



MRISC STANDARD OPERATING PROCEDURES

SOP Number-version: MRI-1.1	
SOP Title: Magnetic Resonance Image Scanner Safety Training	
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Document Control: Eric Forman <i>Eric Forman</i>	Date: 22 - Sept - 2020
	Effective Date: 28 - Sept - 2020

1.0 Purpose / Scope:

- 1.1 The purpose of MRI safety training is to ensure that Principal Investigators and study staff personnel comprehend the safety risks of working in the magnetic environment; and understand that proper screening of research subjects and individuals is necessary to maintain their well being.
- 1.2 The Scope of this procedure covers all studies conducted on either the 3T PRISMA or the Bruker 7T ClinScan small animal MR imager at the UK MRISC.

2.0 Definitions: (if applicable)

- 2.1 Magnetic Environment: The area where the magnetic field is greater than 5 gauss resulting in the potential for objects to become missiles or projectiles as they are attracted into the magnetic field of the scanner. Individuals who may have cardiac pacemakers or other implants and devices may be at risk to enter the magnetic environment. The magnetic field is always present and is three dimensional around the scanner.
- 2.2 MRI Safety Training: The required procedure that must be completed prior to working within the magnetic environment.
- 2.3 Safety Screening: The process of inquiring about the safety of individuals, including research subjects prior to entering the magnetic environment. Screening also applies to checking equipment for safety prior to being used in the magnet room.

For additional definitions, see also the Glossary of Terms located on the GRP Access Server \\prdlcancifs01.mc.uky.edu\Dept\Neuroscience\GRP or IP address \\172.25.104.37\grp\$.

3.0 Specialized Materials & Equipment: (if applicable)

- 3.1 Bruker 7T ClinScan small animal MRI, syngo MR B15
- 3.2 Siemens 3T PRISMA

4.0 Procedures:

4.1 Safety Training

- 4.1.1 Individuals working with MRI scanners for research must complete the required MRI Safety Training prior to conducting or participating with studies in the magnetic environment.
- 4.1.2 Principal Investigators must complete modified MRI Safety Training based on previous experience because they are ultimately responsible for the study, research subjects and study personnel.
- 4.1.3 Research studies performed on the University of Kentucky MR Scanners in the MRISC are not allowed until study team personnel complete MRI Safety Training.
 - 4.1.3.1 New study personnel and Principal Investigators should apply for MRI Safety Training with the ARRT-certified MRISC technologist.
 - 4.1.3.2 MRI Safety Training includes instruction on how to properly conduct safety screening for individuals who may enter the magnetic environment.
 - 4.1.3.3 Researchers must renew the MRI Safety Training with IACUC renewal.
 - 4.1.3.4 Training is documented on F-MRI-1 Attachment 1 (A1), MRI Safety Training verification form.

5.0 Attachments: (if applicable)

- 5.1 F-MRI-1 Attachment 1 (A1), MRI Safety Training verification form.

6.0 References: (if applicable)

- 6.1 ISMRM & SMRT MR Safety Resources <https://www.ismrm.org/mr-safety-links/>
MRI-1.1 MRI Scanner Safety Training

6.2 FONAR – MRI Glossary <http://www.fonar.com/glossary.htm>

7.0 Record Retention:

The signed and dated MRI safety training verification forms are kept by the MRISC Safety Officer.

8.0 Change History:

Rev.	Effective Date	Summary of Changes
1	31-May-2020	New procedure



Attachment 1
Statement of MRI Safety Course

Name: _____
e-mail Address _____
Position/Title: _____
Department: _____
Principal Investigator: _____

I certify the above employee completed the MRI safety course and has passed the safety exam.

3T PRISMA _____ 7T ClinScan _____

David K. Powell, Ph.D.

Beverly Meacham RT (R)(MR)

Date: _____

Date: _____