



SAN DIEGO STATE
UNIVERSITY

MRI Safety Manual: COVID-19

SDSU Imaging Center
San Diego State University

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CONTACT INFORMATION

SDSU Imaging Center

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Addresses

Campus:

San Diego State University (SDSU)

5500 Campanile Dr,

San Diego, CA, 92182

SDSU Imaging Center:

Engineering & Interdisciplinary Sciences (EIS)

Aztec Circle Dr.

Lower Level (LL), Suite 16

Emergency

9-1-1

Non-Emergency

SDSU Campus Police – 619.594.1991

NB: Cell service at the center is very weak due to our location in the basement and the shielding in place to attenuate the magnetic field. Please be aware that you may not receive calls and calls may fail. When making emergency calls use the landlines located at the front desk and next to the MRI console.

SDSU Imaging Center Safety Manual – COVID-19 was written by Martin Sereno & Sean Molnar, 2020

COVID-19

All COVID-19 regulations put in place by San Diego State University (SDSU) and the greater Cal State University (CSU) system must be adhered to in order to gain access to the Imaging Center. This includes campus-wide orders such as mandatory mask compliance and social distancing measures. The topics detailed in this safety manual address procedures specific to the SDSU Imaging Center and serves to supplement the University's quarantine mandates. With these guidelines in place we can ensure a safe lab environment for researchers and study participants. Please refer to the following resources on a regular basis for up to date COVID-19 information.

SDSU Imaging Center

- <https://mri.sdsu.edu>

San Diego State University

- *General Information*
 - <https://sdsu.edu/COVID19>
- *Faculty/Staff*
 - <https://sa.sdsu.edu/student-health-services/coronavirus-covid19-Information-for-faculty-and-staff>
- *Students*
 - <https://sa.sdsu.edu/student-health-services/coronavirus-covid19-Information-for-students>

Cal State University

- <https://www2.calstate.edu/coronavirus>

San Diego County

- https://www.sandiegocounty.gov/content/sdc/hhsa/programs/phs/community_epidemiology/dc/2019-nCoV.html

COVID-19 Screening

The COVID-19 screening form doubles as both a guide/script for participant screening as well as a self-assessment tool for research staff who will be using the SDSU Imaging Center resources. Please use it as a preliminary screening tool to assess if yourself, team members, and participants are healthy enough to enter the lab space. This assessment should be performed and logged for each participant and guest entering the Engineering and Interdisciplinary Sciences (EIS) building. Best practices suggest screening every participant and their guest; during enrollment/scheduling, one day prior to their appointment, and 1-3 hours before arrival to their appointment. Upon arrival, the temperatures of the research team, participants, and guest (if any) will be taken. Any individual with a temperature of 100° F (38° C) or greater will be denied access to the lab. Center staff may ask for verification that COVID-19 screening has been completed prior to arrival. A section of the checklist is show in Figure 1, please see the Appendix or SDSU Imaging Center website (mri.sdsu.edu) for a full-page version.

Figure 1. SDSU Imaging Center: COVID-19 Screening; “Are you currently experiencing, or have been in close contact with anyone experiencing, the following symptoms within the last 21 days?”

Symptoms	Yes/No	Comments
1. Respiratory symptoms (i.e., cough, sore throat, shortness of breath, ...)	_____	_____
2. Fever ¹ ≥100° F (38° C)	_____	_____
3. Cold or flu-like symptoms	_____	_____
4. Muscle pains, chills, or body aches	_____	_____
5. Severe headaches	_____	_____
6. Loss of taste or smell	_____	_____
7. Close contact ² with anyone with a lab-confirmed positive test result for COVID-19?	_____	_____

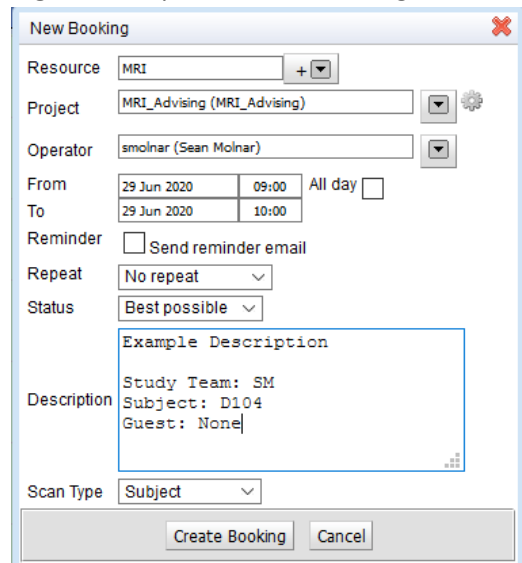
MRI Booking Procedure

When reserving the MRI on Calpendo all individuals who will be entering the Imaging Center should be listed in the description box of the booking menu. This includes the members of the research team, participants, and any essential guests. Input the researcher’s initials, the participants study ID, and the guest’s relation (if any).

