



# Completion

At the end of each section there is a confirmation number listed. Please record that number for verification.

### **Please Note**

We are excited to officially transition to our new name and brand beginning January 17, 2020. As we are becoming Monument Health, you may see items (such as images, documents, policies, etc.) that say Regional Health within this training. All Regional Health branded items should be phased out by the end of the fiscal year (FY20).

- Infection Control
- MRI Suitability for Employees and Guests

# **Infection Control**

# **Personal Protective Equipment (PPE)**

PPE is specialized clothing or equipment worn by a caregiver for protection against a hazard.

Remember that PPE is one of the methods to reduce exposure to infectious agents. PPE is the last line of defense in preventing your exposure to infectious agents.

Examples include, but not limited to:

- eye protection
- face masks or shields
- gowns/laboratory coats (fluid resistant)
- gloves
- ressuscitation and ventilation devices

# **Gloves**

You are required to wear gloves when:

- there may be contact with blood, body fluid, mucous membranes, and non-intact skin
- performing vascular access procedures (for example, drawing blood or inserting an IV)
- handling, touching, or cleaning contaminated items or surfaces



Replace contaminated, torn, or punctured gloves as soon as practical. If there is any doubt that a glove's ability to function as a barrier is compromised, the gloves should be replaced.

# **Glove Removal**

Please watch the video by clicking <u>here</u>. Note: This video does **not** contain audio.

# Masks, Eye Protection, Face Shields

Please watch the video by clicking <u>here</u>. Note: This video **does** contain audio.

# **Personal Protective Equipment**

# **Donning Personal Protective Equipment**

The type of PPE used will vary based on the level of precautions required, such as standard and contact, droplet, or airborne infection isolation precautions. The procedure for putting on and removing PPE should be tailored to the specific type of PPE.

Please watch the Donning video by clicking <u>here</u>. Note: This video **does** contain audio.

# **Personal Protective Equipment Work Practices**

- 1 Remove any garment penetrated by blood or body fluid as soon as possible.
- Remove all PPE prior to leaving your work area or point of use.
- Place removed PPE in a designated area or container for washing, decontamination, or disposal.
- Wash hands with soap and water or hand antiseptic as soon as possible after removing gloves or other protective clothing, or after direct contact with blood or body fluid.
- 5 Keep hands away from face.
- 6 Change gloves when torn or heavily contaminated.
- Perform hand hygiene.

# **Doffing Personal Protective Equipment**

Remove all PPE before exiting the patient room except a respirator, if worn. Remove the respirator after leaving the patient room and closing the door.

Perform hand hygiene between steps if hands become contaminated and immediately after removing all PPE.

Please watch the doffing video by clicking <u>here</u>. Note: This video **does** contain audio.

# **Hand Hygiene**

Hand hygiene is a general term that applies to either handwashing, antiseptic hand wash, antiseptic hand rub, or surgical hand antisepsis.

Cleaning your hands before and after patient/resident contact is one of the most important measures for preventing the spread of infections.







# **Handwashing Steps**

Use soap and water when hands are visibly soiled.

- 1. Wet hands avoid hot water to avoid dermatitis.
- 2. Apply soap and thoroughly distribute.
- 3. Lather for at least 20 seconds between fingers, under nails, back of hands, and palms.
- 4. Rinse thoroughly and dry completely.
- 5. Use a clean paper towel to shut off the faucet.

**Note:** Certain situations call for hand hygiene with soap and water, such as after caring for a patient suspected of or diagnosed with Clostridium difficile (C. diff), Norovirus, or Enterovirus D-68.

Steps to Using Alcohol-Based Hand Rubs (Foam, Gel, etc.)



- Apply product to palm of hand.
- Rub hands together covering all surfaces of hands and fingers.
- Rub until dry. **DO NOT** dry your hands with a towel.
- Be sure to use the volume of product recommended by manufacturer.
- Non-surgical applications:
- Steris Allcare Plus (purple label): **Golf ball-sized**.
- Do wash your hands with soap and water after using foam 5-10 times. The emollients in the foam will build up and need to be rinsed off.

# Which is better, hand washing or alcohol-based hand products?

## **Belief**

Alcohol-based hand rub/rinses/gels dry hands out more than soap and water.

# Reality

Alcohol-based rinses or gels containing emollients caused substantially less skin irritation and dryness than the soaps or antimicrobial detergents tested.

