EFFECTIVE

3/21/2023

MCW/FH IRB

Medical College of Wisconsin and Froedtert Hospital
INTRODUCTION TO THE INFORMED CONSENT

Name of Subject: _____

"Evaluating the Impact of Singing Interventions on Markers of Cardiovascular Health in Older Patients with Cardiovascular Disease."

Jacquelyn Kulinski, MD
Cardiovascular Medicine
414-955-6896
Medical College of Wisconsin
8701 Watertown Plank Road
Milwaukee WI 53226

You are invited to take part in this research. You can decide whether to take part in this project or not. You are free to say yes or no. If there is anything that you do not understand, please ask questions.

Definitions

Flow Mediated Dilation (FMD) Study: A non-invasive ultrasound test along the bicep region of the upper arm, which measures blood vessel function or reactivity.
Peripheral Artery Tonometry (PAT): A non-invasive test that measures endothelial (blood vessel) function or reactivity via probes worn on the fingers.
Heart Rate Variability (HRV) – Variation in the time interval between heartbeats, measured with a chest strap and finger sensor.
Music Experience Questionnaire (MEQ): This questionnaire is about your personal thoughts on music, as well as your feelings and reactions to it. It will also ask about how music relates to your activities. This survey is called the Music Experience Questionnaire and is made up of 53 questions using a scale where you rate each answer a number from 1-5

Purpose

This project is being done to determine if a singing activity can provide a level of physical activity in adults 55-79 years of age which could improve cardiac health in patients with limited physical mobility.

Length

- You will be in this research project for about one month.

Procedures *or* Activities

There are three study Arms (groups), each participant will complete each study arm. The 3 groups include:

- Singing Intervention 1 -Use of an instructional sing-along video
- Singing Intervention 2 In-person music therapy session
- Singing Intervention 3 Control/Sham intervention-A 30-minute period of rest sitting upright in the singing position. A hearing test will be done during this time.

List of visits:

- **Screen Visit and Study Visits 1-3:**
  - Total Number: Four
  - Total Time:
    - Phone Screen: 30 minutes
    - Study Visits 1-3: 2-2.5 hours
  - Approximately 8.5 hours total.

Procedures/Activities that will occur at various visits:

Invasive Procedures/Activities

- Taking the Nitroglycerin

Non-invasive Procedures/Activities

- Vital signs, height and weight, Saliva sample, Heart Rate Variability measurement, FMD, PAT, Borg survey, Singing or Control Intervention, hearing screen, and music questionnaire

Risks

This is a brief list of the most commonly seen side effects/risks The ***full consent form*** after this introduction contains a more complete list of potential research risks.

Intervention risks:

- Short-term Tingling or Numbness in hand or arm
- Temporary Headache with Nitroglycerin
- Shortness of Breath

EFFECTIVE

3/21/2023

MCW/FH IRB

Benefits

This project may or may not help you, but we hope the information from this project will help us develop an alternative exercise for individuals with limited mobility in the age group of 55-79 years.

My Other Options

You do not have to join this project. You are free to say yes or no.

- Whether or not you join this project, you are free to seek services from this or other agencies.
- Whether or not you join this project, your usual medical services will not change.

If you have more questions about this project at any time, you can call Jacquelyn Kulinski, MD at 414-955-6896.

If you have questions about your rights as a participant, want to report any problems or complaints, or offer input, you can call the MCW/Froedtert Hospital Research Subject Advocate at 414-955-8844.

CONSENT TO PARTICIPATE IN RESEARCH

A1. INTRODUCTION – WHY ARE WE ASKING YOU TO PARTICIPATE?

You are being invited to participate in this research study because you have coronary artery disease (heart disease) and you are between the age of 55-79 years.

A total of about 65 people are expected to participate in this research at the Medical College of Wisconsin/Froedtert Hospital.

The Director of the project is Jacquelyn Kulinski, MD in the Department of Cardiovascular Medicine. A research team works with Dr. Kulinski. You can ask who these people are.

The National Institute of Health, a government agency, is funding the research. This project is identified as R61 AT010680-01.

A2. DO I HAVE TO PARTICIPATE?