A maximum of 1 guest may be allowed to accompany the participant. All non-essential guests will not be allowed into the Imaging Center or the Engineering and Interdisciplinary Sciences (EIS) building.

Please leave a 30 min space between bookings for proper equipment cleaning and to allow both the research team and their participants to leave before the next group arrives.

Figure 2. Calpendo: New Booking Form



Temporary Cancellation Policy

There will be a temporary suspension of the cancellation policy outlined in the current SDSU Imaging Center MRI Safety Manual (v2.1c). Effective immediately, the current policy is as follows...

1. A booking may be cancelled at any point before the scheduled start time and the project account will not be charged.
2. It is no longer necessary for a booking to be replaced if cancelled less than 48hrs from the scheduled start time.
3. Moving a booking to a different date will not be considered a new booking and it is no longer necessary for the original time slot to be filled.
4. Maintain a friendly and professional community. Stay in touch with other labs that utilize the MRI so you can reach out and see if they could use a timeslot that you no longer need.

5. Be conscientious of other researchers and do not make a booking with the intent of having it serve as a place holder. Only reserve the time once you have confirmed the participant can meet their responsibilities to the study.

It is still important to cancel the scan on Calpendo before the end of the scheduled appointment. After the booking passes it can no longer be edited or removed. When invoices are generated each month, all scans on Calpendo classified with the scan type, *Subject*, will be considered billable. If you feel there has been an error on an invoice, please contact the Imaging Center at smolnar@sdsu.edu. We hope this change can help reduce some anxiety related to budgeting and allow both participants and researchers more flexibility when scheduling a scan.

Upon Arrival at SDSU

Participants should remain in their car upon parking and alert a member of the research team to their arrival. A researcher will bring them a parking pass (if necessary) and accompany them to the Imaging Center entrance. If the participant did not arrive by car, they should wait outside the EIS building for an escort.

Temperature Screening

All members of the research team, the participants, and their visitors (if any) must have their temperature taken before proceeding into the Imaging Center. If a staff member is unavailable follow the steps detailed below.

1. Turn on the infrared thermometer (Figure 3) by pulling the trigger
2. Ensure the thermometer is in *Body* mode, indicated by the depiction of a face on the LCD screen
3. Position the thermometer 5-8cm (~2-3in) from an individual's forehead and take a reading
4. If the temp is < 100°F (37°C) the individual is cleared to enter.

N.B. - If any individual part of the group has a temperature of 100°F or greater the entire group must leave. The individual with the high temperature should not return until tested for COVID-19 or quarantined for 14 days.

Figure 3. Simzo Thermometer



Temperature & Entry Log

On the clipboard provided at the entrance of the Imaging Center, each individual must log:

1. Full Name (Use your lab generated Subject ID to log participants)
2. PI
3. Lab
4. Temperature < 100°F (yes or no; do not record actual temp)
5. Time of Entry
6. Time of Exit

After clearing and logging the temperature check the research team and participant(s) must sanitize their hands either in the restroom or at the alcohol dispenser located at the entrance to the MRI Control Room.

MRI and Console Room Occupancy

As detailed in the SDSU Imaging Center Operator Certification, there should be no more than 3 persons present during scanning unless approved by the Center Director. With the social distancing measures in effect, this mandate will be strictly enforced. There is enough room to accommodate essential team members only. We encourage PI's and project leads to optimize their teams so scanning can be completed efficiently with a concise number of researchers. Please contact the Imaging Center if your project consists of children or adolescents who require a parent to be present during the scan.

Cleaning Procedure and Checklist

The janitorial staff for the Engineering and Interdisciplinary Sciences (EIS) building cleans and disinfects the Imaging Center every day. This includes sanitizing the bathroom and floors as well as disinfecting the door handles throughout the Center. Imaging Center staff ensure that the commonly used equipment and tabletops in the Waiting Area, MRI Room, and Console Room are clean and ready for use at the start of the day.

