxygen levels) in your brain. We will randomly determine if you receive feedback about activity in an area of the brain that is related to depression or if you will receive feedback about activity in an area of the brain that is not known to be involved in depression. Being randomly assigned to an activity means being assigned by chance (like flipping a coin). During the MRI session you will not know which of these types of feedback you are receiving, but you will be told following your completion of the assessments at the week 10 follow-up. Random assignment is done to try to reduce the chance for bias in the study results. The second task involves rating whether positive, negative, and neutral words are relevant to your life.

During the fMRI scans you will also be asked to undergo an electroencephalogram (EEG), which involves wearing a cap with electrodes that measure brainwaves.

MRI tasks will be completed while lying inside the scanner. You will be able to communicate with the experimenter via an intercom, but while the scanner is “on” it will be very noisy. A staff member and an MRI technologist will be in a control room adjacent to the scanner throughout the procedure. The instrument used for MRI is a large machine employing a strong magnet, radio waves, and a coil to obtain pictures of brain activity. You will be asked a series of screening questions to ensure eligibility for scanning and all women of child-bearing potential will be asked to complete a urine pregnancy test before entering the scanner room to ensure the safety of the participant. The pregnancy test must be negative for you to continue participation in the study. These visits will last about 3.5 hours.

You will then be scheduled with the study therapist to undergo 10 weekly one-hour sessions of cognitive behavioral therapy within in 12-week period. Therapy sessions will take place at the Oxford Building at the University of Pittsburgh.

You will also be asked to complete several on-line questionnaires for three weeks following your second fMRI visit, again at weeks 9 and 10, and at 6 months and 1 year following your completion of CBT. You will be sent secure links to these surveys via email with instructions on how to complete them. We ask that you follow the links to complete the surveys within 3 days of receiving them. These should take you less than 15 minutes to complete

These tests are for research purposes only. We will analyze the data to understand how neurofeedback affects your symptoms during therapy. You will receive compensation for each testing visit, as well as for the follow up questionnaires you complete. You will not be subjected to any medical procedure as a result of participation in this study. The MRIs performed during the course of the experiment are not clinical measures. They will not be read by a radiologist. They are not guaranteed to reveal tumors or brain abnormalities.

Your participation in this study requires you to undergo 10 weeks of cognitive behavioral therapy with the study therapist. While you must begin therapy with the study therapist, you are not required to continue therapy if you do not wish to do so. However, should you discontinue therapy we ask that you let us know and continue to complete all study related activities.

If you are currently seeing a therapist, we ask that you take a temporary break from regularly attending sessions while you are seeing the study CBT therapist. You may resume sessions with your regular therapist once you have completed or discontinued the 10 CBT sessions. This is necessary so that you do not receive conflicting information from two therapists. If you wish for the study therapist to discuss your progress with your usual therapist, you may sign a release of information form permitting this.

We are also requesting your authorization or permission to review your medical records to determine whether you meet the conditions for participation in this study, We will obtain the following information: your diagnosis, age, past medical and psychiatric history (including psychiatric hospitalizations, treatment information and medication history), diagnostic procedures, and emergency room or operating room reports to obtain device information for clearance for fMRI scanning. No information that we obtain from you will be placed into your medical records. This identifiable medical record information will be made available to members of the research team for an indefinite period of time. Your medical information, as well as information obtained during this research study, may be shared with other groups, possibly including authorized officials from the Food and Drug Administration, the National Institute of Mental Health, and the University of Pittsburgh Research Conduct and Compliance Office, for the purpose of monitoring the study.

POSSIBLE DISCOMFORT, INCONVENIENCE, AND RISK FROM THIS STUDY:

Questionnaires and interviews	You may become bored, tired, and/or frustrated during this study. During the experiment you will be asked a number of questions regarding how you "feel". You may become aware of feelings of happiness, sadness, or other mood states that you had not considered before. You may also be asked to think about times in your life that were either very happy or very sad. This could result in a transient happy or depressed mood state. If the study staff has concern for your safety because of suicidal thoughts or behaviors, steps may be taken which could involve transport to an emergency room or local hospital. Also, although extensive measures will be taken to keep all research records confidential, breach of subject confidentiality is a possible risk of this study.
MRI	The space inside the MRI machine is fairly limited and can make some people feel claustrophobic. There is a chance you may be uncomfortable in a space this small. Some individuals panic in enclosed spaces, and thus may experience a panic attack in the scanner. You will have the opportunity to examine this space before the test starts. The study will be ended early if this is a problem for you; you may elect to discontinue the study at any time if you become anxious in the scanner. In the event that you do experience a panic attack, clinically trained personnel will be available to help you to relax; no medications will be provided. A microphone will be provided so that you may direct the staff to stop the testing if you become uncomfortable. After lying in the MRI machine, some people feel lightheaded upon sitting up. This feeling will go away within a few minutes. You will be assisted to make sure that you do not fall. The machine is loud when turned on and may cause some discomfort. Therefore all participants will be given and must wear earplugs. The MRI machine may attract metal objects, and people who have certain types of metal in their body, such as aneurysm clips or pacemakers, will be excluded from this study. Before participating, you will be asked whether you are wearing metal or have metal in your pockets, and will be asked to remove such metal objects before entering the room with the scanner.

