Penn State
Radiological Sciences
Radiation Protection & MRI Safety Handbook
2018 - 2020

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RADIATION PROTECTION

Purpose

It is a well known fact that ionizing radiation can cause damage to living cells. Therefore, it is imperative that everyone involved in the medical application of ionizing radiation have accurate knowledge and understanding of safety guidelines. Application of these safety guidelines will insure that adverse effects of radiation exposure will be kept to a minimum. Program faculty at Penn State University and the clinical affiliates are committed to this endeavor.

The Radiation Protection Handbook is designed to give the student an overview of radiation monitoring, occupational exposure limits, pregnancy guidelines and precautions for personnel protection. The guidelines presented in this handbook can be employed to reduce or limit radiation exposure (primary, scatter and leakage radiation) affecting the patient, radiologist, technologist and student.

Magnetic Resonance Imaging (MRI) is a" *noninvasive diagnostic modality that does not use ionizing radiation. It uses a combination of a powerful magnetic field and radio frequency (RF) pulses that produce a radio signal in the body that can be detected and processed electronically to provide images on the computer monitor." (Patient Care in Radiography;Ehrlich & Coakes)*

ALARA CONCEPT

In 1954 the National Committee on Radiation Protection (later known as the National Council on Radiation Protection and Measurements) put forth the principle that radiation exposure should be kept "*as low as reasonably achievable*". This principle known as the ALARA concept is Accepted by all regulatory agencies. Medical radiographers and radiologists share the responsibility to keep occupational and non-occupational absorbed doses below their allowable maximum levels. This can be achieved through practice of proper radiation control procedures. Reduction of absorbed doses through the use of proper safety procedures benefits both the patient and the radiation worker.

RADIATION MONITORING GUIDELINES

Personnel Monitoring Devices

Federal and state laws require all personnel to wear radiation monitoring devices at all times while using energized radiographic equipment or near radioactive sources when the radiation worker is likely to risk receiving 10% or more of the annual occupational EfD limit of 50 mSv (5Rem) in any single year as a consequence of their work related activities. Students are not considered employees of the hospital during clinical rotation hours however must be issued a personnel monitoring device to record any exposure received.

Proper Use of Personnel Monitoring Devices

Personnel monitoring devices are issued to students and must be worn to measure occupational exposure during clinical rotations and must remain in designated area at all times (exception – external rotation). The devices should be worn on the area of the body that will receive the most exposure.

Personnel monitoring devices should be worn at waist or collar level. While wearing a lead apron, the device should be placed at collar level outside of the apron. Students must return and replace the device at regular intervals (specific to each clinical site). The clinical instructor will issue the personnel monitoring devices.

Improper use of personnel monitoring device

Personnel monitoring devices must be worn by the assigned individual and may not be worn by any other individual. The participant's number on the device is non transferable. Devices should be kept away from extreme hot or cold temperatures and radiation sources when not in use. Do not leave devices on lab coats, lead aprons or uniforms. Personnel monitoring devices are not to leave the clinical site (exception – external rotations). If a personnel monitoring device is lost, misplaced or damaged, notify the clinical instructor IMMEDIATELY.

Exposure Reports

Exposure reports (dosimetry reports) are received monthly or quarterly (depending on clinical site) from a radiation exposure service. Each student will be made aware of their exposure reports. The report will be reviewed on paper or online according to each clinical site policy. Exposure reports are kept on file at each clinical affiliate. All students will receive a yearly report of exposure.

RADIATION EXPOSURE LIMITS REVIEW

For the protection of radiation workers, absorbed dose equivalent limits have been established as guidelines. All medical imaging personnel should be familiar with the NCRP recommendations (NCRP Report #116)

Type of Exposure	**Annual Limits**		
	Rem	Millirem	mSv
Whole Body (annual)	5	5,000	50
Lens of the Eye	15	15,000	150
Localized area of skin, hands and feet	50	50,000	500

Cumulative Effective Dose

1 Rem X Age in Years
10mSv X Age in Years

The exposure limit for a student less than 18 years of age is not permitted to exceed 1mSv or 0.1 rem or 100 rem annually. Students less than 18 years of age will be counseled by the program director and the clinical instructor prior to the start of clinical rotations.

Student Exposure Limits

Clinical sites comply with all regulatory agencies. Radiation physicists will meet and counsel student in areas of overexposure.