As currently detailed in the SDSU Imaging Center - MRI Safety Manual (v2.1c) research teams are expected to properly disinfect and clean the MRI equipment after each use. To ensure individual teams are adhering to this practice we are introducing a short checklist to be completed at the end of each scan. A portion of the checklist is shown in Figure 4 and a full version is located in the Appendix titled – *MRI Cleaning Checklist*.

Blank copies will be available in the Console Room and must be filed with the patient screening form at the end of each scanning session. With the combined effort of the research teams, janitorial staff, and Imaging Center staff we can ensure that everyone is working in a safe and clean environment.

Figure 4. SDSU Imaging Center: MRI Cleaning Checklist

Initials	Magnet Room
1. _____	All Patient Padding Used During Scanning Session (e.g., No-Mo-Co Pads, sandbags, bed cushions, ...)
2. _____	Inner/Outer Surface of the Receive Coil (e.g., 32ch head coil)
3. _____	Patient Alarm Device ("squeeze ball")
4. _____	Inner Surface of the Scanner Bore
5. _____	Response Boxes
6. _____	Plastic Protector of OptoAcoustic Headphones
7. _____	Physiological Signal Recording (e.g., heart rate monitor, ...)
Initials	Scanner Console Room
8. _____	Door Handles (Magnet Room and MRI Control Room)
9. _____	Handles to Cabinet Doors
10. _____	Keyboards and Mice to Console and Server
Initials	Mock Scanner / Testing Room
11. _____	Testing Room Table and Participant Chair Arm Rests
12. _____	Door Handle
13. _____	Mock Scanner Bed Padding, Head Coil, & Inside of Bore

Resources Available for Disinfecting and Cleaning

- **Entrance to Imaging Center (Fig. 5)**
 - Infrared Thermometer
 - Hand Sanitizer
 - Spray Disinfectant
 - For use on tables, door handles, and chairs
 - **Do Not** use on MRI equipment
 - Large Paper Towels

- **Imaging Center Restroom**
 - Soap & Water
 - Paper Towels
 - Touchless Hand Dryer

- **MRI Control Room (Fig. 6)**
 - Isopropyl Alcohol
 - For use on MRI equipment, comfort pads, door handles, keyboards & mice
 - Spray Bleach
 - Floors, tabletops, and door handles
 - **Do Not** use on MRI equipment
 - Paper Towels

Figure 5. Entryway Cleaning Station

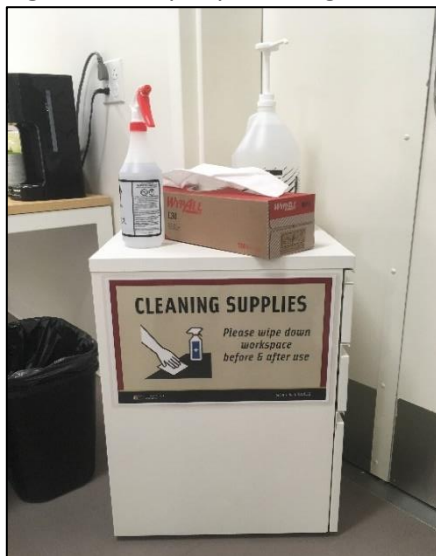


Figure 6. Control Room Cleaning Station



APPENDIX

SDSU Imaging Center: COVID-19 Screening

5500 Campanile Drive, SD, CA, 92182

Engineering & Interdisciplinary Sciences (EIS)
Complex
Lower Level, Suite 16
Tel: (619).594.2949

Date & Time of Screening: _____ Study/Subject ID: _____

Project Name: _____ IRB Number: _____

Interviewer/Operator Name: _____



This COVID-19 form doubles as both a guide/script for participant screening as well as a self-assessment tool for research staff who will be using the SDSU Imaging Center resources. Please use it as a preliminary screening tool to assess if your participant or team members are well enough to enter the lab space.



Best practices suggest screening every participant and their guest; during enrollment/scheduling, in lead up to their appointment, and 1-3 hours before arrival to their appointment.



Upon arrival the temperatures of the research team, participants, and guest (if any) will be taken. Any individual with a temperature of 100° F (38° C) or greater will be denied access to the lab.

