Human Research Protections Program
(858) 246-4777
(858) 246-3329 (FAX)

University of California, San Diego
9500 Gilman Drive, Mail Code 0052
La Jolla, CA 92093-0052

EXPERIMENTAL SUBJECT'S BILL OF RIGHTS

The faculty and staff of the University of California, San Diego wish you to know:

Any person who is requested to consent to participate as a subject in a research study involving a medicalexperiment, or who is requested to consent on behalf of another, has the right to:

1. Be informed of the nature and purpose of the experiment.

2. Be given an explanation of the procedures to be followed in the medical experiment, and any drugor device to be used.

3. Be given a description of any attendant discomforts and risks reasonably to be expected from theexperiment.

4. Be given an explanation of any benefits to the subject reasonably to be expected from theexperiment, if applicable.

5. Be given a disclosure of any appropriate alternative procedures, drugs, or devices that might beadvantageous to the subject, and their relative risks and benefits.

6. Be informed of the avenues of medical treatment, if any, available to the subject after theexperiment if complications should arise.

7. Be given an opportunity to ask any questions concerning the experiment or the proceduresinvolved.

8. Be instructed that consent to participate in the medical experiment may be withdrawn at any time,and the subject may discontinue participation in the medical experiment without prejudice.

9. Be given a copy of a signed and dated written consent form when one is required.

10. Be given the opportunity to decide to consent or not to consent to a medical experiment without theintervention of any element of force, fraud, deceit, duress, coercion, or undue influence on the subject's decision.

If you have questions regarding a research study, the researcher or his/her assistant will be glad to answerthem. You may seek information from the Human Research Protections Program - established for the protection of volunteers in research projects - by calling (858) 246-4777 from 7:30 AM to 4:00 PM, Monday through Friday, or by writing to the above address.

University of California, San Diego

OBSTRUCTIVE SLEEP APNEA ENDOTYPES AND IMPACT ON PHENOTYPES OF PEOPLE LIVING WITH HIV

Dr. Robert Owens and his associates are conducting a research study to understand how obstructive sleep apnea (OSA) affects the way people living with HIV (PLWH) feel. You have been asked to participate in this study because you are a PLWH who has untreated OSA or has the potential to be diagnosed with OSA. There will be approximately 140 participants in this study which is being conducted only at UCSD.

WHY IS THIS STUDY BEING DONE?

Obstructive sleep apnea (OSA) is a very common disease that causes fatigue and increased risk for heart disease. Similarly, people living with HIV often complain of fatigue and are at increased risk of heart disease. The purpose of this study is to see if obstructive sleep apnea is causing or contributing to the fatigue and increased risk of heart disease in PLWH.

WHAT WILL HAPPEN TO YOU IN THIS STUDY?

If you agree to be in this study, the following will happen to you:

1) A baseline (Day visit #1) to assess neurocognitive function, sleep, heart, and lung function. You will also be given a basic health exam, questionnaires, and fit for a wrist activity tracker which will be worn for 2 weeks.
2) A sleep study (Overnight visit #1) to determine OSA severity and a blood draw.

If you are found to have OSA you will also undergo:

3) A research sleep study (Overnight visit #2) to measure the traits that affect OSA, and
4) Weekly phone call to make sure you are wearing the treatment device, and
5) A follow up visit (Day visit #2) to see the impact of PAP therapy, since your overnight visit #1. This visit will have the same procedures as Day visit #1.

The following procedures will be performed at the Altman Clinical Translational Research Institute Clinic, 9452 Medical Center Dr, La Jolla, CA 92037.

You will be asked to arrive at the UCSD Sleep Laboratory for a scheduled appointment between 9am-4pm in order to go through an orientation process and to start the procedures of the research study. Dr. Owens or his representatives will be there to answer any of your questions. This visit should take approximately 4 hours. If COVID-19 (coronavirus) continues to be an issue, our research team will prioritize your safety by offering a combination of shorter length in person visits and activities that can completed at home. Before each study appointment, we will ask that you be tested for coronavirus through a nasal swab. The test will be ordered through our research group at no cost to you. You will be given a list of UCSD locations and a phone number to schedule an appointment for testing. We will proceed with your study visits only if you test negative for the virus.