RADIATION PROTECTION PRECAUTIONS FOR PERSONNEL

Diagnostic Areas

Persons, who regularly work with radiation, including technologists and students, should not hold patients during a radiographic exposure.

Mechanical devices should be used to restrain patients whenever possible (i.e. restraints, sponges etc.)

Always wear personnel monitoring devices.
Utilize protective barrier shielding.

Wear lead aprons, lead gloves, and thyroid shields appropriately. (All protective wear complies with all Federal rules and regulations.)

Fluoroscopic and Portable Areas

Since fluoroscopic and portable procedures may cause the greatest potential for personnel exposure from secondary and scatter radiation, precautions in these areas are essential. Always remember the **THREE CARDINAL PRINCIPLES** of radiation protection.

Time – keep time to the absolute minimum. Perform routine procedures, have all necessary equipment in rooms, be efficient, set fluoroscopy timer and minimize exposure whenever possible.

Distance – maximize distance as much as possible. Utilize the Inverse Square Law – exposure or intensity is inversely proportional to the square of the distance. The intensity of the beam decreases as the distance from the source increases. Maximize distance only while maintaining patient safety.

Shielding – lead aprons, glasses, gloves, thyroid shields, protective fluoroscopy drape, table shields and portable barriers will provide protection.

Pregnancy

Embryo-Fetus Exposure

Pregnant worker's (in this case student) effective absorbed dose should not exceed .5mSv (0.05 rem or 50 mRem) per month and a limit during the entire pregnancy should not exceed 5.0 mSv (0.50 rem) after the declaration of pregnancy.

If I become pregnant, am I required to inform program officials?

The student may choose to declare the pregnancy or not to declare the pregnancy. If the student chooses to declare the pregnancy, a lower radiation dose limit will apply. If the student chooses not to declare the pregnancy, radiation dose limits will be the same as a non pregnant student even if the student is visibly pregnant.

If the student declares the pregnancy (in writing), what happens?

The amount of radiation received will be less because of the reduction of the dose limit for the embryo/fetus of female occupational workers who have formally declared a pregnancy in writing. Ordinarily, the radiation dose limit of a worker is 5,000 milliRems (50 millisievert) in a year.

Any student who declares the pregnancy in writing, the dose to the embryo/fetus is generally limited to 500 millirem (5 millisievert) during the term of the pregnancy, which is one-tenth of the dose limit that an adult worker may receive in any one year. In addition, efforts must be made to avoid substantial variation above a uniform monthly dose rate so that the dose received does not occur during a particular time of the pregnancy. (A student may not be able to complete all

clinical rotations in the assigned order.)

Why do regulations have a lower dose limit for women who declare a pregnancy in writing than for a female occupational worker who is not pregnant?

The purpose of the lower limit is to protect the unborn embryo/fetus. Scientific advisory groups recommend the dose before birth be limited to approx. 0.5 rem (5 millisievert) rather than 5 rem (50 millisievert) occupational annual dose limit because of the sensitivity of the embryo/fetus to radiation. Possible effects include deficiencies in the child's development, especially the child's neurological development and an increase in the likelihood of cancer.

What effects on development can be caused by radiation exposure?

The effects of large doses of radiation on human development are quite evident and easily measureable; however at low doses the effects are not evident or measureable and therefore must be assumed.

For example, studies of the effects of radiation on animals and humans demonstrate clearly and conclusively that large doses of radiation such as 100 rems, (100,000 millirem or 1 sievert) cause serious developmental defects in many of the body's organs when the radiation is delivered during the period of rapid organ development.

The developing human brain has been shown to be especially sensitive to large doses of radiation. Mental retardation has been observed in the survivors of the atomic bombings in Japan exposed in utero during sensitive periods. Additionally, some other groups exposed to radiation in utero have shown lower than average intelligence scores and poor performance in school. The sensitivity of the brain undoubtedly reflects its structural complexity at its long developmental period (and hence long sensitive period). The most sensitive period is during the 8^{th} to 15^{th} weeks of gestation followed by a substantially less sensitive period for the 2 months after the 15^{th} week. There is no known effect on the child's developing brain during the first two months of pregnancy or the last three months of pregnancy.

No developmental effects caused by radiation have been observed in groups at doses at or below the 5 rem (50 millisievert) occupational dose limit. Scientists are uncertain whether there are developmental effects at or below doses 5 rems (50 millisievert). It may be that the effects are present but are too mild to measure because of the normal variability from one person to the next and because the tools to measure the effects are not sensitive enough, or, it may be that there is some threshold dose below which there are no developmental effects whatsoever.

