Fatigue and Fatigability in Veterans Following SARS-CoV-2 Infection

NCT05699538

March 3, 2025

Participant Name: _____ Date: _____

Title of Study: Fatigue and Fatigability in Veterans Following SARS-CoV-2 Infection (Intervention)

Principal Investigator: [redacted] VA Facility: DC VAMC, 688

KEY SUMMARY INFORMATION ABOUT THIS STUDY

You are being invited to take part in a research study that is being funded by the VA Office of Research and Development (ORD), Rehabilitation Research and Development (RRD). The purpose of this study is to determine factors that may contribute to fatigue in individuals with long COVID-19 and to what extent a home-based exercise program improves fatigue levels. The duration of your involvement in the study if you choose to participate is approximately 8-weeks consisting of one 60-minute exercise session per week. Two 3-hour testing sessions will be conducted before and after the exercise intervention. Testing assessments include measuring your muscle fatigue levels, cardiorespiratory fitness, muscle strength, physical function, and questionnaires regarding your health and quality of life. Compensation for your time and travel is included as part of your involvement in the study. Before you decide to take part, it is important for you to know why the research is being done and what it will involve. This includes any potential risks to you, as well as any potential benefits you might receive. Taking part in this study is completely voluntary.

You are eligible to participate if:

1. You are registered to receive healthcare at the Washington DC VAMC
2. You are able to walk on your own with or without an assistive device (e.g., cane or walker)
3. You are aged 50 years or older
4. You have previously had COVID-19 confirmed by polymerase chain reaction (PCR) test, antibody test or clinical diagnosis and
5. The continuation or development of fatigue 12 weeks or longer after the initial SARS-CoV-2 infection

You are not eligible to participate if:

1. You are unable to speak English
2. You are not 50 years of age or older
3. You have not had a previously confirmed diagnosis of COVID-19 by PCR test, antibody test or clinical diagnosis or confirmed COVID-19 <12 weeks ago
4. Body mass index >40 $kg \cdot m^2$
5. Diagnosis of psychiatric disorder(s)
6. You are non-ambulatory
7. You are unable to follow study instructions
8. You have any uncontrolled cardiovascular or musculoskeletal problems that would make your participation in this study unsafe
9. Any orthopedic or joint pain which would prevent the participant from safely engaging in the study protocol
10. If you plan to relocate from the Washington DC metro area within 1 year

WHAT IS THE STUDY ABOUT AND HOW LONG WILL IT LAST?

By doing this study, we hope to learn more about which factors impact fatigue in Veterans following COVID-19 infection and the safety and feasibility of home-based exercise. Your participation in this research will last about 8-weeks. There is no long-term follow-up as part of this study beyond your 8-week participation.

WHAT ARE KEY REASONS YOU MIGHT CHOOSE TO VOLUNTEER FOR THIS STUDY?

You might choose to volunteer for this study to learn more about the possible factors contributing to fatigue following COVID-19 infection or to determine if home-based exercise is beneficial for improving your current levels of fatigue.

WHAT ARE KEY REASONS YOU MIGHT CHOOSE NOT TO VOLUNTEER FOR THIS STUDY?

This study requires you to attend weekly virtual exercise sessions. If travel is a challenge you may choose not to participate in this study. If access to technology or operating technology is a challenge you may choose not to participate in this study. Additionally, if there are concerns with engaging in the study's exercise intervention, further consultation with your medical provider may be required before agreeing to participate in this study. For a complete description of risks, refer to the Detailed Consent and/or Appendix.

DO YOU HAVE TO TAKE PART IN THE STUDY?

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any services, benefits, or rights you would normally have if you choose not to volunteer.

WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS OR CONCERNS?

The person in charge of the study is [redacted]. If you have questions, suggestions, or concerns regarding this study or you want to withdraw from the study his contact information is:

[redacted]

[redacted]

DETAILED INFORMATION ABOUT THE STUDY

WHAT IS THE STUDY ABOUT AND WHY ARE WE DOING IT?

