York MRI Facility

Standard Operating Procedure #10-02
Last Updated: 16 Dec 2015

Restricted Access Policy

1. Introduction

1.1. The 3T MRI scanner at the York MRI Facility is used primarily for in-vivo studies of human and animal structure and function. These studies include assessment of cognitive function and vascular dynamics, metabolism and physiology in normal and research patient populations. The facility resources are available to R & D phase medical device development and academic research, with appropriate Review Ethics Board protocols in place, see SOP #20-01 "New Protocols and Ethics Procedures".

1.2. Research involving Magnetic Resonance Imaging (MRI) at high magnetic field strengths present unique hazards to both research subjects and individuals working within and around the MRI system. Consequently, the potential for serious personal injury is present due to the sheer size and strength of the static magnetic field along with the flexibility of the research system and associated peripheral hardware.

1.3. The static magnetic field in the York MRI Facility is always present. It is important that all those entering the facility be aware of the presence of the field, as it cannot be detected in any way, i.e. magnetic fields cannot be felt, seen or smelled. Ferromagnetic objects brought into the magnet room could quickly become dangerous projectiles, and the magnetic field can also interfere with the operation of certain medical implants.

2. Zones

2.1. The MRI suite is divided into separate safety zones, by standard convention labeled I – IV.

2.1.1. Zone I consists of all areas outside the MRI suite, accessible to the general public.

2.1.2. Zone II is located inside the secure access door to the York MRI Facility, Sherman 1009, and includes the MRI waiting room, and the Analysis laboratory.

2.1.3. Zone III is located inside the second secure access door, Sherman 1009A, and includes the MRI control room, the MRI equipment room and prep rooms. This zone contains several areas where magnetic fields exceed 5 Gauss.

2.1.4. Zone IV is the magnet room itself. This entire room exceeds the 5 Gauss magnetic field safety limit. The door to the magnet room must be kept closed at all times, unless entering or exiting, and must be locked when the scanner is not in use.

3. Entry Regulations

3.1. Zone I

3.1.1. Entry to Zone I is not restricted in any way. The general public has access to Zone I.

3.2. Zone II

3.2.1. Entry to Zone II, Sherman 1009, is restricted by the secure access door at the entrance to the waiting room.

3.2.2. There is no training required to obtain security access to the waiting room.

3.2.3. There is open access from the waiting room to the Analysis laboratory.

3.3. Zone III

3.3.1. Entry to Zone III, Sherman 1009A (the control room, equipment room, prep rooms and washroom) is restricted to personnel who have completed Level 1 or Level 2 safety training, or to those who are under the supervision of Level 2 personnel.

3.3.2. It is very important to monitor the location of those who have not completed safety training as there are areas in Zone III that exceed magnetic field strengths of 5 Gauss.

3.4. Zone IV

3.4.1. Entry to Zone IV (the magnet room) is restricted to personnel who have completed Level 1 or Level 2 safety training, and to those who are under the supervision of the Level 2 personnel.

3.4.2. All those with intent to enter the magnet room **MUST** complete a "Magnetic Resonance Safety Screening Form" and have it reviewed and approved by a Level 2 individual before entering the magnet room.

4. Security Access Procedure

4.1. Security access to the waiting room door (Zone II, Sherman 1009)

4.1.1. Present your request in writing by email to the MRI Technologist or the Facility Director and including the following information: your name, access card number and a reason for the request.

4.2. Security access to the control room door (Zone III, Sherman 1009A)

4.2.1. Those wishing to obtain access to the control room door must complete Level 1 Safety Training as described in SOP #30-01 "Safety Training Procedures".

4.2.2. All operators of the 3T MRI scanner must obtain security access to the control room door by following the procedures outlined in SOP #30-01 "Safety Training Procedures". Operators wishing to scan only phantoms are required to complete Level 1 Safety Training. Those who will be scanning human subjects on the 3T MRI scanner must complete Level 2 Safety Training.

4.2.3. Security access to the control room will not be granted to any individuals with medical devices, implants or objects as listed in SOP #31-01 "General Safety Procedures".

4.2.4. If a person displays inappropriate and/or unsafe behavior in the York MRI Facility he/she may be denied access by the operator, MRI Technologist or Facility Director.