

Business Goal: To maintain a zero-incident MRI testing environment at Milton Imaging, ensuring the safety of both employees and patients.

Objectives:

- 1. Explain the hazards of MRI exposure when metal is present.
- 2. Identify common items that patients may bring or wear during MRI testing.
- 3. Practice pre-screening patient interviews.
- 4. Identify safety risks and highlight protocols for each zone of the MRI suite using visuals and warnings.

All Buttons:

Shape: Rounded Rectangle
Normal State: #79C6C2
Hover State: #DDFCFB
Visited State: #79C6C2

Slide #: 1.1	Introduction: MRI Safety Training	
On-Screen Text		Graphics
MRI Safety Training		<p>Graphics: Milton Imaging logo on bottom right. Top ribbon background MRI machine image to the right Timer icon "15 minutes" Thought icon "Decision Making Scenarios"</p> <p>Button: Begin</p>

Notes to developer, media file(s) or additional instructions:

Timer & thought icons fly in from left in sync with narration
Learner clicks Begin button to start the course when narration ends.

Audio narration:

Welcome to Milton Imaging's online training for MRI Safety. Before starting the course, it's important to note that not all slides will have narration. This training should take approximately 15 minutes and will contain some knowledge checks and scenario-based decision-making along the way. Let's get started. Click the begin button to continue.

Slide #: 1.2	Course Objectives	
On-Screen Text	Graphics	
In this training, you will ... <ul style="list-style-type: none">● Explain the hazards of MRI exposure when metal is present.● Identify common items that patients may bring or wear during MRI testing.● Practice pre-screening patient interviews.● Identify safety risks and highlight protocols for each zone of the MRI suite using visuals and warnings.	Graphics: Stock image of MRI machine in a medical center right aligned Top ribbon background	
Notes to developer, media file(s) or additional instructions: Objectives will fly in from the left synched with narration. Objectives boxes: rounded rectangle with black font, fill color: DDFCFB Audio narration: At our new facility, administrators anticipate that MRI will be one of the most utilized diagnostic services at the imaging center. Milton Imaging will be using a state-of-the-art MRI machine housed within a separate suite in the clinic. There are some risks involved in using such an extraordinary medical device. This training will explain the hazards of MRI exposure when metal is present, identify common items that patients may bring or wear to testing, allow you to practice patient pre-screening interviews, and identify safety risks and highlight protocols for each zone in the MRI suite.		

Slide #: 1.3	What is MRI?
On-Screen Text	Graphics
<p>What is MRI?</p> <p>An MRI (Magnetic Resonance Imaging) machine is a large, narrow, tunnel-like structure where patients lie down during the scan. Some newer MRI machines are more open.</p> <p>An MRI machine uses a 1.5 T magnet to scan the organs, bones, muscles, and blood vessels of the body using radio waves and signals.</p> <p>These signals are then sent to a computer and converted into an image of the area of the body being scanned. The scans can be viewed on a computer monitor.</p>	<p>Graphics: MRI sketch with patient right aligned Top ribbon background</p>
<p>Notes to developer, media file(s) or additional instructions: Text will fly in from the left synched with narration. Text boxes: rounded rectangle with black font, fill color: DDFCFB</p> <p>Audio narration: Before we begin the training modules, it's important to understand what an MRI is. An MRI machine is a large, narrow, tunnel-like structure where patients lie down during the scan. However, newer models may offer a more open design for increased comfort. Inside the MRI machine, a powerful 1.5 Tesla magnet is used to scan the body's organs, bones, muscles, and blood vessels. This is achieved by emitting radio waves and signals into the body. These signals are then received and processed by a computer, which converts them into detailed images of the area being scanned. These images can be viewed by healthcare professionals on a computer monitor.</p>	

Slide #: 1.4	Course Menu
On-Screen Text	Graphics
<p>This training is divided into 5 modules. Click on each button below to learn how to create a safe MRI environment.</p> <p>Understanding the Dangers: MRI and Metal</p> <p>Hazardous items Patients May Bring to Testing</p> <p>Safety Risks in the MRI Suite</p> <p>Prescreening conversation strategies with patients</p> <p>MRI Suite Protocols</p>	<p>MI background top ribbon along left margin</p> <p>Button: Next (hidden until learner completes all sections)</p>
<p>Notes to developer, media file(s) or additional instructions: The learner will click a menu item to be brought to that section of the course. As the learner completes each section, they will be brought back to the menu and the section they visited will be set as “completed”. Once the learner has completed all 5 sections, the “next” button will appear that will take them to the congratulations screen to end the training.</p> <p>Audio narration: Learning the risks associated with MRI and following basic safety protocols in the MRI suite will ensure a safe and accident-free experience for staff and patients. Click on each button below to learn how to create a safe MRI environment.</p>	

