

MRI Safety

● SKILL SNAPSHOT

Purpose

- Prevents projectile, implant/device, heating, burn, acoustic, and emergency hazards in the MRI environment.

When to use

- Every patient, staff member, visitor, and object before entering controlled MRI zones, with repeat screening after any change.

Supplies needed

- Approved MR screening form; ferromagnetic detector if used; MR Safe/Conditional equipment; hearing protection; patient gown; emergency plan.

● PREP + PATIENT SETUP

- Use trained MR personnel and current facility/ACR policy.
- Obtain detailed implant, surgery, injury, occupational-metal, pregnancy, renal, and prior MRI history.

● VAULT TIP

- If the device or object is not positively identified and cleared, it does not enter the scanner room.

● STEP-BY-STEP

1. Identify patient with two identifiers and complete written plus verbal MR screening in a private setting.
2. Ask specifically about pacemaker/ICD, neurostimulator, aneurysm clips, pumps, cochlear implants, shrapnel, bullets, metal eye injury, patches, and recent surgery.
3. Resolve every implant/device with documentation of manufacturer, model, location, MR status, field strength, and conditions before entry.
4. Remove all metallic/electronic items: phone, keys, jewelry, cards, hearing aids, dentures, clothing with metal, medication patches when indicated, and cosmetics/devices per policy.
5. Change into MR-approved clothing and use final screening before entering higher-risk zones.
6. Only bring equipment labeled MR Safe or verified MR Conditional under the exact conditions. Never bring standard oxygen cylinders, stretchers, or tools into scanner room.
7. Position patient to prevent skin-to-skin contact and conductive loops; keep cables straight, insulated, and off bare skin.
8. Provide hearing protection and communication/alarm method. Explain noise, stillness, and emergency stop signal.
9. Follow device-specific monitoring and staffing plan; use only MR-compatible monitors, pumps, and oxygen equipment.
10. For contrast, complete allergy/renal/pregnancy screening and IV checks according to protocol.
11. If an emergency occurs, remove patient from Zone IV/scanner room to designated safe resuscitation area before using standard code equipment.
12. After scan, assess for burns, pain, device issues, dizziness, contrast reaction, or other adverse event.

● SAFETY REMINDERS

- The magnet is always on unless formally quenched.
- Never assume an implant is safe because a prior MRI occurred.
- MR Conditional means every stated condition must be met.
- Standard resuscitation equipment stays outside Zone IV.

● COMMON MISTAKES

- Incomplete implant identification.
- Bringing standard oxygen tank inside.
- Allowing cable/skin loops.
- Coding patient beside magnet.

● DOCUMENTATION

- Screening and implant verification.
- MR conditions and equipment used.
- Pregnancy/contrast/renal assessment.
- Monitoring, tolerance, adverse events.
- Items removed and safety teaching.