You can decide whether to take part in this research or not. You are free to say yes or no. If you say no, your regular medical care will not change. Even if you join this project, you do not have to stay in it. You may stop at any time.

A3. WHY IS THIS PROJECT BEING DONE?

The purpose of this project is to determine if completion of a singing activity can provide a level of exercise for adults 55-79 years of age that has the ability to improve cardiac health in patients with limited physical mobility.

B1. WHAT WILL HAPPEN IF I PARTICIPATE?

Screening procedures:
If you decide to join the study, a phone screening will be completed to assess your eligibility. If the screening information shows that you meet the requirements, then you will work with the study team to set up the Phone Screen Visit during which you will go over the consent form, verify your medical history, and schedule your 3 Study Visits.
If you are interested in participating in this study, you will sign the consent at Study Visit 1 with a member of the study team. A signed copy will be provided for your reference.

If you agree to participate in this study, you will have 3 study visits at research clinic over about one month. During each of these visits you will complete a different singing intervention. At the time of each study appointment, you will need to be fasting for a minimum of 8 hours and will be asked to refrain from taking your morning medications. The study team will give you specific instructions on which medications you should hold. You can drink water up until your appointment.

These visits will occur in the MCW Adult Translational Research Unit.

Research Study Arms / Singing Interventions:

The three groups include:

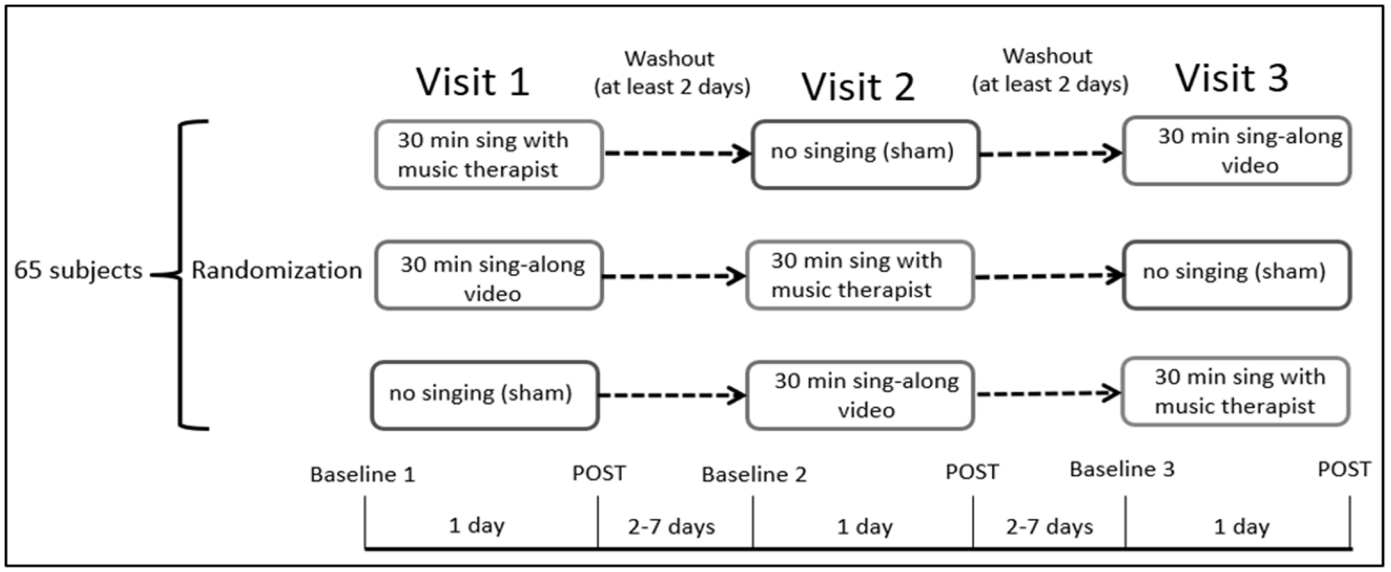
1. Instructional Sing Along Video
2. In-Person Music Therapy
3. Control / Sham Intervention (30-minute rest)

Between each study visit there is a washout period of 2-7 days. Washout refers to the time needed to separate the effects of each singing intervention. The study team will work with you to schedule your three study visits.