Slide #: 1.5	Dangers: MRI and Metal	
On-Screen Text		Graphics
<p>Dangers: MRI and Metal</p> <p>The MRI magnet generates a powerful magnetic field that can create health risks for patients and staff. Select each caution sign to learn more.</p> <ul style="list-style-type: none"> • The magnetic force can cause ordinary metal objects to turn into projectiles, causing injury. • Metallic objects also heat up quickly when exposed to the radiofrequency energy the MRI uses which can cause burns or tissue damage if the metal is against the skin. • Metallic implants within the body can also be moved or displaced resulting in discomfort or malfunction. 		<p>Graphics:</p> <p>MI Background Half Fade</p> <p>Orange caution sign placed before each fact.</p> <p>Button:</p> <p>Next (to bring learner to the course menu)</p>
<p>Notes to developer, media file(s) or additional instructions:</p> <p>Text will fly in from the right when learner clicks caution sign.</p> <p>Text boxes: rounded rectangle with black font, fill color: DDFCFB</p> <p>Audio narration:</p> <p>Because the MRI magnet is so powerful, it has the potential to create health risks for patients and staff. Even when the machine isn't scanning, the magnetic field is still activated. Therefore, it's important to learn about potential hazards and risks. Click each caution sign to learn more.</p>		

Slide #: 1.6	Dangers: Medical Devices	
On-Screen Text		Graphics
<p>Dangers: Medical Devices</p> <p>Click on the areas of the body that may include a metallic medical device. There are 6 locations.</p> <ol style="list-style-type: none"> 1. Hearing Devices The patient should remove their hearing aid(s) prior to the MRI procedure. If the patient has a cochlear implant, they should contact their physician to have the implant bound prior to the MRI procedure. 2. Pacemakers MRI scan can interfere with the functionality of pacemakers and defibrillators. Patients should check with their physicians to ensure their pacemaker is MRI compatible. 3. Insulin Pump (3 locations) Insulin pumps are most often found in the upper arm, abdomen, or upper thigh. Exposure to the MRI magnets can cause the motor in the pump to interfere with how much insulin a patient receives. The pump and/or metal cannula should be removed prior to entering the MRI suite. 4. Pins, screws, etc. Pins, screws, plates and other hardware (anywhere in the body) can be affected by the MRI magnet. Patients should make staff aware of these items prior to entering the MRI suite. 		<p>Graphics:</p> <p>MI Background Half Fade</p> <p>Human body sketch right aligned</p> <p>On each corresponding slide layer:</p> <p>Photos of cochlear implant</p> <p>Photos of pacemaker</p> <p>Photos of insulin pumps</p> <p>Photos of screws/pins</p> <p>Button:</p> <p>Next (to bring to slide 1.6)</p>
<p>Notes to developer, media file(s) or additional instructions:</p> <p>To assist the learner, each section will light up as the learner hovers over it. When clicked, information about each medical device will show on the screen with images of the item. Each item will be a different slide layer.</p> <p>Locations of clickable areas:</p> <p>Hearing devices: ear</p> <p>Pacemakers: heart</p>		

Insulin pumps: upper arm, abdomen, upper thigh

Pins, screws, clamps: wrist

Audio narration:

It is extremely important for patients to inform staff if they have any metal in their body, especially medical devices. The strong magnetic force may disrupt the performance of these devices and can cause injury to the patient. Click on 6 areas of the body that may contain a metallic medical device.

Slide #: 1.7

Dangers: Metal in Clothing, Health and Beauty Aids, and Accessories

On-Screen Text

Many common items patients and staff may have in their pockets, on their clothing, or use for health and beauty aids contain metal. These items cannot be brought into the MRI suite.

Select each icon to learn what to look for before patients and staff enter the MRI suite.

Clothing: Clothing contains many hidden metal objects that can cause injury to patients and staff.

Examples include: buttons, belts, grommets, fasteners, hooks, zippers, tie clips, and metallic threads.

Note: athletic clothing containing silver cannot be worn for the procedure.

Health & Beauty Aids: Health and beauty aids such as cosmetics may contain metal that can interfere with MRI results or cause injury.

Cosmetics are generally safe; however items that may contain metal include: eyeliner, lipstick, and eye shadow. Therefore, it's best for patients not to wear make up during the MRI procedure.