Script for Research Staff:

“For health safety reasons, and to help prevent the spread of the Coronavirus, we are asking a few questions regarding how you are feeling and any cold or flu-like symptoms you may have, before you come to your appointment. Are you currently experiencing, or have been in close contact with anyone experiencing, the following symptoms within the last 21 days?”

Symptoms	Yes/No	Comments
1. Respiratory symptoms (i.e., cough, sore throat, shortness of breath, ...)	_____	_____
2. Fever ¹ ≥100° F (38° C)	_____	_____
3. Cold or flu-like symptoms	_____	_____
4. Muscle pains, chills, or body aches	_____	_____
5. Severe headaches	_____	_____
6. Loss of taste or smell	_____	_____
7. Close contact ² with anyone with a lab-confirmed positive test result for COVID-19?	_____	_____

If NO to ALL SYMPTOMS:

“Great, please plan on the study visit [today, tomorrow, or DATE]. Do you need any directions to the facility, [or can I answer any questions you may have?]”

If YES to ANY SYMPTOM:

“Out of an abundance of caution, we must reschedule your in-person appointment. You will be contacted by a member of the study team in one to two weeks. [If you have fever:] We recommend you self-quarantine (stay at home) and contact your healthcare provider. Thank you for your understanding.”

If research staff perform a self-evaluation with this form and respond YES to ANY SYMPTOM, please contact your lab manager and refrain from coming onto SDSU campus.

NOTES

The COVID-19 screening script was developed by the University of California, San Diego (UCSD) and the Center for Functional MRI (CFMRI). It was adapted to adhere to criteria set by the San Diego State University (SDSU) Department of Graduate and Research Affairs, *Guide to Human Subjects Research (HSR) Face-to-Face (F2F) Interaction*.

Definitions of Fever and Close Contact:

•Fever is considered $\geq 100^{\circ}\text{F}$. may not be present in some patients, such as those who are very young, elderly, immunosuppressed, or taking certain fever-lowering medications. Clinical judgment should be used to guide testing of patients in such situations.

•Close contact with a person who is under investigation for 2019-nCoV. Close contact is defined as:

- a) being within approximately 6 feet (2 meters), or within the room or care area, of a novel Coronavirus case for a prolonged period of time while not wearing recommended PPE (e.g., gowns, gloves, NIOSH-certified disposable N95 respirator, eye protection)
- b) close contact can include caring for, living with, visiting, or sharing a healthcare waiting area or room with a novel Coronavirus case
- c) having direct contact with infectious secretions of a novel Coronavirus case (e.g., being coughed on) while not wearing recommended personal protective equipment

SDSU Imaging Center: MRI Cleaning Checklist

5500 Campanile Drive, SD, CA, 92182

Engineering & Interdisciplinary Sciences Complex
Lower Level, Suite 16
Tel: (619).594.2949

Please file this form with the MRI Safety Screen documents at the end of your scan session

Study ID: _____

Operator Name: _____

Project Name: _____



- Use available disinfectants and supplies to clean the listed surfaces & equipment.
- Spray disinfectants onto a paper towel then apply to the items and locations detailed
- **No not** spray disinfectant directly onto items in the MRI room or electronics
- If the research team or participant did not use an item listed, please write "N/A" in lieu of Operator initials.

Initials	Magnet Room
1. _____	All Patient Padding Used During Scanning Session (e.g., No-Mo-Co Pads, sandbags, bed cushions, ...)
2. _____	Inner/Outer Surface of the Receive Coil (e.g., 32ch head coil)
3. _____	Patient Alarm Device ("squeeze ball")
4. _____	Inner Surface of the Scanner Bore
5. _____	Response Boxes
6. _____	Plastic Protector of OptoAcoustic Headphones
7. _____	Physiological Signal Recording (e.g., heart rate monitor, ...)
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Initials	Mock Scanner / Testing Room
11. _____	Testing Room Table and Participant Chair Arm Rests
12. _____	Door Handle
13. _____	Mock Scanner Bed Padding, Head Coil, & Inside of Bore

Cleaning Supplies Locations:

- *Entrance to Imaging Center*
- *MRI Control Room*
- *Imaging Center Restroom*

Please alert us immediately if you notice supplies are low. If you have questions or wish to report any area of concern, contact the SDSU Imaging Center at smolnar@sdsu.edu