In view of the possibility of developmental effects, even if very mild, at doses below 5 rems (50 millisievert), scientific advisory groups consider it prudent to limit the dose to the embryo/fetus to 0.5 rem (5 millisievert).

What is the likelihood of cancer risk?

Radiation exposure has been found to increase the likelihood of cancer in many studies of adult human and animal groups. At doses below the occupational dose limit of 5 rem (50 millisievert) an increase in cancer incidence has not been proven but is presumed to exist even if too small to be measured.

Is the embryo/fetus more sensitive to radiation than the adult?

While the evidence for increased sensitivity of the embryo/fetus to cancer induction from radiation exposure has not been proven that an increased sensitivity exists, it is assumed that there is some increased sensitivity. Scientific advisory groups assume that radiation exposure before birth may be 2 or 3 times more likely to cause cancer over a person's lifetime that the same amount of radiation received as an adult. If this is true, the incidence would be 1 radiation induced cancer death in 200 people exposed in utero at the occupational dose limit of 5 rems (50 millisievert).

Scientific advisory groups have considered this risk to be too high and have thus recommended that the radiation dose to the embryo/fetus be limited to a maximum of .5 rem (5 millisievert). At that dose, the incidence would be 1 radiation-induced cancer death per 2,000 people.

How does the risk to the embryo/fetus from occupational radiation exposure compare to other risks?

The risk to the embryo/fetus from 0.5 rem (5 millisievert) or even 5 rems (50 millisievert) of radiation exposure is relatively small compared to some other avoidable risks.

Of particular concern is excessive consumption of alcohol during pregnancy. The United States Public Health Service has concluded that heavy alcohol consumption during pregnancy (3 drinks per day and above) is the leading known cause of mental retardation. Children whose mothers drank heavily during pregnancy may exhibit developmental problems such as hyperactivity, distractibility, short attention spans, language difficulties and delayed maturation, even when intelligence appeared normal.

In studies tracking the development of children born to light or moderate drinkers, researchers have also correlated mother's drinking patterns during pregnancy with low birth weight, decreased attention spans, delayed reaction times and lower IQ scores at age 4. Youngsters whose mothers average 3 drinks per day during pregnancy were likely to have IQ's averaging 5 points lower than normal. Cigarette smoking may also harm the unborn. A direct correlation can be linked between the amount of smoking during pregnancy and the frequency of spontaneous abortion and fetal death. Children of mothers who smoke while pregnant are more likely to have impaired intellectual and physical growth. Maternal smoking has also been associated with such behavioral problems in offspring such as lack of self-control, irritability, hyperactivity and a general

disinterest in activity. Long-term studies indicate that these children perform below the average when matched with youngsters of non-smoking mothers on tests of cognitive, psychomotor, language and general academic function.

Alcohol, recreational drug abuse and smoking are only examples of other risks during pregnancy. Many other toxic agents and drugs also present risks. In addition, many factors that cannot be controlled present risks. Increasing maternal age also poses a risk to the unborn as well as maternal disease. Malnutrition and toxemia may be associated with birth defects. Maternal diabetes and high blood pressure have been associated with problems in the newborn. Many birth defects occur at random and are not the result of genetics and outside influences. Viruses, for example, can cause birth defects as well as spontaneous random defects in cell reproduction which cannot be controlled.

In summary, any pregnant occupational worker (students fall under this category) is advised to keep radiation exposure to the unborn child below 0.5 rem (5 millisievert) and to limit the consumption of alcohol, recreational drug use and cigarette smoking. These guidelines should also be followed by the non-occupational worker as well.

What if I decide I do not want any radiation exposure during the pregnancy?

Follow the guidelines of the established Pregnancy Policy of the program. (See Pregnancy Policy – Student Handbook) Typically natural background radiation exposure during a 9 month pregnancy will result in an exposure of 0.3 rem (3 millisievert).

What effects will formally declaring a pregnancy have on clinical experience or with completion of the program in established time frames?

Follow guidelines of the established Pregnancy Policy of the program. (See Pregnancy Policy – Student Handbook). In the event the student chooses NOT to declare the pregnancy the lower exposure limit of 0.5 (5 millisievert) will NOT apply. In the event a student chooses to declare the pregnancy, the program faculty together with the radiation physicist from the appropriate clinical site will confidentially counsel the student. The student will be issued a second personnel monitoring device to monitor fetal exposure during the pregnancy. Although the student will be counseled of the hazards of ionizing radiation and biological damage, any decisions with regard to the continuing with the program or clinical rotations is solely the decision of the student.