Pregnancy Test (if necessary): You will be asked questions to determine if you might be pregnant. If you might be pregnant, we will check your urine to make sure you are not pregnant. Women who are pregnant may not participate in the study.

Day time Visit 1:
We will ask you to complete questionnaires on a computer to evaluate your sleep, breathing, and brain function. You will asked to perform breathing tests (lung performance test) that measure how quickly you can blow air out of your lungs. You will take part in a non-invasive measure of blood vessel function, which involves siting with a blood pressure cuff on your arm for a few minutes. Your reaction time will also be assessed; you will be asked to quickly tap a spacebar every instance a red dot appears on a computer monitor. In a basic exam, we will take note of your height, weight, neck circumference, hip, and waist circumference, blood pressure, and oxygen saturation. The study physician will also complete a structured interview to compile a list of medication you previously and are currently taking. You will be fitted for a watch that collects your activity and exposure to light. Please note that due to the length of this day time visit we anticipate that you will need to complete a test for COVID-19 and test negative before coming in. You will not be charged for this nasal swab test.

Shortened Daytime in person Visit + Virtual Daytime Visit #1

Due to COVID-19, we would like to practice social distancing to limit how much time you spend at our location for our study activities. If COVID-19 remains an ongoing concern, we will have you complete a portion of the first daytime visit in person and portion at home instead of the full length 4-hour daytime visit. You will come to our study location to complete a basic health exam, lung performance test, non-invasive measure of your heart function, and a reaction assessment. We will either mail you the watch that collects information about your activity or provide it during this visit. We anticipate this visit will last 2 hours. You will not need to be swabbed for COVID-19 for this appointment.

A couple of days later you will receive a link to a website where you will complete questionnaires related to your general health and sleep. A researcher will be available on the phone as you complete these activities. Later, the main study investigator will call you to obtain a list of any medications that you have previously and are currently taking. We anticipate that this will take 1-2 hours.

Overnight Sleep Study Visit 1:

You will be asked to come in for an overnight sleep study at 8PM. Please note that due to the length of this visit we anticipate that you will need to complete a test for COVID-19 and test negative before coming in. You will not be charged for this nasal swab test. At this visit, you will return the wrist activity tracker, which was worn for two weeks. You will have sensors pasted on your scalp, face, chest and legs that will help determine when you are asleep or awake. A microphone will be placed on your neck to monitor snoring, and a probe will be placed on your finger or ear lobe to measure your oxygen level. A small vital sign monitor will be taped to your finger to read additional vital signs. An adhesive body position sensor and 2 pairs of

magnets will be placed on your body to measure what position you are sleeping in, and the volume of your chest while breathing. Almost all of this equipment is standard for a diagnostic sleep study and should not be uncomfortable.

We will also take 2-3 teaspoons of blood. Please note that this blood will be separated into serum and plasma for analysis to find links between other diseases. We will not be using this blood sample for DNA analysis.

Occasionally, we are not able to arrange for you to complete the blood draw the morning after your overnight sleep study. If this is the case, a study coordinator will schedule you to come in for an additional morning visit and you will be compensated for completing the blood draw separately. You will be scheduled to complete this blood draw during a 15 minute appointment between 7AM-8:30AM. Since this is a fasting blood draw, you will not be able to have food in the morning when you awake up until after the blood draw has been completed. You will be allowed to drink water, but no other beverage before your appointment.
If you consent to giving blood or tissue specimens as part of this study, these specimens will become the property of the University of California. The blood samples will not be shared with other researchers/institutions outside of University of California San Diego.

The study will end at approximately 6AM, all the monitoring equipment will be removed, and you will be allowed to go home. A member of the research team will assess your level of sleepiness before you leave.

If you do not have obstructive sleep apnea, you will not participate in any further portion of the study.

If you do have obstructive sleep apnea, you will be asked to make an appointment with a sleep physician for an evaluation.

Please expect a phone call and letter to inform you of this result.

<u>At Home Overnight Visit 1</u>:

If COVID-19 remains an ongoing concern, we will have you complete a Home Sleep Test in order to assess for sleep apnea. You will be given a standard home sleep test device and instruction on how to complete the test (10 minutes for instruction). This device is strapped over the chest movements to measure breathing effort, a tube under your nose to measure your breathing and a finger probe measuring blood oxygen saturation. You will be asked to return the device the next morning and the data will be downloaded and analyzed. If the results of your HST shows evidence of a sleep disorder you will be referred to seek medical treatment with your primary care physician. In some cases, the quality of your sleep may not allow us to get all the data we need. In these cases, you may be invited back to repeat the sleep test. However, you are under no obligation to conduct a repeat HST. After you complete the Home Sleep Test, you will receive a phone call to let you know if you are eligible for the remaining study activities.