This study is randomized to remove bias from our study results. To accomplish this, a computer program randomizes/chooses (like the flip of a coin) which group you are in first.

The progression through the three different study visits you will participate in during the study are shown below:

Description of procedures occurring during Study Visits 1-3:



Completion and Updating the Study Medical History Form: A review of your demographics, medical history, current medications, and levels of exercise. This will be reviewed with you at the Phone Screen, then updated as necessary at Visits 1,2, and 3.

Vital signs and Height/weight: Blood pressure, heart rate and pulse oximetry (using a finger probe to measure of the amount of oxygen in your blood), will be measured multiple times during each study visit.

Target heart rate calculation: This provides estimation of the amount of exercise you are getting from the signing intervention(s). You will be given a target heart rate that you will try to reach while singing. This number is calculated based on your age; the study team will let you know what this number is.

Hearing screen: A tablet-based application will be used for a hearing screening test. This application tests your ability to hear 6 different tones in both ears through headphones. This is not meant to replace a clinical hearing test, but to alert the study team to any hearing deficit you may have. This test will take place during the 'sham (no singing) visit of the study.

Borg Rating of Perceived Exertion (RPE): A numbered scale ranging from levels 6-20, allowing you to communicate where you feel your level of exertion is while completing singing interventions. You will be able to see the Borg RPE scale on the wall in front of you while you are completing your intervention. The study coordinator will ask that you report the changes in the levels as they occur, they will also encourage you to exert yourself during the singing interventions.

Heart rate variability (HRV) assessment: A measure of how your heart rate changes. We will measure HRV by placing a strap with a sensor on it around your chest right below the breastbone against your skin and placing a HRV finger sensor monitor on a finger. HRV will be monitored before, during and after the singing and sham interventions.

Saliva collection for cortisol and cytokines: We will ask you to place about ½ teaspoon of saliva in a special tube, before and after your singing intervention. These samples will be sent to an outside laboratory (Salimetrics Laboratory) and will have cortisol and cytokine levels checked. These chemicals found naturally in your blood report the level of stress your body is experiencing. In this case, the stress we are measuring is related to your singing exercise.

Flow Mediated Dilation (FMD)/ Peripheral Artery Tonometry: Both FMD and Peripheral Artery Tonometry testing measure the blood vessel function. This involves putting a blood pressure cuff below the elbow and inflation of the cuff to stop blood flow below the cuff for 5 minutes. Ultrasound pictures of the artery in the extremity will be taken before and after the blood pressure cuff is inflated. The PAT probes will be placed on one finger of each hand at the beginning of these measurements. This will be done while you are lying down. You will experience some tingling in your arm (like it is asleep), and then it will go numb. After the 5 minutes are up, the cuff is released and blood flow returns. You will experience a warm sensation and tingling in the arm, but it will quickly return to normal (usually within 3-5 minutes). FMD will be done before and after each intervention. In order to access your arm, the study team asks that you wear a short-sleeved T-shirt; alternatively, a hospital gown can be provided to wear during the study visit.

FMD with Nitroglycerin (Optional): After the second FMD/PAT measurement at each of the study visits, there is an optional FMD with nitroglycerin. This is done after 10-20 minutes' rest period, using a 0.4 mg of sublingual nitroglycerin rather than a cuff inflation to induce vasodilation (widening of the artery). Ultrasound images are taken of your artery before nitroglycerin administration and for 5 minutes afterwards. This is the dose of nitroglycerin commonly used for patients who have chest pain coming from the heart. This is done to discern whether any differences observed in blood vessel function are due to the endothelium (artery wall) or the underlying smooth muscle. The research team will determine if you are eligible to take the nitroglycerin by asking you some questions about your medical history and obtaining blood pressure measurements.

ArtsObS Assessment: The ArtsObS assessment is a visual scoring tool in which your reactions to performing the singing interventions in a healthcare setting will be evaluated. This will occur before, during and after you complete the singing intervention.
Music Experience Questionnaire (MEQ):

This questionnaire is about your personal thoughts on music, as well as your feelings and reactions to it. It will also ask about how music relates to your activities. This survey is called the Music Experience Questionnaire and is made up of 53 questions using a scale where you rate each answer a number from 1-5 (scale described below).

