



SOP Number **OCMR_003**
 SOP Title **Screening subjects for safety to scan**

	NAME	TITLE	SIGNATURE	DATE
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1. PURPOSE

The intention of this SOP is to describe how subjects for MRI examinations should be screened to ensure that they are safe to be scanned.

2. SCOPE

This SOP applies to all scans performed at OCMR.

3. INTRODUCTION

For most subjects MRI is a safe, non-invasive imaging technique. However there are several situations in which it may be unsafe to scan. All subjects are therefore screened prior to being scanned. This SOP details how this should be done and how the criteria for safe scanning are reviewed.

4. DEFINITIONS

4.1 Controlled Area

A controlled area is defined as an area with a field strength of 5 Gauss or more. Subjects should not enter a field above 5 Gauss without being safety screened. At OCMR the 5 Gauss (0.5mT) line for the 1.5T scanner is contained within the magnet room. For the 3T Trio on level 0, the 5 Gauss line extends out into the control room; back corridor, workshop, admin corridor and courtyard. For the 3T Prisma the 5 Gauss line is contained in the magnet room but a small area of 5 Gauss field is also present in changing room 2 (to the left as you enter the changing area). These areas are clearly marked with yellow and black tape. To reduce the risk of exposure to magnetic field the doors to the control rooms on all magnets at OCMR are equipped with entry security. Any researcher or operator should feel able to challenge, at any time, a person who is within the controlled area that they do not recognise.

In addition to the 5 Gauss controlled areas within the building, the entire roof space at OCMR is considered to be a controlled area due to the 30 metre exclusion zone around each quench duct. Warning stickers are present at the entrance to the roof and on each quench duct. All those who access the roof must sign for the keys and will be provided with a warning note explaining the risks (see appendix 1).

5. RESPONSIBILITIES

5.1 Radiographers

Radiographers are responsible for the oversight of safety screening and ensuring that best practice is followed in the controlled areas.

5.3 Physicists

The OCMR physicists are responsible for advising the radiographers on safety concerns associated with exposure to high magnetic fields.

5.4 Safety Committee

Safety reporting and monitoring is the responsibility of the OCMR staff committee. Safety incidents are reviewed at the monthly staff committee meeting.

A staff list is available on the OCMR website, along with details of approved OCMR radiographers and scanner operators. (www.ocmr.ox.ac.uk)

It is the ultimate responsibility of the person who takes the subject into the 5 Gauss field to ensure that the subject is safe.

6. SPECIFIC PROCEDURE

6.1 At the time of recruitment (research participants)

Consideration should be given to preliminary screening of participants prior to their attendance for a scan. The safety screening forms are available in the documents section of the OCMR website, the questions can be put to potential subjects over the phone prior to recruiting them to a study. If any potential safety concerns come to light at this stage a radiographer should be consulted for advice before the subject attends for their scan.

6.2 On the day of the scan (all scan subjects)

The scanner operator carrying out the scan is responsible for the safety and well-being of the subject at all times. This person will have been trained in all relevant procedures. Subjects will be formally screened outside the controlled area using the appropriate screening form. An appropriately trained person must go through this form in person with the subject prior to the subject entering the control room. A new safety screening form and personal interview must be completed each time a subject is scanned, even if the subject has been scanned before.

An answer of "yes" to any question on the screening form does not automatically mean that it is unsafe for the subject to enter the controlled area, however it will mean that further questions will need to be asked of the subject. Operators will write on the screening form a summary of the answers to additional questions that they have asked and why they believe it is safe, or otherwise to scan the subject.

All forms must be signed by the subject and countersigned by an appropriately trained person.

If there are any concerns as to whether it is safe to scan a subject, advice should be sought from a radiographer or physicist. If there is any doubt as to the safety of scanning a particular subject then that individual should not be allowed into the controlled area and should not be scanned. **The scanner operator has the authority to postpone or cancel the scan due to safety concerns.**

6.3 Before entering the magnet room

It is the responsibility of the person taking the subject into the magnet room to ensure that a thorough secondary screen is performed and that the subject is magnet safe.

Safety should be the primary concern at all times.

6.4 Reviewing the MRI safety screening forms

The MRI safety screening forms are a tool to help the operator ensure that a subject is safe to enter the controlled area. It is essential that the questions on the form represent the current best practice in screening subjects. As such the forms are reviewed regularly and updated to reflect changes in best practice. Operators should ensure that they are using the most up to date version of the form as displayed on the OCMR website.

7. INTERNAL REFERENCES

Current versions of the safety screening forms are available in the documents section of the OCMR website (www.ocmr.ox.ac.uk/documents)

8. CHANGE HISTORY

SOP no.	Effective Date	Significant Changes	Previous SOP no.
OCMR_003	September 2016	New Version	CVM_019_V4
OCMR_003 V2	July 2016	Updates following installation of Prisma and consequent changes to controlled areas	OCMR_003_V1