Center for Biomedical Imaging (CBI) MRI screening policy

All participants entering the room with the MRI scanner must be screened for safety criteria prior to entering the scanner room. The MRI technologist (individual running the scanner) is responsible for reviewing this information prior to the individual entering the scanner room.

As we are a research facility, it is expected that each study will pre-screen subjects for MRI compatibility prior to scheduling them for an MRI scan. All research subjects being scanned must be subjects in an IRB approved research protocol (local or offsite).

Questions related to MRI compatibility can be directed to the CBI director.

Since none of the scans that we perform are for medical purposes, the risks associated with the imaging session must be balanced off the benefits to be gained by the study. This risk/benefit ratio is the responsibility of the IRB to determine, but factors related to risk may adversely impact this ratio. In this event, the investigator would need to review the situation with the IRB or elect to not include this subject in the imaging portion of the study.

With the risk/benefit ratio in mind, there are four categories that potential study participants fall into:

1) Unable to scan because the risk of harm is elevated. This category essentially includes individuals with any of the following:
    a. Cardiac pacemaker, pacer wires or defibrillator
    b. Insulin or infusion pump
    c. Cochlear, otologic or ear implant
    d. Any implant held in place by a magnet
    e. Tissue expanders
    f. Implanted catheter, clamp, clip, valves or other metal
    g. Shrapnel or metal fragment
    h. Implanted devices that are adjusted with radiofrequency or magnetic field
        i. Certain implants are themselves MRI compatible but would need to be re-adjusted after the scan is complete
    i. Pregnant
    j. Wearing of electrodes

    k. Being attached to any medical machinery, medication pump, vagal nerve or neurostimulator
2) Uncertain if we can scan. This category is meant to be a temporary one until further information can be acquired – if the information is not available then scanning cannot take place
    a. Orthopedic implants, pins, plates or screws
    b. Tattoos
    c. History or current work with metal
    d. Implanted stints or catheters
    e. History of cardiac surgery
    f. History of aneurism
    g. Dental implants (dentures or braces)
    h. IUD in place
    i. Hair extensions
3) Unable to scan because scans are likely to be obscured with artifact. This category captures devices that are not likely to produce risk to the subject but are likely to have an adverse impact on the data being collected. Most of our users rely on the EPI sequence to collect forms of functional and diffusion-based data. Unfortunately, this is perhaps the most artifact prone MRI sequence.
    a. Head or neck jewelry that cannot be removed
    b. Dentures or braces (ferrous or nonferrous) that are not removable
    c. Heavy forms of mascara and eyelining tattoos
    d. Forms of contact lenses
    e. Acupuncture beads
4) Capable of being scanned. This category includes individuals who either don't fall into the other three categories or:
    a. Study personnel have identified health records asserting that implants/surgery results are MRI compatible (MD's note approving scan is not acceptable).
    b. Device is removeable
    c. Concern is cleared (i.e. x-ray showing no metal in eyes)
    d. Tattoo is not located on the head or neck and is not likely to contain iron oxide
    e. IRB has evaluated the situation and protocol has been modified to take additional risk into consideration and appropriate safeguards are in place (i.e. medical supervision)