1 = Very untrue
2 = Somewhat untrue
3 = Equally true and untrue; unsure
4 = Somewhat true
5 = Very true

This questionnaire should take anywhere from 15-30 minutes to complete. This will take place on the third (final) visit of the study. You will be provided with a laptop computer and directed to the electronic link for this survey.

Survey of preferred intervention: Once you have completed all three of the Singing Interventions, the research coordinator will ask you which method you preferred the most.

B2. HOW LONG WILL I BE IN THE PROJECT?

Your participation in this study will last approximately one month. The goal is to complete Study Visits 1-3 in approximately three weeks.

B3. CAN I STOP BEING IN THE PROJECT?

You may stop at any time. If you decide to leave the project, please let the study team know.

The study doctor may stop your participation in the project at any time for any reason without your consent. He / She will tell you if this happens.

C1. WHAT HEALTH RISKS OR PROBLEMS CAN I EXPECT FROM THE PROJECT?

We watch everyone in the project for unexpected problems. **You need to tell the research doctor or a member of the research team immediately if you experience any problems or become too upset.**

Fasting: Side effect's you may experience from fasting for FMD measurements are fatigue and/or lightheadedness. These will be minimized by having you fast overnight and coming in for your study visits in the morning. You will be able to eat and drink at the end of the study visit.

FMD and PAT Measurements: You may feel temporary discomfort, tingling and numbness due to the prolonged inflation of the blood pressure cuff which will go away within several minutes after the blood pressure cuff is deflated. You may also experience a temporary headache from the nitroglycerin dose. This usually goes away within 30 minutes to 1 hour after the dose. You could also experience lightheadedness from a temporary drop in blood pressure due to the nitroglycerin dose.

High blood pressure: You may be asked to delay taking your blood pressure medications on the morning of Visits 1-3 until after the study visit is completed. These medications can affect the FMD procedure results. This may cause your blood pressure to be higher than usual, just as if you delayed or forgot to take it for another reason. We will ask that you bring your blood pressure medication with you to the study visit and ask you can take it once the study visit is complete. Your blood pressure should return to normal once your medication is absorbed into your body.

Singing Intervention: The singing interventions for this study will require a light -to- moderate level of exertion. This level of exertion or exercise is necessary to evaluate any potential benefit to the heart. This level of exercise may cause you to become short of breath or feel faint. If these symptoms occur, you should tell the study team if this occurs. It is expected that these symptoms would go away shortly after you stop singing. If you feel you cannot continue the singing you will be allowed to stop.

Hearing Screen: Headphones will be used with the hearing screening test. Some people find the squeeze to their head to be uncomfortable when the headphones are in place. This should go away once the hearing screen is complete and the headphones are removed.

Heart Rate Variability Assessment: The strap placed around your chest holding the sensor monitoring your heart rate variability will need to be snug on your chest to accurately record your heart rate. This may feel tight. The HRV finger sensor monitor needs to be placed around your finger to accurately record heart rate. This may feel tight as well. After the HRV measurements are complete you will be able to remove the strap and the finger sensor monitor.

Another risk may be loss of confidentiality. Every effort will be made to keep your research records confidential but we cannot guarantee it. Depending on the kind of information being collected, if your research information were accidentally seen, it might be used in a way that could embarrass you or affect your ability to get insurance. If you have questions, you can talk to the project director about whether this could apply to you.

C3. ARE THERE ANY BENEFITS TO TAKING PART IN THE PROJECT?

This project may or may not help you, but we hope the information from this project will help us improve our understanding of the potential impact of singing on cardiovascular health and tests which measure the effects of physical activity on your heart. We hope to use what we learn to design future research studies in this area.

D1. ARE THERE ANY COSTS TO BEING IN THE PROJECT?

There are no costs to you for any of the visits or services you receive in this project.

If you participate in this research, the costs of any necessary emergency medical treatment in the event of a research-related injury will be billed to you or your health insurance.