Declaration of Pregnancy

What information must be provided to declare a pregnancy?

Name, declaration of pregnancy, estimated date of conception (month and year) and date of declaration must be submitted to the Program Director and Clinical Instructor of the assigned clinical site. The declaration will be placed in both the clinical file and the file on campus. A sample declaration letter is included in the

back of this book or you may write your own declaration letter.

Do I have to have medical documentation to declare a pregnancy?

No, the letter of declaration is the only documentation required.

Is an oral declaration sufficient?

No, the declaration must be in writing and submitted to the Program Director and the Clinical Instructor of the assigned clinical site. In accordance with rules and regulations regarding pregnancy, an oral declaration is the same as NO declaration.

If I do not declare my pregnancy in writing, but because of obvious reasons program faculty are aware of my pregnancy, do the lower dose limits apply?

No, the lower dose limits apply only for occupational workers (students fall under this category) who declare the pregnancy in writing and submit to proper officials. Declaration of a pregnancy is solely the decision of the student. No student will be removed from a specific area either by declaring or not declaring a pregnancy.

If I am planning to become pregnant and notify program officials of my intentions in writing, do the lower dose limits apply?

No, the lower dose limits apply only to those who declare in writing of a pregnancy. This does not apply to those planning to become pregnant.

What if I have a spontaneous abortion or discover I am not pregnant?

If you submitted in writing a declaration of pregnancy, promptly notify the Program Director and Clinical Instructor of the assigned clinical site of the situation. Regulations do not warrant a written submission of revocation of a pregnancy, but it is recommended to prevent confusion that you do so. It is policy of the program that you submit a written revocation of pregnancy. If you did not declare a pregnancy there is no need for any action. If you become pregnant before revocation of the declaration of pregnancy, you must submit an additional declaration to include a new estimated inception date.

Any additional pregnancies will follow the same procedure. If the pregnancy is declared a written declaration must be submitted to the Program Director and the Clinical Instructor of the assigned clinical site to include name, date of submission, declaration of pregnancy and date of conception.

How long is the lower dose limit in effect?

The dose to the embryo/fetus must be limited until (1) you have given birth (2) you inform the program faculty that you are no longer pregnant (3) you inform the program faculty that you no longer wish to be considered pregnant.

If I have declared a pregnancy in writing, can I revoke my declaration even if I continue with a pregnancy?

Yes, the choice in solely the students. The lower dose limits will not apply in the event of a revocation of pregnancy.

Can I declare a pregnancy (even though I knowingly am not pregnant) to elect clinical rotations under the lower dose limit guidelines?

The purpose of the regulations is to permit pregnant occupational workers (students fall under this category) to choose a heightened level of protection from radiation exposure for the embryo/fetus during the pregnancy. Nothing in the rules and regulations regarding pregnant occupational workers would prevent the program from taking action against a student who intentionally declares a pregnancy under false pretenses. Any student who intentionally misleads program officials with regards to a fictional pregnancy may be disciplined according to the disciplinary policy of the program found in the student and clinical handbooks.

Steps to Low Radiation Dose

What steps can I take to lower my radiation dose?

The general principle for maintaining low radiation exposure is to abide by the ALARA principle (keep exposure as low as reasonably achievable). Program officials as well as officials at the clinic site will educate the student to the rules and regulations regarding exposure to ionizing radiation. Contact the Radiation Safety Officer at the clinic site for any additional information or to ask for clarification of steps to reduce radiation exposure

External Radiation Exposure

What is external radiation exposure?

Radiation exposure received from radiation sources or radioactive materials outside the body.

3 cardinal rules to reduce radiation exposure are time, distance and shielding. --
Time – decrease amount of time near radiation sources – work quickly and efficiently to ensure exposure to ionizing radiation is kept to an absolute minimum

Distance – increase distance from radiation sources. As the distance is increased from the source of radiation, the dose decreases.
Shielding – take precautions to ensure gonadal region is covered – work behind the shielding whenever possible. The shielding will absorb some of the radiation thus reducing the amount that you will be exposed.

Internal Radiation Exposure

What is internal radiation exposure?

