
Physics Associates, LLC.

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MRI Safety Training

Level 2 Personnel

OVERVIEW

This training was primarily developed for MR technologists who perform MRI studies, but can be tailored (emphasis) for MR Medical Directors or Safety Officers. This course is a refresher / annual update and assumes the student has a basic working knowledge of MRI concepts. Each year the emphasis and focus of discussion may vary depending on new medical devices / compatibility concerns and recent advances in the imaging. Lecture consists of roughly 1 hour of lecture (PowerPoint slides) / discussion followed by hands on protocol creation for new conditional devices if appropriate or further discussion.

Outline

Science Review

- Image process - simplified explanations for patient dissemination / comfort.
- MRI safety overview where is the danger?

Screening procedures - facility specific discussion

- Patient History
 - Screening Forms and Policies
 - Elderly Patients / Dementia
 - Who's Call? (Physicians, Technologist, Power of Attorney, etc..)
 - Radiographs?
 - Previous Imaging
 - Pregnancy and MRI
 - Conditions that counter indicate MRI
- Ferromagnetic threats
 - Heating / Acceleration
 - Patient and facility specific threats identified
- Noise Pollution - Patient hearing protection and communication concerns
- You SAR what? Scan without cooking

- Medical devices / implants
 - Patient Devices (Safe / Conditional / Not Safe)
 - Troubleshooting recent conditional devices Hands-On Protocol development.
- Patient positioning to prevent burns (padding / positioning aids, and coils to reduce burn risks).

MRI Zones / Facility Policies

- Overview of Zone Criteria
- Facility Policies
- MRI safety trained employees and event responders (Trained / Screened)
- Appropriate (MR Conditional) equipment and supplies for use in the MRI environment
- Procedures in a code (Zone 3 or Zone 4 - Crash Carts)
- Emergency run-down procedures and protocols
- Emergency quench procedures and protocols
- Management of anxious or distressed patients

Records

- Maintain a record of all patient burns that occur during MRI exams.
- Maintain a record of failed screenings for ferromagnetic objects / materials when these objects were unintentionally / unknowingly brought into the MRI scanner room (whether the object was attracted to the magnet or not).
- Maintain a record of any and all injuries involving a ferromagnetic object in the MRI scanner room.
- Reporting mechanism Radiation Safety / Patient Safety Committees