

MRI QUENCHING THE MAGNET

PURPOSE: To provide guidelines for Quenching the magnet (a magnet rundown)

POLICY: Quenching the magnet or a rundown of the magnet is deactivating the magnetic field of the magnet. A quench is an escalating reaction to heat. It causes the cryogenics to boil off rapidly, which in turn causes the loss of the static magnetic field. This process takes approximately two minutes

A magnet quench will result in several days of downtime, a very expensive repair and could jeopardize the integrity of the magnet. Do not press the button except in a true emergency (see below). Do not attempt to test this button; it should be tested only by qualified service personnel.

1. When is it acceptable to quench the magnet?
 - a. If someone is pinned against the magnet by a ferromagnetic object and is being crushed.
 - b. If there is a fire located within the gantry.
2. How to quench the magnet?
 - a. The emergency Magnet Rundown Unit (MRU) is located on the wall near the magnet.
 - b. On the box there is a red button clearly marked "Rundown". Lift the plastic cover and push the red rundown button.
 - c. Pushing this button will quench the magnet in about two minutes.
 - d. Turn on the emergency venting system.
 - e. Remove the patient and personnel from the magnet area
 - f. Call service immediately.

DANGER: In the event of a magnet quench with a magnet vent failure, a sudden release of cryogen vapor (a cloud of smoke) can cause asphyxiation, frostbite, or injuries due to panic. Calmly evacuate the patient and all personnel from the area immediately. **Failure to follow these precautions can result in serious injury.** In case of sudden cryogen release into the scan room:

1. **Do not panic.**
2. **Turn on the room exhaust fan.**
3. **Prop the door open between the operator and the hallway.**

4. **Using the intercom, ask the patient to stay calm and remain on the table. Tell him/her that someone will be in shortly to offer assistance.**
5. **Prop open both doors to the scan room.**
6. **Enter the scan room, undock the table and remove it from the scan room.**
7. **Evacuate the area until the air is restored to normal.**

In case helium is venting into the room, the scan room door may not open.

1. **Try opening the scan room door several times.**
2. **If the door cannot be opened after 45 seconds, break the window to the scan room to relieve pressure.**
3. **Enter the scan room through the door. If door does not open, go through the door.**
4. **Evacuate patient as before.**

Written: 06/07
Revised: 01/2009