Radiation from radioactive materials from which you have been exposed generally by the air you breathe, the food you eat or the water you drink.

Students scheduled in Nuclear Medicine will follow policy and procedure to keep internal exposure to a minimum. The following general precautions should be recognized when working with radioactive materials that are not encapsulated during clinical rotations:

Wear lab coats or other protective clothing because of a possibility of a spill.

Use gloves while handling unencapsulated radioactive materials.

Wash hands after working with unencapsulated radioactive materials.

Do not eat, drink, smoke or apply cosmetics in areas with unencapsulated radioactive materials.

Do not pipette radioactive solutions by mouth.

MRI – Magnetic Resonance Imaging

Magnetic resonance imaging (MRI) - Magnetic resonance imaging (MRI) is a technique that uses a magnetic field and radio waves to create detailed images of the organs and tissues within your body.

Magnetic resonance technologist A person, other than a licensed practitioner, who is licensed to perform magnetic resonance procedures using magnetic fields and radiofrequency signals.

MRI education will begin during orientation to the program in the first semester and continue throughout the program. Clinical education is an inherent part of the Radiological Sciences Program. All students must understand the safety concerns with an MRI rotation. All students will complete a MRI screening (screening form included in this handbook) during orientation and a non-patient MRI screening at the clinical site. A section in the course RAD 206 is dedicated to MRI education

ADDITIONAL INFORMATION

Where can I get additional information?

You can find additional information on the risks of radiation on the Nuclear Regulatory Commission (NRC) website at www.nrc.gov or by contacting the NRC at:

United States Nuclear Regulatory Commission
Office of Public Affairs

Washington, DC 205555
1-800-368-5642 or
301-415-8200

If you believe you have been discriminated against for any reason, contact the United States Equal Employment Opportunity Commission (EEOC) website at www.eeoc.gov or by contacting the EEOC headquarters at:

United States Equal Employment Opportunity Commission
1801 L Street, N.W.
Washington, DC 20507
Phone: (202) 663-4900 or
Contact the local EEOC field office at 1-800-669-4000.

If you would like to file a complaint against the program contact the Joint Review Committee on Education in Radiologic Technology (JRCERT) website at www.jrcert.org or by contacting the JRCERT at:

JRCERT
20 N. Wacker Drive
Suite 2850
Chicago, IL 60606-3182hon
Phone: (312) 704-5300
Fax: (312) 704-5304
E-mail: mail@jrcert.org

Voluntary Declaration of Pregnancy

Student Name: (print name)_____

Student Signature: _____

Date: _____

Date of Conception: (month/year): _____

By providing this information to my Program Director and Clinical Instructor, in writing, I am declaring myself to be pregnant as of the date shown above. I understand that I may be counseled by appropriate personnel of the clinical site which may include the Radiation Safety Officer or Radiation Physicist. I understand that I will be counseled to the effects of exposure to ionizing radiation and the effects on the developing embryo/fetus. I also understand I will be counseled to exposure limits both monthly and the entire duration of the pregnancy. I understand this limit includes exposure I have already received. If my estimated exposure since the above date to conception has already exceeded 5 mSv (500 mrem), I understand that I will be limited to no more than 0.5 mSv (50 mrem) for the remainder of my pregnancy. If I should find out that I am not pregnant, or if my pregnancy is terminated, I will inform my Program Director and Clinical Instructor as soon as practical and will rescind the declaration of pregnancy.
Once declaration of pregnancy has been established by the completed form in writing, Program Faculty will forward within two business days to Radiation Safety at the clinical site for review and counseling to the student.

The student will follow the protocol according to the established Pregnancy Policy of the program. (See Pregnancy Policy in the Student Handbook).

I have decided to rescind the letter of declaration of pregnancy. This form will be forwarded to the Radiation Safety office of the clinical site. The declaration will be rescinded within one year if the student's pregnancy is terminated and the student does not notify program officials.

Signature of Student: _____

Date Signed: _____

Revised:dm, 8-07, dm, 8-10, dm,7-12, dm, 4-13,dm5-18

Penn State- New Kensington
Radiological Sciences Program

MRI Screening Form

Name: _____ Date: _____

Clinical education is an inherent part of the Radiological Sciences Program. All students must understand the safety concerns with an MRI rotation. The form must be completed during orientation. Failure to turn in an MRI Screening Form will result in disciplinary action according to the Zero Tolerance Policy of the program. Students will also complete a non-patient MRI form during clinical rotations. This form will kept on file for reference at any time.