D2. WILL I BE PAID FOR PARTICIPATING IN THE PROJECT?

You will be paid $100 for Study Visits 1-3 following each visit for your time in completing the study procedures and the cost of traveling for the study visits. You will receive a total of $300.00 for you study participation.

A prepaid debit card (VISA) will be provided once you complete Study Visit 1 and will have $100.00 loaded onto it. After the completion of Study Visit 2 and 3, the card will have a total of $300 uploaded onto it. This money will be available about 1 full business day after it is added to your card. At the end of this study you should retain this card, as it may be used for other studies you complete under the direction Medical College of Wisconsin study investigator.

To pay you, we will need your social security number. Any payment may be reportable as income on your taxes.

D3. WHAT OTHER HEALTHCARE CHOICES DO I HAVE?

You do not have to join this project. You are free to say yes or no.

Whether or not you join this study, your usual medical services will not change.

D4. WILL I BE GIVEN NEW INFORMATION ABOUT THE PROJECT?

If we learn any important new information about the singing interventions that might change your mind about being in the study, we will tell you about it right away. You can then decide if you want to stay in the study.

After the project has been completed, we will notify you of the results if you tell the study team you would like to be notified.

When research data/biospecimens/images are collected and analyzed, there is the chance of finding something clinically relevant. There may be benefits to learning such results (such as early detection and treatment of a medical condition), but there are risks as well (such as feeling worried about a finding for which no treatment is required or appropriate).

The results from the data/biospecimens/images we collect in this research study are not the same quality as what you would receive as part of your health care, so you will not be informed of any clinically relevant research findings. The results of your research data/biospecimens/images will not be placed in your medical record.

D5. WHAT HAPPENS IF I AM INJURED BECAUSE I TOOK PART IN THE PROJECT?

Emergency medical treatment for injuries directly related to your participation in this research project will be provided to you. You or your health insurance will be billed for the costs of this emergency treatment. MCW will decide on a case by case basis if they will reimburse you or your insurer for emergency treatment costs. If your research-related injury requires medical care beyond this emergency treatment, you or your insurer will be responsible for the costs of this follow-up care.

At this time, there is no plan for any additional financial payments.

If you believe that you have been injured because of your participation in this project, contact the research doctors right away. Contact information: Dr. Kulinski, at 414-955-6896.

Nothing in this consent form affects any legal rights you may have nor does it release the investigator, the sponsor, the institution, or its agents from liability for negligence.

D6. WHO CAN ANSWER MY QUESTIONS ABOUT THE PROJECT?

- If you have more questions about this project at any time, you can call Dr. Kulinski at 414-955-6896.
- If you have questions about your rights as a research participant, want to report any problems or complaints, or offer input, you can call the MCW/Froedtert Hospital Research Subject Advocate at 414-955-8844.

E. PERMISSION TO COLLECT, USE AND SHARE HEALTH INFORMATION

E1. What health information will be collected and used for this project?

To be in this research project, the research team needs your permission to access, collect and use some of your health information. If you say no, you cannot be in the project. This information may come from questions we ask, forms we ask you to fill out, or your medical record, as described below. We will only collect and use information needed for the project.

The protected health information (PHI) originates from services you will or have received at one or more of the following locations: the Medical College of Wisconsin (MCW); BloodCenter of Wisconsin (BCW); Children's Hospital of Wisconsin (CHW); any Froedtert Health Affiliate-Froedtert Memorial Lutheran Hospital (FMLH), Inc.; Community Memorial Hospital (CMH) Menomonee Falls, Inc.; St. Joseph's Community Hospital (SJH) West Bend, Inc.; Froedtert & The Medical College of Wisconsin Community Physicians Clinics, Inc. (FMCWCP); the West Bend Surgery Center, LLC; and the Froedtert Surgery Center, LLC.
The health information we will collect and use for this project is:

- All medical records available in your EPIC record, documenting you medical / surgical history
- Current Medications
- Smoking History
- Information regarding your singing preferences and experiences
- Review of your physical activity levels
- Results of the procedures and tests collected for this study, such as: vital signs; height & weight; hearing screen; heart rate variability; saliva sample results; FMD and PAT procedures.
- Records from outside healthcare facilities if you seek unplanned, urgent, or emergent medical care during your study participation.