This study is about fatigue in Veterans who have previously had COVID-19. This study is funded by the Department of Veterans Affairs Office of Research & Development (ORD), Rehabilitation Research & Development (RRD).

This study will include a total of 52 people. Your individual commitment will be for approximately 8 weeks. Each testing visit will last approximately 3 hours and each exercise session will last approximately 1 hour.

The time to complete this research study is expected to take approximately 2 years. No long-term follow-up after the initial 2-year period will be conducted as part of this study.

[redacted], a full-time member of the DC VAMC staff is the Principal Investigator for this study. He has no other relationship with VA ORD RRD, the sponsor of this project.

WHAT WILL HAPPEN AND WHAT CAN I EXPECT IF I TAKE PART IN THIS STUDY?

If you consent to participate in this research study you will be asked to perform the following procedures for the assessment of your fatigue levels, strength, and physical function. All participants will be randomly assigned to either the exercise group or standard-of-care group using a method that allows similar numbers of participants in each study group. If you consent to participate in this research study, you may be asked to complete the following procedures:

1. *Fatigability testing:* during this assessment you will be asked to complete a test of muscle endurance of your thigh muscle to assess your level of fatigue. This will require you to contract your thigh muscle by kicking your foot out 15 times. Immediately following the 15 repetitions, you will be ask to contract your thigh muscle isometrical as fast and hard as possible for 5 seconds. This sequence will be repeated twice. After the muscle fatigue testing you will be asked to rate how fatigued you feel using a 11-point scale (0=no fatigue; 10=completely fatigued). We will also ask you to rate how you feel on a 10-point scale scale (-5=very bad; 0=neutral; +5=very good).
2. *Muscle oxygen extraction and motor unit firing:* during the muscle fatigue test, we will monitor your thigh muscles ability to use oxygen and activation levels of your muscle non-invasively.
3. *Functional assessments:* measures of your strength, balance, mobility, and walking distance will be obtained.
4. *Exercise stress test:* an exercise stress test will be conducted to determine if it is safe for you to participate in exercise and to measure your cardiorespiratory fitness.
5. *Bioelectrical Impedence Analysis (BIA):* body weight, body mass index, and body composition will be assessed using BIA.
6. *Elecrical nerve stimulation:* electrical nerve stimulation will be used to assess the contractile properties of your muscles and your ability to activate your muscles.

7. *Muscle imaging (ultrasound):* ultrasound (which used soundswaves) images of the thigh muscle will be obtained to estimate muscle thickniess and muscle fat.
8. *Questionnaires:* you will be asked to complete a set of questionnaires related to your usual activity, educational level, mood, and health-related quality of life.
9. *Exercise:* Veterans will participate in a remotely supervised exercise program consisting of body-weight resistance exercise. Exercise intensity and volume will be individualized to each participant.

If you are, or become pregnant, the particular treatment or procedures performed during testing,and exercise, might involve risks to the embryo or fetus, which are currently unforeseeable. You agree to tell the investigator or research staff if you believe you might be pregnant or knowingly are pregnant as soon as you become aware of this information.

Your individually identifiable health information is information about you that contains your health information and information that would identify you such as your name, date of birth, or other individual identifiers. The VA Principal investigator (PI) and/or the VA research team members are asking to access and use your past or present health information in addition to new health information they may collect for the study named above.

The investigators of this study are committed to protecting your privacy and the confidentiality of information related to your health care.

Your individually identifiable health information used for this VA study includes the information below:

a. Information from your VA Health Records such as diagnosis, progress notes, medications, lab or radiology findings
b. Demographic information such as name, age, and race
c. Questionnaire, survey, and/or subject diary

Specific instructions for you:

- Keep your study appointments. If you miss an appointment, please contact the investigator or research staff to reschedule as soon as you know you will miss the appointment.
- Fill out your diaries as instructed.
- Ask questions as you think of them.