Source: CDC MMWR, Guideline for Hand Hygiene in Health-Care Settings, October 25, 2002. Vol. 51, No. RR-16. (p. 13)

# **How to Handrub?**

# RUB HANDS FOR HAND HYGIENE! WASH HANDS WHEN VISIBLY SOILED

Duration of the entire procedure: 20-30 seconds



Apply a palmful of the product in a cupped hand, covering all surfaces;



Rub hands palm to palm;



Right palm over left dorsum with interlaced fingers and vice versa;



Palm to palm with fingers interlaced;



Backs of fingers to opposing palms with fingers interlocked;



Rotational rubbing of left thumb clasped in right palm and vice versa;



Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



Once dry, your hands are safe.



Patient Safety

World Alliance for Safer Health Care

SAVE LIVES
Clean Your Hands

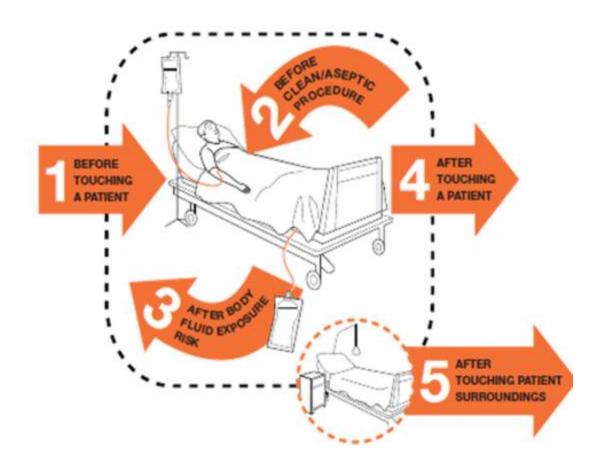
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# Foam In/Foam Out

Monument Health has a catch phrase to remind everyone to "foam in" when going into a patient's/resident's room or patient area and to "foam out" upon leaving the patient/resident room or patient/resident area.

Alcohol-based hand rubs are very efficient cleansers when there is no visible contamination. Alcohol-based foam or gel has been placed outside almost every patient room and in many areas throughout the healing environment.

Please watch the video by clicking <u>here</u>. Note: This video **does** contain audio.



# **Airborne Infections and Communicable Diseases**

### Tuberculosis (TB)

If you see the signs and symptoms of TB (fever, night sweats, persistent cough, weight loss, loss of appetite, or coughing blood) you need to initiate airborne isolation and discuss TB concerns with the provider.

# **Isolation Precautions**

Monument Health provides facilities and services for isolation procedures necessary to help prevent transmission of infections and communicable diseases among patients, residents, caregivers, and visitors.

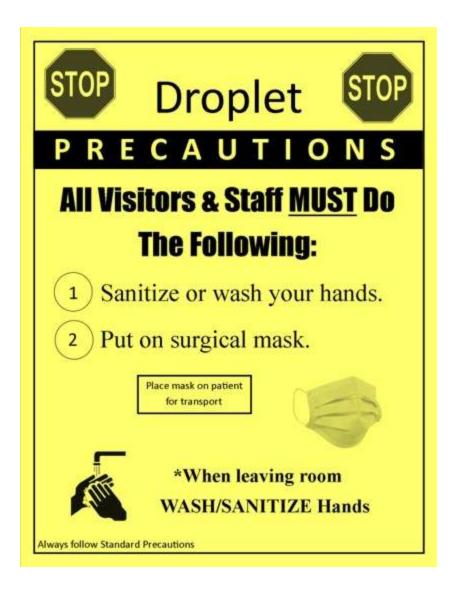
Remember that Standard Precautions will be used with all patients at all times. Patients will be placed in appropriate precautions for known or suspected infectious diseases.

Below is a list of precautions that could be used at Monument Health. The colored square corresponds to the colored sign used for each precaution.



# **Isolation Precautions**

Click on the arrows next to the image below to view more information.