EEG and Electrodes	The frame holding the electrodes on your head may feel tight and thus, may be associated with headaches upon prolonged use which go away upon its removal. If you report a headache, we will remove the frame. Some of the adhesives we use with electrodes could cause skin irritation in people with skin allergies. We will ask if you have skin allergies before using these products with you.
Medical Records Review	We will make every attempt to protect your privacy and the confidentiality of your records, as described in this document, but cannot guarantee the confidentiality of your research records, including information obtained from your medical records, once your personal information is disclosed to others outside UPMC or the University.
Cognitive Behavioral Therapy	You may become bored, tired, and/or frustrated during therapy sessions. During therapy you will be asked to discuss your thoughts and how you feel. You may become aware of feelings of happiness, sadness, or other mood states that you had not considered before. This could result in a transient happy or depressed mood state. If the study staff has concern for your safety because of suicidal thoughts or behaviors, steps may be taken which could involve transport to an emergency room or local hospital. Also, although extensive measures will be taken to keep all therapy notes confidential, breach of subject confidentiality is a possible risk of this study.

POSSIBLE BENEFITS

Neurofeedback targets a mechanism we believe to underlie problems with positive thinking. So it is possible that as a result of this pre-treatment, your positive thinking may improve. It is also possible you will not experience any benefit from this pretreatment. This is a new intervention which we are using for the first time in combination with therapy this study, so it is hard to predict how well it will work. The cognitive-behavioral therapy you receive as part of the study is a standard treatment for depression, and as such is likely, though not guaranteed, to improve your symptoms.

We will notify you if any other information, either good or bad, about this research study develops during the course of this study and which may cause you to change your mind about continuing to participate.

COMPENSATION
There will be no costs to you for your participation in this study. You will receive compensation for participation at each testing visit in which you participate. Specifically, compensation will be:

- Visit 1 Interviews: $20
- MRI scan Visits 2 and 3: $100/visit

- Follow-up Surveys: $5/each week of follow-up surveys completed except for the final follow up survey set for which you will be compensated $8, for a total of $28. If you complete the 6 month and 1 year follow-up surveys you will be compensated an additional $10 ($5/follow-up).

If you complete all study visits and follow-up assessments you will receive a total of $258 for your participation.

Since you are being compensated for your participation in this study, your name, address, and social security number will be released to the Accounting Office. If the total reimbursement for your participation in research is greater than $600 in a year, this will be reported to the Internal Revenue Service (IRS) as income.

10 cognitive behavioral therapy sessions with a trained therapist will be provided to you at no cost. You will not be compensated for attending therapy sessions. All sessions must be completed within a 12-week period, you will not be eligible to continue with the study therapist once 12 weeks following your first appointment have passed.

Parking will be arranged for your personal vehicle at each visit (including therapy sessions) at no cost to you. Should you require transportation to and from the facilities, you will be reimbursed for the cost of a cab/UBER if you provide us with your receipt.

If you are assigned to the control neurofeedback, you will have the option to return for a final neurofeedback scan to receive neurofeedback from the region involved in emotion. However, you will not be compensated for this visit.

CONFIDENTIALITY
Any information we obtain about you will be kept as confidential (private) as possible. All paper records will be stored in a locked file cabinet and computer data will be stored on password-protected computers. Your data will be indexed by a case number rather than by your name. Information linking these case numbers with your identity will be kept separate from the data. Your data may be shared with other conducting similar research, however, this information will be shared in a de-identified manner. You will not be identified by name in any publication from these data unless you sign a separate consent form giving your permission (release).

Although every reasonable effort has been taken, confidentiality during Internet

communication activities cannot be guaranteed and it is possible that additional information beyond that collected for research purposes may be captured and used by others not associated with this study.

In addition to the investigators listed on the first page of this consent form and their research staff, authorized representatives of the University of Pittsburgh Research Conduct and Compliance Office may review your identifiable research information for the purpose of monitoring the appropriate conduct of this research study. In unusual cases, the investigators may be required to release identifiable information related to your participation in this research study in response to an order from a court of law. If the investigators learn that you or someone with whom you are involved is in serious danger or potential harm, they will need to inform, as required by Pennsylvania law, the appropriate agencies. Authorized representatives of the sponsors of this research study, the National Institutes of Health, may review and/or obtain identifiable information related to your participation in this research study for the purpose of monitoring the accuracy and completeness of the research data and for performing required scientific analyses of the research data.