Students must understand that allergies may hinder the completion of or administration of contrast during the exam. Also, patients may be pre-medicated by a referring physician for pain/claustrophobia etc. and must be accompanied by a person to drive them home safely.

It is also important to ask for the patient height and weight for many tables have limitations. It is also important to note the patients name and date of birth for logistics and for proper identification of the patient. HIPAA will be strictly followed during any patient exam.

Many departments will give patients:

- ✓ some type of hearing protection to prevent possible hazards related to acoustic noise.
- ✓ a way to communicate with the technologist during the exam.
- ✓ an explanation that exam door is vacuum sealed which causes a delay when entering the room.
- ✓ an explanation that if the exam is not completed, the patient had to be removed from the scanner, the radiologist may not be able to give a complete interpretation of the exam which may delay findings or a diagnosis.

- ✓ the opportunity to ask questions before/after the exam.
- ✓ an explanation that certain devices, or objects may be hazardous to you and/or may interfere with the MRI procedure.
- ✓ an explanation that the magnet is always on.

I have completed the MRI safety training during orientation and understand the safety concerns of the MRI rotation.

Student Signature: _____ Date: _____

Please answer the following questions. Also, understand answering yes to any of the questions may prevent you from completing the MRI rotation. These are questions that all patients must answer before beginning the MRI exam.

Students do not have to answer the questions highlighted. These would be questions asked of a patient.

Please complete the questionnaire		
	YES	NO
Cardiac pacemaker/defilbrillator		
Cerebral aneurysm clip(s)		
Cochlear, otologic, or other ear implant		
Shunt (spinal or intraventricular) Programmable?		
Spinal cord or nerve stimulator		
Aortic aneurysm grafts		
Bone growth/bone fusion stimulator		
Other electronic implant device		
Swan-Ganz or thermodilution catheter		
Have you ever been a metal worker?		
Have you ever had an injury to the eye with metal?		
Shrapnel fragment or bullet injury		
Tattoo or permanent makeup		
Body piercing jewelry		
Artificial or prosthetic limb		
Dentures or partial plates		

Hearing aid		
Are you claustrophobic		
Breathing problem or motion disorder		
Pregnancy or expected pregnancy?		
Breast feeding?		
Last day of menstrual cycle _____		
Epilepsy or Seizures?		
Allergy to MRI, CT or X-ray Contrast (dye)?		
If yes, please explain: _____		
Heart valve prosthesis		
Date implanted _____		
Metallic, stent, filter or coil		
Date implanted		
Drug infusion pump		
Internal electrodes or wires		
Magnetically activated implant or device		
Type		
Vascular access port and/or catheter		
Radiation seeds or implants		
Surgical staples, clips, sutures		
Tissue expander (ei. breast)		
Wire mesh implant		
Joint replacement (hip, knee etc)		
Bone/joint pin, screw, nail, wire, plate, IUD, diaphragm or pessary		
Type		
Eyelid spring or wire		
Any type of prosthesis (eye, penile etc)		
Type or other implant _____		
Pill cam endoscope device		
Medication patch (nicotine, thermos etc.)		
If yes, medication type		
History of cancer?		
History of stroke?		

History of diabetes		
History of impaired kidney function?		
High blood pressure?		

Comments: Please explain any yes answers to above questions.

Documentation
You will have to document: (this is for patient screening)

- ✓ removal of dentures/partials, hearing aid, jewelry, glasses and anything else that would impede completion of the exam.
- ✓ person(s) completing questionnaire and relationship to patient.
- ✓ confirmation of review of questionnaire.
- ✓ IV start/removal – existing or new start for contrast injection – location, blood return.
- ✓ allergy to contrast – agent and type of reaction.
- ✓ possible premedication.
- ✓ bloodwork pertinent to exam. Is blood work and what type is necessary for an MRI exam.

By signing this form, I understand the safety concerns of an MRI rotation during my clinical rotations. I have also read the Joint Commission – Prepublication Requirements – Revised requirements for Diagnostic Imaging Services attached to this form.

Student signature: _____

Student Print Name: _____

Date: _____

Reviewer Signature: _____
Clinical Instructor or designated personnel of the clinical site.

Yes _____ student was cleared to complete clinical rotations in MRI and help move patients when needed in the MRI suite.

No _____ student cannot complete clinical rotation in MRI or help move patients in the MRI suite.

DM:5-16
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