Any updates to this information occurring during study participation will be included in your study record.

E2. Who will see the health information collected for this project?

The only people allowed to handle your health information are those on the research team at MCW/Froedtert Hospital, those on the Institutional Review Board (IRB) and those who check on the research activities to make sure the hospital's rules are followed.
If the costs of any necessary emergency medical treatment in the event of a research-related injury are billed to your health insurance, your health information may need to be disclosed to the insurer for billing purposes.

The research team may share your information with people who are not part of the research team because they planned, pay for, or work with us on this project. The federal Privacy Rule may no longer protect your health information once it leaves MCW/Froedtert Hospital. For this project, we plan to share information with those doctors, researchers or government representatives working with us on this project at the institutions or companies listed here:

- National Institute of Health Bethesda, MD
- Salimetrics Laboratory Carlsbad, CA
- Healing Harmonies, LLC (music therapists) Brookfield, WI

Because this project involves the use of drugs and/or devices, the FDA also has the right to inspect all project records.

We may record your research information, including results of tests, procedures or questionnaires done for research, in your Froedtert Hospital and/or Medical College of Wisconsin medical record. As a result, this research information may be seen by people allowed to see your medical records for healthcare operations or treatment, by those you allow to see your medical records by giving written permission, and by others when required by law.

We will not use your personal health information for a different project without your permission or the permission of a hospital research review board (IRB). Once all personal identification is removed from your health information and/or biospecimens, the information and/or biospecimens may be used for future research or distributed to another investigator for future research without additional informed consent from you or your legally authorized representative. The information might also be used or released for other purposes without asking you. Results of the project may be presented in public talks or written articles, but no information will be presented that identifies you.

E3. What are the risks of sharing this health information?

One risk of taking part in a research project is that more people will handle your personal health information collected for this project. The research team will make every effort to protect the information and keep it confidential, but it is possible that an unauthorized person might see it. Depending on the kind of information being collected, it might be used in a way that could embarrass you or affect your ability to get insurance. If you have questions, you can talk to the research doctor about whether this could apply to you.

E4. How long will you keep the health information for this project?

If you sign this form, we plan to keep your information for 10 years after the research project ends in case we need to check it again for this project.

E5. Can I cancel my permission to share this health information?

If you change your mind later and do not want us to collect or share your health information, you need to send a letter to Jacquelyn Kulinski, MD at Division of Cardiovascular Medicine / HUB for Collaborative Medicine, 5th Floor / 8701 W. Watertown Plank Road/ Milwaukee, Wisconsin 53226. The letter must say that you have changed your mind and do not want the researcher to collect and share your health information. At that time, we will decide that you cannot continue to be part of the project. We may still use the information we have already collected.

E6. Access to records

You may not be able to see, or copy, your project-related health information until after the project has been completed; otherwise, it could affect the study.

Certificate of Confidentiality:
To help us protect your privacy, we have obtained a Certificate of Confidentiality from the National Institutes of Health. The study team 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 study team will use the Certificate to resist any demands for information that would identify you.

The Certificate cannot be used to resist a demand for information from personnel of the United States federal or state government agency sponsoring the project and that will be used for auditing or program evaluation of agency 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, medical care provider, or other person obtains your written consent to receive research information, then the researchers will not use the Certificate to withhold that information.

F1. For More Information about the Project

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.

You can look up this project by referring to the ClinicalTrials.gov number NCT04121741or by asking the research team for a printed copy.

CONSENT TO PARTICIPATE

By signing my name below, I confirm the following:

- I have read (or had read to me) this entire consent document. All of my questions have been answered to my satisfaction.
- The project's purpose, procedures, risks and possible benefits have been explained to me.
- I agree to let the research team use and share the health information and other information gathered for this project.
- I voluntarily agree to participate in this research project. I agree to follow the procedures as directed. I have been told that I can stop at any time.

IMPORTANT: You will receive a signed and dated copy of this consent form. Please keep it where you can find it easily. It will help you remember what we discussed today.

Subject's Name *please print*	**Subject's Signature**	**Date**