Are you willing to repeat your Home Sleep Test, if needed? You will be compensated for the additional study visit.

☐ Yes ☐ No Initials _____

Overnight Sleep Research Study Visit 2:

Please note that due to the length of this visit we anticipate that you will need to complete a test for COVID-19 and test negative before coming in. You will not be charged for this nasal swab test. You will return to our study location for a second overnight sleep study. A nasal mask will be placed over your nose and secured. Attached to the mask will be a flow meter for measurement of air flow as you breath. Your mouth will be either gently taped closed or a chip strap applied to ensure you breathe through your nose. Mask pressure and carbon dioxide will be continuously analyzed from the air you breathe. A modified continuous positive airway pressure (CPAP) device that delivers both positive and negative airway pressure will be the home setting. After you go to sleep, the CPAP pressure will be increased and decreased throughout the night so to measure your upper airway response to different CPAP pressures. A second machine, a standard CPAP machine, will also be used to make the same measurements. A small vital sign monitor will be taped to your finger, and a three-minute ECG trace may be performed. After the pressure measurements are completed, the CPAP will be either returned to the beginning pressure or stopped and the mask removed. You will be allowed to continue sleeping. Of note, for the majority of the night your CPAP will be at your therapeutic pressure.

Additionally, a catheter will be inserted through one nostril to measure diaphragm activity. Before the catheter is placed, you will be given 2 sprays of nasal decongestant and local anesthesia with a topical cream. Please note that you may opt out of this study activity.

The study will end at approximately 4AM, at which time all the monitoring equipment will be removed, and you will be allowed to go home. A member of the research team will assess your level of sleepiness before you leave.

In some cases, the quality of your sleep may not allow us to get all the data we need. In these cases, you may be invited back for an additional overnight stay. However, you are under no obligation to participate in the extra overnight study.

Are you willing to be contacted for the extra overnight visits if needed? You will be compensated for the additional study night ($100).

☐ Yes ☐ No Initials _____

If there is a gap of 12 weeks between Day visit #1 and the start of OSA treatment, you will be asked to complete an additional day visit with the same activities as Day visit #1.

☐ Yes ☐ No Initials _____

Are you willing to be contacted for additional daytime/evening study visits, if needed? You will be compensated for the additional study visit.

☐ Yes ☐ No Initials _____

If you start treatment for OSA, you will be invited to participate in Aim #3, which will take place after starting treatment (usually CPAP) for your sleep apnea.

If you would like to get started on a trial of PAP therapy for the treatment of your OSA, we can offer you an Automatic Positive Airway Pressure (APAP) device. Dr. Owens will oversee the management of the device, until you are able to establish care and get supplies through your sleep physician.

Are you willing to be given a loaner APAP device for up to 3 months, while you are waiting for clinical evaluation and device delivery through your healthcare providers?

☐ Yes ☐ No Initials _____

Weekly Phone calls: For 12 weeks, research staff will be in contact in the form of check in phone calls. Staff will provide encouragement and help you work through any issues that occur with your CPAP device.

Day Visit 2:
You will be asked to arrive at the UCSD Sleep Laboratory for a scheduled appointment between 9am-5pm. You will not need to be swabbed for COVID-19 for this appointment. This visit should take approximately 2 hours. You will be asked to repeat some testing that was completed during your baseline visit with the exception of the breathing test. You will also be given a watch to monitor your activity for another two week period. Watch will be dropped off at the UCSD Sleep Laboratory when finished.

Occasionally, we are not able to arrange for you to complete the blood draw during your final daytime visit. If this is the case, a study coordinator will schedule you to come in for an additional morning visit and will be compensated for completing the blood draw separately. You will be scheduled to complete this blood draw during a 15 minute appointment between 7AM-8:30AM. Since this is a fasting blood draw, you will not be able to have food in the morning when you awake up until after the blood draw has been completed. You will be allowed to drink water, but no other beverage before your appointment.