Graphics

Graphics:

MI Background Half Fade

MR image with a red line left aligned

Buttons:

Clothing

Health & Beauty Aids

Accessories

Accessories such as hair pins, hair ties, headbands, jewelry, eyeglasses, and other related items should not be brought into the MRI suite. All piercings should also be removed prior to the MRI procedure and left in the secure patient changing area.	
<p>Notes to developer, media file(s) or additional instructions: The learner will click each button revealing the corresponding slide layer with additional information.</p> <p>Audio narration: Because many everyday items patients may bring with them to the imaging center may contain metal elements or embellishments, it's important to know what to look for. Metal can be present in some clothing, certain health and beauty aids and many accessories. Click each category for specific examples.</p>	

Slide #: 1.8	Dangers: Metal in Clothing and More	
On-Screen Text		Graphics
Click on potential metal items on the following people. There are 11 items.		MI images: Sketch graphics of man with cane, healthcare assistant, and nurse. Transparent circle (hex #FF9291) hover state over: Man's cane handle Man's belt buckle Man's shirt button Man's shoe lace grommet Woman's shoe lace grommet Woman's jeans button

	Woman's bag buckle Woman's bracelet Woman's glasses Nurse's stethoscope Nurse's pocket - hidden pen Button: Next (to slide 1.4, course menu)
Notes to developer, media file(s) or additional instructions: The learner will hover over potential areas with metal objects. The areas with metal will light up with a transparent rose circle for the learner to click. When clicked, photo images of each item should appear. Audio narration: Now that you know what to look for, can you find the 11 metal items on these individuals? Click each area where metal might be present.	

Slide #: 1.9	MRI Suite Map: Zones 1, 2, 3, and 4
On-Screen Text	Graphics
Select each number to learn about the risks associated within each zone. MRI Zone I: unrestricted zone, requires no screening, open to the general public, prior phone screening, optional. MRI Zone II: where screening takes place, review of patient screening form, required before entry into Zone III MRI Zone III: Close proximity to MRI scanner, unscreened individuals not permitted, patients re-screened	Zone map Markers to number each zone (see labeled graphic) Zone hazard signs for each corresponding layer Button: Back to Map on each slide layer so learner returns to the map

MRI Zone IV: Only people cleared may enter, clearance is the final step	
<p>Notes to developer, media file(s) or additional instructions: The learner will click each marker bringing them to a slide layer with additional information about each zone (Zone 1, Zone 2, Zone 3, Zone 4).</p> <p>Audio narration: Each zone of the MRI suite has its own restrictions and safety risks. Click each numbered icon to learn about each zone.</p>	

Slide #: 1.9	Zone IV (MRI) Room Items Investigation
On-Screen Text	Graphics
<p>Select the 4 hazardous items in this room that must be investigated!</p> <p>Fire extinguisher feedback: Correct! Even though a fire extinguisher is an important piece of safety equipment, it can become a dangerous projectile within the MRI suite.</p> <p>Bobby pin feedback: Correct! Although items such as bobby pins are small, the force of the MRI magnet can turn it into a dangerous projectile within the MRI suite.</p> <p>Pen feedback: Correct! Even staff members can forget to check their pockets for potentially dangerous items! This pen is sharp enough to cause injuries!</p> <p>Screwdriver feedback: Correct! The maintenance crew needs to double check their tools! This screwdriver can cause a lot of harm when turned into a projectile in the MRI suite!</p>	<p>MRI room: MRIphoto.jpg</p> <p>Insert Canva files:</p> <ul style="list-style-type: none"> - Fire extinguisher - place to the left of the MRI machine - Bobby pin - small image- place on the floor - Pen - place in doctor's pocket - Screwdriver - place on the box behind the doctor <p>Button:</p> <p>Next (send to slide 1.4 course content)</p>

Notes to developer, media file(s) or additional instructions:

Learner will click the hazardous items. When clicked, a black checkmark will appear on the item and a feedback box appears. Feedback box should fade but checkmark should stay so the learner has a visual of what has already been clicked.

Audio narration:

You've learned about the dangers of metal objects within the MRI suite. Identify the items in this image that should be investigated and removed from the suite!

Slide #: 1.11	Patient Prescreening	
On-Screen Text		Graphics
Patient Prescreening In this scenario, you will be assisting Darius as he completes the MRI prescreening interview. The goal is to ensure patient and staff safety by verifying he does not bring any hazardous items into the MRI Suite. Deborah McKay, Patient Intake Representative Darius Richardson, Patient		2 characters (1 nurse & 1 patient) representing our staff and patients Button: Let's Get Started!

Notes to developer, media file(s) or additional instructions:

Learner will click Let's Get Started to begin the dialogue.

Audio narration:

It is important to prepare patients for their MRI by ensuring they know the safety requirements. In this scenario, Deborah is conducting a prescreening interview with Darius. You will take on Deborah's role and help Darius get ready for his procedure.