# **Droplet Precautions**

- Mumps
- Whooping Cough
- Influenza



# **Airborne Precautions**

- Chickenpox & Measles
- Suspected or confirmed cases of Laryngeal or Pulmonary Tuberculosis



# **Bleach Contact Precautions**

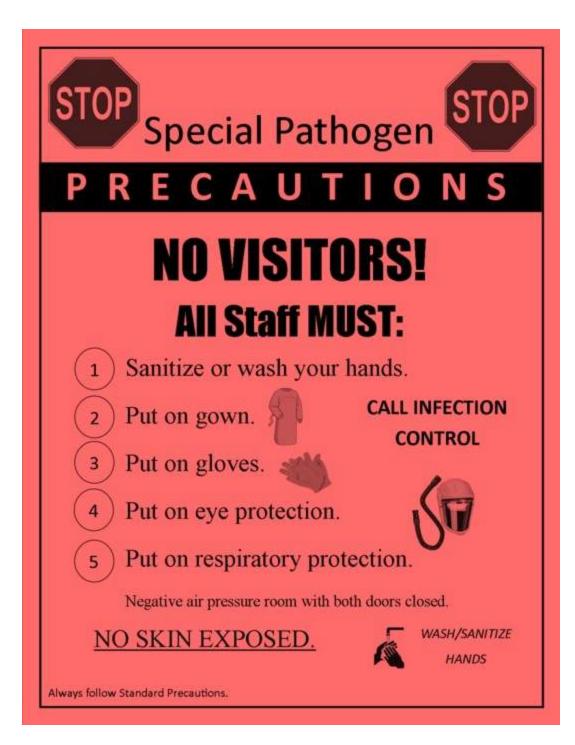
- C. difficle
- Norovirus

Wash Hands with soap and water



# **Contact Precautions**

- Multi-Drug Resistant Organisms
- MRSA, VRE, ESBL, CRE, KPC
- Rotavirus



# **Special Pathogen Precautions**

- SARS
- Smallpox
- Ebola
- MERS

**Call Infection Control Immediately** 

# **PPE for Isolation Situations**



PPE must be d**ON**ned AFTER performing hand hygiene outside of an isolation room.

PPE must be d**OFF**ed at the room threshold and disposed of in the isolation room.

Hand hygiene should be performed outside of an isolation room, after removing PPE.

Please watch the video by clicking <u>here</u>. Note: This video **does** contain audio.



# **Infection Control Completion**

Please record the following number for completion: 324985.

# CONTINUE

# **MRI Suitability for Employees and Guests**

# **Objectives**

By the end of this lesson, learners will be able to recognize the importance of MRI safety. During the lesson learners will:

- identify what an MRI scanner is
- identify what the missile affect in MRI is
- identify ways to prevent the missile effect
- recognize MRI safety zones
- recognize employee MRI screening

# What Is MRI?

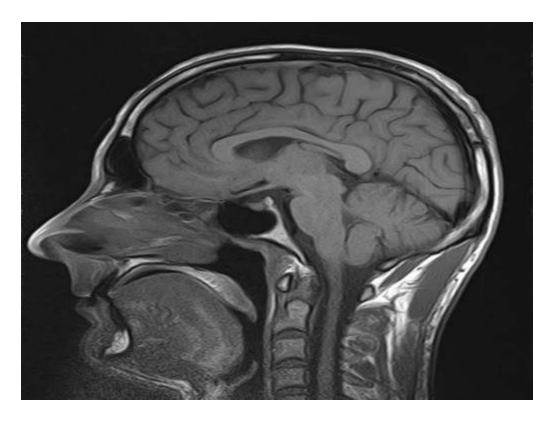


Image of an MRI

# MRI stands for Magnetic Resonance Imaging.



MRI machine

An MRI machine takes images of the body using a powerful magnet and radiofrequency.

# **Hidden Danger**

# What are the hazards in the MRI?

The powerful MRI magnet is **always** on!

Click on each of the + markers in the image below to learn more.





# Danger

**Any** metallic object, including medical devices, present a danger!



# Danger

Dangers arise when a metallic item is brought into the MRI scanner. The item becomes a projectile that flies to the center of the MRI scanner with deadly force!

# Why Is the MRI so Dangerous?



The MRI scanners at Rapid City Hospital are 1.5 tesla in strength.



A 1.0 tesla strength crane is strong enough to pick up junk cars.

Left Image - MRI scanner; Right Image - Crane lifting car

The MRI scanner magnet is stronger than a crane.

# The Magnet Is Always On

Accidents happen when people assume the magnet is off and bring a metal item into the room, or when they are unaware of metal being brought into the room, such as metal items in someone's pockets.