While participating in this research study, do not take part in any other research project without approval from the investigators. This is to protect you from possible injury from things such as extra blood drawing, extra X-rays, or potential drug interactions. Taking part in other research studies without first discussing it with the investigators of this study may invalidate the results of this study, as well as that of the other studies.

WHAT POSSIBLE RISKS OR DISCOMFORTS MIGHT I HAVE IF I TAKE PART IN THIS STUDY?

Any procedure has possible risks and discomforts. The procedures in this study may cause all, some, or none of the risks or side effects listed.

1. Possible worsening of symptoms due to engaging in physical exercise. The PI or research staff will be monitoring your symptoms throughout the duration of the study.
2. Possible mild swelling of your muscles or some muscle soreness. This may be a delayed reaction you might experience after you leave the clinic, but it is not serious and will usually resolve itself within 4 to 5 days.
3. There is a slight risk of falling during testing of gait speed, balance, and walking on a treadmill. All assessments will be performed under direct supervision of research staff and on flat unobstructed surfaces and stand-by assistance during testing to ensure participant safety.
4. Adverse cardiovascular events are possible during exercise stress testing such as potential heart rhythm abnormalities for those with pacemakers, myocardial ischemia and infarction. However, such risks are low even in clinical settings. Heart rate, blood pressure, and electrocardiography will be monitored continuously during the test for signs of ischemia or abnormal heart arrythmias and if identified the test will be stopped immediately.
5. Potential heart rhythm abnormalities for those with pacemakers and ICDs undergoing bioelectrical impedance analysis. If you have a pacemaker or ICD, this procedure will not be performed.
6. Muscle pain and discomfort may be experienced during the assessment of muscle activation in which the femoral nerve is stimulated. The methodology used for this assessment has been widely used across clinical populations, nonetheless, some discomfort may be experienced.
7. Please be aware that not all study risks can be predicted, and that risk of loss of confidentiality of some of your information is also possible. However, we will make every effort to ensure that your private information is completely secure. All medical information collected from you as a part of this study will be kept in a locked file within the Research Building at the Washington, DC VAMC.
8. There is always a chance that any procedure can harm you. The procedures in this study are no different. In addition to the risks described above, you may experience a previously unknown risk or side effect.
9. Risks of the usual care you receive are not risks of this study. Those risks are not included in this consent form. You should talk with your health care providers if you have any questions about the risks of usual care.

WHAT ARE THE POSSIBLE BENEFITS OF THIS STUDY?

We do not know if you will get any benefits from taking part in this research study. However, possible benefits may include:

1. You may benefit from participating in this study by learning information about your fatigue levels, muscle strength, functional capabilities, and physical activity levels.
2. You may learn about any changes in fatigue, muscle strength, function, and physical activity during the study. You may experience benefits in fatigue, muscle strength, functional performance, physical activity, and overall health as a result of study participation.
3. It is possible that participating in this study will not benefit you personally but may lead to knowledge that will help others in the future.
4. Last, your physician will be notified of any abnormal results obtained through your participation in this study.

WHAT OTHER CHOICES DO I HAVE IF I DO NOT WANT TO JOIN THIS STUDY?

You may choose not to participate in this study. If you choose not to participate in this research study, there are other alternatives you may seek to learn about your condition, diet, exercise, and healthy lifestyle behaviors. The DC VAMC COVID Clinic is a valuable resource for Veterans experiencing long COVID symptoms. The VA Whole Health program provides information about health and well-being that you may find helpful. Information about the VA Whole Health program can be found at https://www.va.gov/wholehealth/#top. You may discuss these options with your doctor.

HOW WILL MY PRIVATE INFORMATION BE PROTECTED?

VHA will maintain the confidentiality of your records. If information is shared with others, the VHA will require that your records will be kept confidential. Federal and local regulations may require review of our medical and research records by representatives of Government Accountability Office (GAO), the VA, Office of Human Research Protection (OHRP), Office of Research Oversight (ORO), VA Office of the Inspector General (OIG), and the Institutional Review Board of this medical center.