Virtual Daytime Visit #2 + Shorter Daytime Visit #2

If COVID-19 remains an ongoing concern, we will have you complete a portion of the final daytime visit at home. You will receive a link to complete questionnaires related to your general health and sleep. A researcher will be available on the phone as you complete these activities. We anticipate that this will take 45 minutes to 1 hour. You will receive the watch to collect information about your activity by mail and wear it for 1 week.

Within a week, you will come to our study location to complete the remaining study activities that cannot be completed virtually—a morning blood draw, basic exam, lung performance test, non-invasive measure of heart function, and reaction assessment. We anticipate this visit will last 1-2 hours.

HOW MUCH TIME WILL EACH STUDY PROCEDURE TAKE, WHAT IS YOUR TOTAL TIME COMMITMENT, AND HOW LONG WILL THE STUDY LAST?

1) Daytime Visit #1 was take approximately 4 hours or Shortened in person Daytime Visit + Virtual Daytime Visit #1
2) Overnight Visit #1 will last 10 hours (mostly sleeping)
3) Weekly phone calls will be 10-15 minutes each for 12 weeks
4) Overnight Visit #2 will last 8 hours (mostly sleeping)
5) Daytime Visit #2 or Shortened in person Daytime Visit #2 + Virtual Daytime Visit #2 will be 2 hours

We expect you will be enrolled in the study for a total of 18 weeks.

WHAT RISKS ARE ASSOCIATED WITH THIS STUDY?
Participation in this study may involve some added risks or discomforts. These include the following:

Risks of Sleep Studies: During the sleep studies, there may be discomfort at the electrodes or monitors sites that can develop; a localized skin irritation/allergy can occur due to application of the skin surface electrodes. Similarly, the CPAP mask can cause temporary skin irritation, nasal congestion, and/or nasal dryness.

Short periods of apnea during the study might occur when the CPAP pressure is turned down. However, these would not be expected to cause side effects, other than the possibility of awakening from sleep. You might be sleepy the next morning after participating in the study.

Risks of a blood draw/blood pressure test: You may have temporary pain, bleeding, risk of infection, and/or discomfort during the blood draw or cardiovascular assessment.

Risks of esophageal catheter: You may experience esophageal injury, choking, gagging, and/or vomiting.

Risks of Loss of Confidentiality: Even with all of the study procedure precautions that will be taken to protect confidentiality, there is a still a risk of loss of confidentiality associated with this study. Research records will be kept confidential to the extent allowed by law. The study personnel are well trained in securing and safely storing all your data.

Unknown Risks: Because this is a research study, there may be some unknown risks that are currently unforeseeable. You and, if requested, a physician you designate will be informed of any significant new findings.

WHAT ARE THE ALTERNATIVES TO PARTICIPATING IN THIS STUDY?
The alternatives to participation in this study are not to participate in the study.

WHAT BENEFITS CAN BE REASONABLY EXPECTED?
There may be benefit to you for participating in this study, especially if we diagnose a sleep disorder like OSA. Other benefits of this study are principally to science and future patients, in that we may better understand how OSA is important for PLWH, and the impact of treatment. This information may be useful to clinicians.

CAN YOU CHOOSE TO NOT PARTICIPATE OR WITHDRAW FROM THE STUDY WITHOUT PENALTY OR LOSS OF BENEFITS?
Participation in research is entirely voluntary. You may refuse to participate or withdraw at any time without penalty or loss of benefits to which you are entitled. If you decide that you no longer wish to continue in this study, you will be requested to contact Dr. Owens or his study coordinator at (858) 246-2154.

You will be told if any important new information is found during the course of this study that may affect your wanting to continue.

CAN YOU BE WITHDRAWN FROM THE STUDY WITHOUT YOUR CONSENT?
You may be withdrawn from the study if:

- You become ill,
- Become injured and cannot get around without assistance.

You may also be withdrawn from the study if you do not follow the instructions given you by the study personnel.