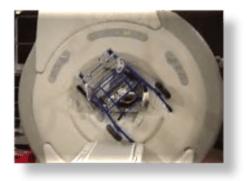
The magnet in MRI scanners is **ALWAYS ON**; whether it be day, night, weekend, holiday etc.

# DANGER HIGH MAGNETIC FIELD!

# STOP

DO NOT ENTER IF YOU HAVE ANY OF THE FOLLOWING:
ALL METAL OBJECTS, PENS, SCISSORS, WATCHES,
CREDIT CARDS, IMPLANTABLE
CARDIOVERTER DEFIBRILLATORS,
PACEMAKERS, OXYGEN TANKS,
PAGERS AND CELL PHONES

**The Missile Effect** 



Metal object in MRI scanner

The closer a metal object comes to the magnet, the more powerful the force is.

The metal object becomes a projectile that may fly through the air at 45 MPH with deadly force, harming anyone in its path.

A few examples of items that may become deadly projectiles in the MRI scanner are shown below.





Patient bed stuck in MRI scanner

# Don't let this happen to you!

# **Steps You Can Take to Prevent the Harmful Missile Effect**

- Increase your awareness of the dangers in MRI.
- Control access to the MRI area.
- Follow clearance before entrance procedures.

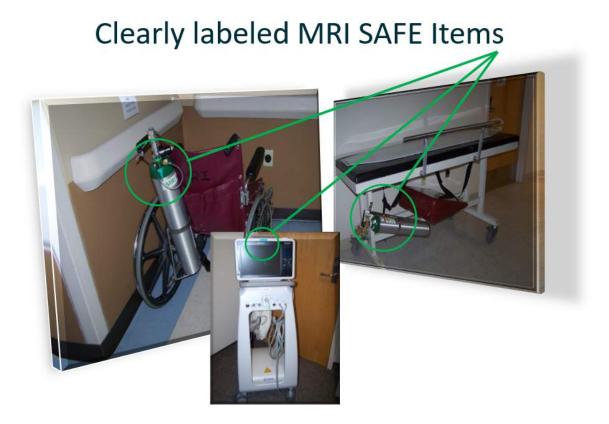
- Screen for metallic implants, metallic foreign body, pregnancy, pacemaker, ICD, and electronically magnetically activated devices.
- Remove all personal metal items such as pagers, cell phones, jewelry, credit cards, keys, etc.

# **Identifying MRI Safe Items**

Items that are safe to go into MRI scanner are items that are nonferrous and not attracted to the powerful magnet used in MRI. The definition of nonferrous is a metal other than iron and alloys that do not contain appreciable amount of iron.

MRI compatible wheelchairs, monitors, and patient gurneys are safe to enter the MRI room.

MRI Safe items are marked with a green MRI SAFE label.



Clearly labeled MRI SAFE items

# **Screening Process**

To keep our patients and employees safe, MRI staff will screen everyone by asking questions about metal items. Click the link below to view, print and complete the employee screening form.

http://regionalhealth/rh/university/Resources/Clinical%20Development/MRI%20Suitability%20for%20Employee%20or%20Guest%20004147-20160120.pdf

The form will ask about these items which are not safe in MRI area.

- Pacemaker/pacing wires
- Cardiac defibrillator
- Aneurysm clip
- Middle ear implants
- Resolution clip or swallowed GI pillcam
- Magnetic dental work
- History of metal in your eyes
- Currently pregnant

# Turn in all completed forms to MRI Supervisor!

# **MRI Zones**

Our accrediting agencies recommend progressive signage and clearance standards.

Zone 1 - Where general public is

**Zone 2** – Where screening process occurs

Zone 3 - MRI Control area where you must have clearance from MRI staff to enter this area

**Zone 4** – Where the MRI Scanner is

# **MRI Access**

If you need access to zones 2, 3, or 4, contact the MRI Supervisor. The MRI Supervisor will verify that you have completed the quiz at the end of this training and you will be given the door code which provides access to the MRI.

# **Summary**

- Remember the MRI Scanner is **ALWAYS ON!**
- Increase your awareness of the dangers, such as the missile effect.
- Control access to the MRI area.
- Follow clearance before entrance procedures.
- Screen for metallic implants, metallic foreign body, pregnancy, pacemaker, ICD, and electronically magnetically activated devices.
- Remove all personal metal items such as pagers, cell phones, jewelry, credit cards, etc.

# MRI Suitability for Employees and Guests Completion

Please record the following number for completion: 897624.

### CONTINUE