Sources of Materials. All personal identifiers might be removed from the identifiable private information or identifiable biospecimens that are collected. After that removal, the information or biospecimens could be used for future research studies or distributed to another investigator for future research studies without additional informed consent from you or your legally authorized representative.

A description of this clinical trial will be available on http://www.ClinicalTrials.gov as required by U.S. 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.

While this study is being conducted, you will not have access to your research related health records.

Health Information Portability and Accountability Act (HIPAA)

There are rules to protect your private health information. Federal and state laws and the federal medical law, known as the HIPAA Privacy Rule, also protect your privacy. By signing this form, you provide your permission called your 'authorization', for the use and disclosure of information protected by the HIPAA Privacy Rule.

Your individually identifiable health information is information about you that contains your health information and information that would identify you such as your name, date of birth, or other individual identifiers. VHA is asking you to allow the VA Principal Investigator (PI) and/or the VA research team members to access and use your past or present health information in addition to new health information they may collect for the study named above. The investigators of this study are committed to protecting your privacy and the confidentiality of information related to your health care.

Your treatment, payment, enrollment, or eligibility for VA benefits will not be affected, whether or not you sign this consent form.

The research team working on the study will collect information about you.This includes things learned from the procedures described in this consent form, in addition to :

- Your VA health records such as diagnoses, progress notes, medications, lab or radiology findings, medical history, allergies,
- demographic information such as name, age, race
- Questionnaire, survey, and/or subject diary

The research team may also need to disclose your health information and the information it collects to others as part of the study progress, including:

- Study Sponsor/Funding Source: VA Office of Research & Development (ORD), Rehabilitation Research & Development (RRD)
- Washington DC VA MC Compliance and Safety Monitors

Other Federal agencies required to monitor or oversee research (such as FDA, OHRP, GAO): Food and Drug Administration, Office (FDA), Office of Human Research Protections (OHRP), the VA Office of Research Oversight (ORO), Government Accountability (GAO); VA Office of the Inspector General (OIG); the Institutional Review Board (IRB) and Research Compliance Officer(s) (RCO) at this medical center.

Your health information disclosed pursuant to this authorization may no longer be protected by Federal laws or regulations and may be subject to re-disclosure by the recipient.

You can revoke this authorization, in writing, at any time. To revoke your authorization, you must write to the Release of Information Office at this facility or you can ask a member of the research team to give you a form to revoke the authorization. Your request will be valid when the Release of Information Office receives it. If you revoke this authorization, you will not be able to continue to participate in the study. This will not affect your rights as a VHA patient to treatment or benefit outside of the study.

If you revoke this authorization, [redacted] and his research team can continue to use information about you that was collected before receipt of the revocation. The research team will not collect information about you after you revoke the authorization.

Treatment, payment or enrollment/eligibility for benefits cannot be conditioned on you signing this authorization. This authorization will expire at the end of the research study unless revoked prior to that time.

HOW WILL RESEARCH RESULTS BE USED?

1.We (I) will let you and your physician know of any important discoveries made during this study, which may affect you, your condition, or your willingness to participate in this study.
2.We (I) will notify your primary physician immediately of any concerning suicidal intent, depression, or other major clinical findings, if expressed, during testing visits.
3.If results of this study are reported in medical journals or at meetings, you will not be identified by name, by recognizable photograph, or by any other means without your specific consent.
4.We will maintain your privacy and the confidentiality of the research record and no information by which you can be identified will be released or published without your authorization unless required by law. Dr. Jared M. Gollie will have possession of all data including questionnaires. Other research staff members will have access to them but they will be stored in a secure location in accordance with the record control schedule. At that time, they will be destroyed. There is a possibility that the VA ORD RRD may inspect the records.

WHAT WILL HAPPEN IF I AM INJURED BECAUSE OF MY BEING IN THE STUDY?