WILL YOU BE COMPENSATED FOR PARTICIPATING IN THIS STUDY?
For your time and travel, you will receive the following:

- Daytime Visit 1 (Aim 1): $50 or Shortened in person Daytime Visit + Virtual Daytime Visit: $50
- Overnight Visit 1 (Aim 1): Routine Polysomnography: $100 or Home Sleep Test: $100
- Actiwatch returned (Aim 1): $50
- Overnight Visit 2 (Aim 2): Research Polysomnogram: $100
- Weekly Phone calls (Aim 3): Subject will be compensated for $20 for answering each weekly follow-up call for 12 weeks, in total of $240.
- Daytime Visit 2 (Aim 3): Day Testing $50 or Shortened in person Daytime Visit #2 + Virtual Daytime Visit #2: $50
- Actiwatch Returned (Aim #3): $50
- If a separate visit needs to be scheduled for the fasting morning blood draw: $20 for each visit If an additional daytime visit is needed for data collection: $50
- If data is inconclusive and an additional polysomnogram night is required, you will be paid $100.

You will make up to a total $660.00 for completion of the all study visits, unless additional data needs to be collected.
Taxability of Subject Payments: Payment received as compensation for participation in research is considered taxable income for a research subject. If payments are more than $600 in any one calendar year, UCSD is required to report this information to the Internal Revenue Service (IRS). Research subjects payments exceeding $600 during any calendar year will result in a 1099 (Miscellaneous Income) form being issued to you and a copy will be sent to the IRS.

If you only complete day time visit 1 and overnight visit 1, compensation will be $200.00.

If you only complete day time visit 1, overnight visit, day time visit 2, and overnight visit 2, compensation will be $300.00.

Parking will be available free of charge and participants will also be reimbursed for minor out of pocket expenses including meal vouchers, public transportation or taxi vouchers. If the subject terminates the study early, they will receive an amount based on the visits that have been completed. If any of the visits are missed, the subject will not be compensated for those visits.

ARE THERE ANY COSTS ASSOCIATED WITH PARTICIPATING IN THIS STUDY?
There will be no cost to you for participating in this study. Parking expenses at UCSD Medical Center will be covered. Subjects diagnosed with sleep apnea who are recommended to undergo treatment for OSA and elect to do so may have expenses incurred. For example, they may have a co-pay as part of their clinical sleep evaluation, or as part of their OSA treatment.

WHAT IF YOU ARE INJURED AS A DIRECT RESULT OF BEING IN THIS STUDY?
If you are injured as a direct result of participation in this research, the University of California will provide any medical care you need to treat those injuries. The University will not provide any other form of compensation to you if you are injured. You may call the Human Research Protections Program Office at (858) 246-4777 for more information about this, to inquire about your rights as a research subject or to report research-related problems.

WHAT ABOUT YOUR CONFIDENTIALITY?
Research records will be kept confidential to the extent allowed by law. To guard your confidentiality, you will be assigned a unique identifying number to label all your data collection sheets. All personal information will be kept strictly confidential by the investigators. All study forms, and data collected will be kept locked in a secure location. All your data forms will only list your unique study ID number. If you have previously participated in a study hosted by the UCSD HIV Neurobehavioral Research Program (HNRP), data collected may be shared with this division. All research staffs are trained in the protection of subject privacy and confidentiality. Research records may be reviewed by the UCSD Institutional Review Board, or the study Sponsor, the National Institute of Health (NIH). .

Because of the need to release information to these parties, absolute confidentiality cannot be guaranteed. The results of this research study may be presented at meetings or in publications; however, your identity will not be disclosed in those presentations.

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.

WHO CAN YOU CALL IF YOU HAVE QUESTIONS?
Dr. Owens and/or _____ has explained this study to you and answered your questions. If you have other questions or research-related problems, you may reach Dr. Owens at (858) 246-2154.

You may call the Human Research Protections Program Office at (858) 246-4777 to inquire about your rights as a research subject or to report research-related problems.

YOUR SIGNATURE AND CONSENT
You have received a copy of this consent document and a copy of the "Experimental Subject's Bill of Rights" to keep.

You agree to participate.

_____ _____
Subject's signature Date

PARTICIPATION IN FUTURE STUDIES WITH DR. OWENS.
May we contact you later either by phone, email or mail for other research projects administered by Dr. Owens?

Yes _____ **No** _____

_____ _____
Subject's signature Date

PARTICIPATION IN FUTURE STUDIES WITH HNRP.
May the UCSD HNRP contact you later either by phone, email or mail for other research projects?

Yes _____ **No** _____

_____ _____
Subject's signature Date