**Slides #: 1.12
- 1.15**

Prescreening Dialogue**On-Screen Text****Graphics**

Same male and female characters with poses reflecting stages of scenario.

MI Dialog Boxes

Buttons:

Question 1:

Correct Answer- "Next" button to send learner to question 2 (slide 1.15)

Incorrect Answer #1 - "Next" button to continue dialogue (slide 1.14)

Incorrect Answer #2 - "Start Over" button to begin again (slide 1.12)

Question 2:

Correct Answer - "Next" button to return learner to 1.4 (course menu)

Incorrect Answer - "Try Again" to restart slide.

	Correct Answer #2 - ""Next"" button to return learner to 1.4 (course menu)
<p>Notes to developer, media file(s) or additional instructions:</p> <p>Click for dialogue text, correct, incorrect answers, and feedback.</p> <p>Learner will listen to audio narration of technician question and patient response while it appears on screen. Learner will click on a response choice that will provide correct/incorrect feedback to continue the dialogue as outlined. When final feedback is given on slide 1.15, button will take learner back to course menu (slide 1.4)</p> <p>Audio narration: Initial question and patient response will be narrated for questions 1 & 2. See file linked above for text.</p>	

Slide #: 1.16	MRI Suite Procedures
On-Screen Text	Graphics
<p>MRI Suite Procedures</p> <p>In this scenario, you have been asked to assist in the MRI suite. Your decisions will effect staff and patient safety. Make safe choices to avoid hazards and ensure an incident free experience.</p>	<p>Background - medical office</p> <p>Buttons: Let's Get Started</p>

<p>Notes to developer, media file(s) or additional instructions:</p> <p>The learner will click Let's Get Started to begin the scenario.</p> <p>Audio narration (slide 1.16) In this scenario, you've been asked to assist in the MRI suite, an area of the imaging center you don't routinely work in. Your decisions will either create a safe environment or lead you and the patient into danger. Click Let's Get Started to begin.</p>	

Slide #: 1.17	Choose Your Character
On-Screen Text	Graphics
Choose Your Character	Background - medical office 3 characters in medical clothing (2 females, 1 male) representing our staff (neutral and positive poses) Buttons: Next and back arrows to navigate character carousel Button under each character that says "Select {character name} that will link to slide 1.18 (greeting slide)"

Notes to developer, media file(s) or additional instructions: The learner will select his/her character for this scenario (use a carousel feature with next and back arrows to view the characters). As the learner hovers over each character, the neutral pose will become more positive to engage with the learner.	

Slide #: 1.18	Greeting	
On-Screen Text		Graphics
Hi, my name is {character selection name variable}. Let's prepare to head into the MRI Suite.		Background - medical office Positive pose of each character MI Dialogue Box
Notes to developer, media file(s) or additional instructions: The character the learner chose from the carousel will appear here with their greeting.		

Slide #: 1.19 - 1.27	
On-Screen Text	Graphics
<p>Follow the decision-based scenario linked below.</p>	<p>Positive and negative poses for each character</p> <p>Buttons:</p> <p>"Restart Scenario" for incorrect responses (that link back to question slide)</p> <p>"Next" for correct responses that bring to next question or the Scearnio Complete slide 1.27</p>
<p>Notes to developer, media file(s) or additional instructions:</p> <p>Click for scenario text, correct, incorrect answers, and feedback.</p> <p>The questions will be narrated and the responses will fly in from the right one at a time. The learner will select the best response. Correct responses will show their character in a positive pose, incorrect responses will show their character in a negative pose, with the feedback linked above.</p> <p>Audio narration:</p> <p>The 2 questions will be narrated. See script linked above.</p>	

Slide #: 1.27	Success		
On-Screen Text		Graphics	
Nice Work! Your safe and informed choices ensured a positive and incident free experience!		Background - medical office Same characters in a thinking pose Button: Next (to course menu slide 1.4)	
Notes to developer, media file(s) or additional instructions: The learner will receive positive feedback and click the next button to return to the course manu (slide 1.4). Audio narration: Nice Work! Your safe and informed choices ensured a positive and incident free experience!			

Slide #: 1.28	Training Conclusion		
On-Screen Text		Graphics	
Congratulations! You have completed the MRI Safety Training		Milton Imaging logo on bottom right. Top ribbon background	
Notes to developer, media file(s) or additional instructions:			

This slide will look like the Introduction slide (without the MRI sketch). Learners will view this slide at the completion of the course.

Audio narration:

Congratulations! You have completed Milton Imaging's MRI Safety Training by demonstrating that you know the risks, necessary protocols, and procedures to ensuring a safe and incident free environment!