We will make every attempt to protect your privacy and the confidentiality of your records, as described in this document, but cannot guarantee the confidentiality of your research records, including information obtained from your medical records once your personal information is disclosed to others outside UPMC or the University. This authorization is valid for an indefinite period of time. However, you can always withdraw your authorization to allow the research team to review your medical records by contacting the investigator listed on the first page and making the request in writing. If you do so, you will no longer be permitted to participate in this study. Any information obtained from you up to that point will continue to be used by the research team.

To help us protect your privacy, we have obtained a Certificate of Confidentiality from the National Institutes of Health. The researchers can use this Certificate to legally refuse to disclose information that may identify you in any federal, state, or local civil, criminal, administrative, legislative, or other proceedings, for example, if there is a court subpoena. The researchers will use the Certificate to resist any demands for information that would identify you, except as explained below.

The Certificate cannot be used to resist a demand for information from personnel of the United States Government that is used for auditing or evaluation of federally-funded projects or for information that must be disclosed in order to meet the requirements of the federal Food and Drug Administration (FDA).

You should understand that a Certificate of Confidentiality does not prevent you or a member of your family from voluntarily releasing information about yourself or your involvement in this research. If an insurer, employer, or other person obtains your written consent to receive research information, then the researchers may not use the Certificate to withhold that information.

The Certificate of Confidentiality will not be used to prevent disclosure to state or local authorities of child abuse and neglect, or harm to self or others.

VOLUNTARY PARTICIPATION
Your participation in this research study is entirely voluntary. You may want to discuss this study with your family and friends and your personal physician before agreeing to participate. If there are any words you do not understand, feel free to ask us. The investigators will be available to answer your current and future questions.

Whether or not you provide your consent for participation in this research study will have no effect on your current or future relationship with the University of Pittsburgh. Whether or not you provide your consent for participation in this research study will have no effect on your current or future medical care at a UPMC hospital or affiliated health care provider or your current or future relationship with a health care insurance provider.

WITHDRAWING AND REMOVAL FROM THE STUDY
You may stop participating at any time, even after signing this form. Your decision will not affect your relationship with the University of Pittsburgh or care at UPMC hospitals or affiliates or relationship with UPMC.

If you withdraw from the study, any identifiable research information recorded for, or resulting from, your participation in this research study prior to when formally withdrew may continue to be used and disclosed by the investigators for the purposes described above.

There may be circumstances under which your participation in the study may be stopped by the researcher without you consent. Examples of these circumstances include concern for your safety or the safety of other personnel, or if the fMRI data we collect is unusable due either to a scanner malfunction or from you moving your head too much. In these case, the researchers will inform your participation in the study is terminated, and you will be given a referral to other local clinicians. You will receive compensation for the visit in which this was determined.

USE OF RESEARCH RESULTS
Results of this study may be presented at scientific conferences and published in the medical or scientific literature. Data from this study, stripped of all identifying information, may be made available to other researchers.

COMPENSATION FOR INJURY
If you believe that the research procedures have resulted in an injury to you, immediately contact the Principal Investigator who is listed on the first page of this form. Emergency medical treatment for injuries solely and directly related to your participation in this research study will be provided to you by the hospitals of UPMC. Your insurance provider may be billed for the costs of this emergency treatment, but none of those costs will be charged directly to you. If your research-related injury requires medical care beyond this emergency treatment, you will be responsible for the costs of this

follow-up care. At this time, there is no plan for any additional financial compensation.

THIS STUDY IS A REGISTERED CLINICAL TRIAL
A description of this clinical trial is available on *https://clinicaltrials.gov/ct2/show/NCT02709161)*, as required by US Law. This website will not include information that can identify you. At most, the website will include a summary of the results. You can search this website at any time.

VOLUNTARY CONSENT: All of the above has been explained to me and all of my questions have been answered. I also understand that any future questions I have about this research will be answered by the investigator(s) listed on the first page of this consent document at the telephone numbers given. Any questions I have about my rights as a research subject will be answered by the Human Subject Protection Advocate of the IRB Office, University of Pittsburgh (1-866-212-2668). By signing this form, I agree to participate in this research study and provide my authorization to share my medical records with the research team.

_____ _____
Printed Name of Subject Time

_____
Subject's Signature Date

CERTIFICATION OF INFORMED CONSENT: I certify that I have explained the nature and purpose of this research study to the above-named individual(s), and I have discussed the potential benefits and possible risks of study participation. Any questions the individual(s) have about his study have been answered, and we will always be available to address future questions as they arise.

_____ _____
Printed Name of Person Obtaining Consent Role in Research Study

_____ _____
Signature of Person Obtaining Consent Date