## MRI SAFETY PROTOCOLS

#### Prepared By :

Mr. Anbarasan Dr. Savitha Hiremath Dr. Moneesha Mrs. Divya Mrs. Ramani Bai Mr. Selva kumar Mrs. Thamizhakkiya Reviewed By : Dr. Lallu Joseph Dr. Joseph Fidelis Dr.Nithya Dr.Parivalavan Rajavelu

## **EMPLOYEE SAFETY**

### ALL EMPLOYEES MUST BE SCREENED TO WORK IN A MAGNETIC FIELD ENVIRONMENT JUST LIKE THE PATIENTS.

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First

NO EXCEPTIONS.

### **MRI PERSONAL SCREENING**

- PRE-EMPLOYMENT SCREENING
- REPORTING OF THE EVENTS LIKE TRAUMA, SURGERY ETC.

### HISTORY TAKING BEFORE MRI SCAN

## INTERVIEW THE PATIENT

- H/O MEDICAL DISEASE.
- H/O SURGERY, CANCER TREATMENT (RADIATION SEEDS).
- H/O TRAUMA, WAR INJURY, OCCUPATIONAL HISTORY, TATTOO
- ALLERGY OR PROBLEM DURING PREVIOUS MRI
- HISTORY OF PREGNANCY AND BREAST FEEDING, LMP
- CLAUSTROPHOBIA AND ANXIETY

### Device and Object Screening

 As part of the Zone III site restriction and equipment testing and clearing responsibilities, all sites should have ready access to a strong handheld magnet (1000-Gauss) and/or a handheld ferromagnetic detection device.

### INSTRUCTIONS FOR THE PATIENTS BEFORE MRI

### INSTRUCTIONS TO THE PATIENT

1. YOU ARE URGED TO USE THE EAR PLUGS OR HEADPHONES THAT WE SUPPLY FOR USE DURING YOUR MRI EXAMINATION

2. REMOVE ALL MAKE UP AND JEWELRY (E.G., NECKLACES, PINS, RINGS).

- 3. REMOVE ALL DENTURES, FALSE TEETH, PARTIAL DENTAL PLATES.
- 4. REMOVE HEARING AIDS.
- 5. REMOVE EYEGLASSES.

6. REMOVE YOUR WATCH, CELL PHONE, CREDIT AND BANK CARDSAND ALL OTHER CARDS WITH A MAGNETIC STRIP.

alamy

7. USE GOWN, IF PROVIDED, OR REMOVE ALL CLOTHING WITH METAL FASTENERS, ZIPPERS, ETC.

**8.SQUEEZE BULB IS GIVEN TO THE PATIENT FOR EMERGENCY PURPOSES** 

# Auditory damage

#### Always apply hearing protection for patients





### COMPATIBLE AND NON COMPATIBLE DEVICES

## Usually MRI compatible

#### Cardiac

- Sternal wires
- Heart valves & annuloplasty rings
- Coronary stents
- Epicardial wires (cut short and taped)
- Other vascular stents, coils and filters

### Other

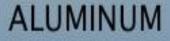
- Orthopaedic implants
- Contraceptive devices
- Dental implants

### • ONLY METALS THAT ARE MRI COMPATIBLE SUCH AS...



TITANIUM







• IF YOU ARE NOT SURE IF AN OBJECT IS MRI SAFE...DON'T TAKE IT INTO THE ROOM. ASK A TECHNOLOGIST!!!!!!!!





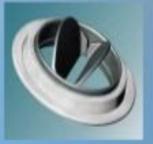


Cerebral Metalli aneurysm In Electifical devices

Metallic foreign body in iCES the eye Shrapnel, bullets (in critical area)



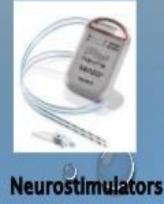
Metallic Ocular implants



**Pacemakers** 

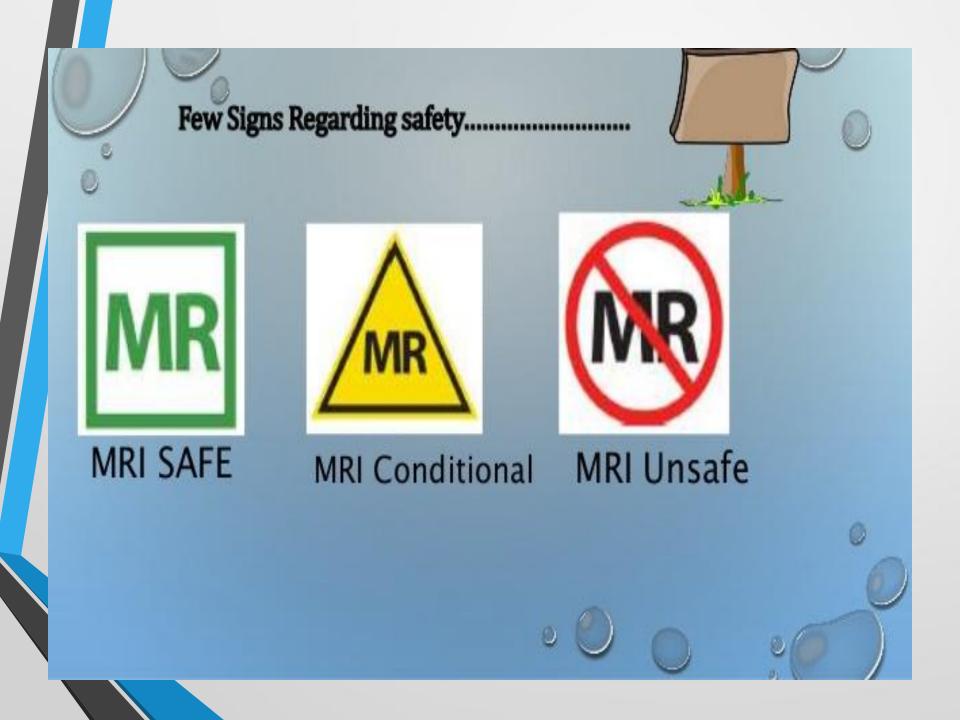


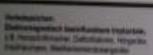
Pacing wires











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### HOW DO WE HANDLE EMERGENCY SITUATIONS

#### HANDLING EMERGENCY SITUATIONS

- In the event of an emergency, you should first remove the subject from the MRI scan room
- Stand near the doors to the scan room to insure no unauthorized emergency personnel can enter
- > NO CODE OR CODE LIKE PROCE WILL BE RUN IN THE MRI ROOM

www.MRImetalDetecton.com

### QUENCH Quench is done in an emergency ,to run magnetic field ZERO in order to remove projectile /patient from the scanner in An emergency If these done Cryogens (Helium and Nitrogen ) BOIL OFF and DEACTIVATE the magnet



### **Emergency stopper button**

EMERGENCY STOP BUTTON DOES NOT QUENCH THE MAGNET THIS TURN OFF MOST ELECTRICAL POWER IN THE SCANNER ROOM AND OPERATOR AREA

Stop buttom



### THANKYOU