

Recommendation for N95 Respirators in MRI

If you have any questions or comments regarding this information sheet please contact DI.EmergencyResponse@ahs.ca

The purpose of this document is to outline strategies that maximize compliance with Infection Prevention & Control (IPC) standards of practice while using Personal Protective Equipment (PPE) and adhering to magnetic resonance safety principles. Changes to the AHS N95 mask inventory have identified the need to provide clarification for N95 mask users in MRI.

Principles

- Safety of staff and patients within an MRI department is of primary importance at all times.
- Equipment in an MRI department is labelled with one of three possible safety levels:
 - MRI Safe – Safe to be used in the MRI environment
 - MRI Conditional – Safe to be used in the MRI environment under specific conditions
 - MRI Unsafe – Not Safe to be used in the MRI environment under any circumstances
- N95 respirators used in the MRI environment fall into two categories:
 - Those that are MRI Safe, with no ferromagnetic components. (i.e.-8210, KC46827(s), KC46727, or similar MRI Safe models)
 - Those that are MRI Conditional, made with ferromagnetic staples or parts. (i.e.-1870+, 8110s, DTC3Z, 1860s or similar MRI Conditional models)
- The ferromagnetic nature of these parts may cause the seal of these respirators to be breached in certain circumstances within Zone 4⁽¹⁾ of an MRI department.
- This potential breach would be a higher concern at magnetic field strength of 3T as opposed to 1.5T.
- The specific scenarios in which this potential breach may occur are varied and complex and would depend on the strength and design of each specific MRI scanner, location of the respirator in relation to the magnet and duty being performed by the staff member.

Recommendations for N95 Use in MR

Recommendation #1:

- Whenever possible, staff required to wear N95 respirators while in Zone 4, should use an MRI Safe model.
- Staff fit tested to an MRI Conditional model N95 respirator may work within Zone 4 under certain conditions.
 - Avoid coming within an area of 30.5cm (12”) of the bore and external housing of the scanner.

Recommendation #2:

- Patient care tasks performed within an area of 30.5cm (12”) of the bore and external housing of the scanner should be accomplished in one of two ways:
 - By a staff member wearing an MRI Safe N95 respirator.
 - By removing the patient so that the task may be performed outside of this sensitive zone.

Recommendation #3:

- Staff who work the majority of their time in the MRI department should be fit tested for an MRI Safe N95 respirator.

⁽¹⁾**Zone 4** – Refers to the room containing the MRI scanner.