

SMRT

SOCIETY FOR MR
RADIOGRAPHERS & TECHNOLOGISTS
A Section of the ISMRM

A WORLD
OF KNOWLEDGE
FOR MAGNETIC RESONANCE
PROFESSIONALS

MRI Safety Week

Quiz Question 1

SMRT Safety Committee - 2018

Both of these fire extinguishers were installed in the MR control room (Zone 3) of a MRI suite, one is **MR Conditional**, the other is **MR Unsafe**. This represents a potential MR safety risk!

Question: Which of the following options would you do to avoid a potential MR safety accident?

- a) Ensure both extinguishers are appropriately & clearly labelled e.g. **MR Conditional** or **MR Unsafe**
- b) Remove the ferrous extinguisher from the MR control room (Zone 3) to avoid accidental use in the MRI scanner room (Zone 4)
- c) Check that no ferrous components have been added to the **MR Conditional** extinguisher (e.g. metal date tags, rings, etc.)
- d) Just shut the door of the **MR Unsafe** extinguisher to avoid its use in the MRI scanner room (Zone 4)
- e) All of the above



Both of these fire extinguishers were installed in the MR control room (Zone 3) of a MRI suite, one is **MR Conditional**, the other is **MR Unsafe**. This represents a potential MR safety risk!

Question: Which of the following options would you do to avoid a potential MR safety accident?

- a) Ensure both extinguishers are appropriately & clearly labelled e.g. **MR Conditional** or **MR Unsafe**
- b) Remove the ferrous extinguisher from the MR control room (Zone 3) to avoid accidental use in the MRI scanner room (Zone 4)
- c) Check that no ferrous components have been added to the **MR Conditional** extinguisher (e.g. metal date tags, rings, etc.)
- d) Just shut the door of the MR unsafe extinguisher to avoid its use in the MRI scanner room (Zone 4)
- e) All of the above



Learning points:

- Ferrous fire extinguishers are a risk for projectile accidents as they are strongly attracted to the static magnetic field of the MRI scanner
- Only use fire extinguishers that are specifically designed to be used in the MRI environment
- Where possible, remove ferrous fire extinguishers from the MRI control area (Zone 3) so that they are not taken into the MRI scanner room (Zone 4) during an emergency
- Remember the appearance of **MR Conditional** fire extinguishers vary!

Correct Answer: a,b & c

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Acknowledgments

Contributors: The SMRT Safety Committee (2018)

Disclaimer: This program was developed by the SMRT Safety Committee to provide education to promote safety in the MRI environment. The information presented does not replace any MRI guidelines or site specific policies & procedures.

MRI Safety Resource List

- **ISMRM & SMRT MR Safety Resources:** www.ismrm.org/mr-safety-links
- ACR White paper on MR Safety (2013)
- IEC MRI Safety Recommendations (2014)
- MHRA Safety Guidelines for MRI Equipment in Clinical Use (2015)
- EU Directives on MR safety (2013)
- RANZCR MRI Safety Guidelines
- [www.fda.gov: Magnetic Resonance Imaging \(MRI Safety\)](http://www.fda.gov: Magnetic Resonance Imaging (MRI Safety))
- www.mrisafety.com