1. If you are injured as a result of taking part in this study, the VAMC will provide necessary medical treatment at no cost to you or your insurance. However, the VAMC has the right not to provide treatment for injuries resulting from your noncompliance with study procedures.

2. Additional compensation may or may not be payable in the event of physical injury arising from this study under applicable federal law. Further information about compensation may be obtained from the Office of the Patient Experience & Advocacy at this VA Medical Center. The contact number is [redacted].

3. You do not waive any legal rights by signing this Consent Form.

WHAT OTHER SPECIAL INFORMATION SHOULD I KNOW?

1. You are not required to take part in this study: your participation is entirely voluntary.
2. You can refuse to participate now or you can withdraw from the study at any time after giving your consent. This will not interfere with your regular medical treatment, if you are a patient.
3. Financial compensation for your time and consideration will be provided as follows:

   Exercise group - 8 exercise visits (1 per week) for exercise sessions, and 4 visits to measure progress

   a. $6.00 for each completed exercise session
   b. $70 per testing visit to the DC VAMC

   Standard-of-Care group - 8 health coaching sessions (1 per week) for educational sessions, and 4 visits to measure progress

   a. $6.00 for each completed educational session
   b. $70 per testing visit to the DC VAMC

   - Payments will be provided using direct deposit or direct express debit mastercard.
   - Payments will be distributed after the completion of week 4 and at the end of the study.
   - Should you decide to withdraw, you will be compensated for all completed visits prior to the withdraw date.
   - Due to limitations in the Financial Management System, payments made to subjects through Austin Financial Services Center generate Internal Revenue Service Form 1099 regardless of amount. The SSN of the subject will be used for this purpose.
   - If you choose to withdraw from the study, no additional payments will be provided beyond the last study session completed.

4. There will be no costs to you or your insurance for any of the treatment or testing done as part of this research study.
5. Eligibility for medical care is based upon the usual VA eligibility policy and is not guaranteed by participation in a research study.
6. If you are a VA employee, refusal to take part in the study will in no way influence your employment status, employment rating, or subsequent recommendations as applicable.
7. By signing this document below, you voluntarily consent to participate in this study and authorize the use and disclosure of your health information for this study. You also confirm that you have read this consent, or it has been read to you. You will receive a copy of this consent after you sign it.
8. If you have questions about your rights as a study participant, or you want to make sure this is a valid VA study, you may contact the [redacted]. This is the Board that is responsible for overseeing the safety of human participants in this study. You may call the [redacted] if you have questions, complaints or concerns about the study or if you would like to obtain information or offer input.

Title of Study: Fatigue and Fatigability in Veterans Following SARS-CoV-2 Infection (Intervention)

Principal Investigator: [redacted] VA Facility: DC VAMC, 688

AFFIRMATION FROM SUBJECT

Dr. Jared M. Gollie, or a member of his research staff, has explained the study to me and answered all of my questions. I have been told of risks or discomforts and possible benefits of the study. I have been told of other choices of treatment available to me.

I understand that I do not have to take part in this study, and my refusal to participate will involve no penalty or loss of rights to which I am entitled. I may withdraw from this study at any time without penalty or loss of VA or other benefits to which I am entitled.

The results of this study may be published, but my identity will not be revealed unless required by law.

In case there are medical problems or questions, I have been told I can call Dr. Gollie at 202-745-8000 x55851 during the day. If any medical problems occur in connection with this study the VA will provide emergency care.

I understand the explanation of my rights as a research subject, and I voluntarily consent to participate in this study. I understand the explanation of what the study is about and how and why it is being done. I will receive a signed and dated copy of this consent form.

_____ ____/_____/_____

Participant's Signature Date

_____

Print Name (Participant)

I have informed the participant of the intent, nature benefits and risks of the research project. I judge that he/she understood my explanation and that his consent was given freely.

_____ _____ ____/_____/_____

Consent Informant Signature Print Name Date