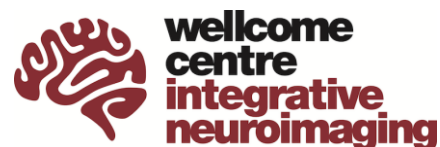


# Safe Scanning Policy

For Studies on the FMRIB Scanners



For scanning at FMRIB the **minimum** number of people that must be in attendance:

Scan Type	Hours	Operator	Within Control Room	Pager holder
<b>Category 0</b> Phantom Scanning	Working hours	Trained operator	-	-
	Extended hours and late evening	Trained operator	-	Within building
<b>Category 1</b> Simple Scanning	Working hours	Trained operator	-	Within building
	Extended hours and late evening	Trained operator	1 Experienced Researcher	-
<b>Category 1a</b> Healthy Subjects	Working hours, extended hours, and late evening	Trained operator	1 Experienced Researcher	-
<b>Category 2</b> Vulnerable Subjects	Working hours or extended hours <b>ONLY</b>	Advanced operator	1 Specifically Trained Researcher	-
<b>Category 3</b> High Risk	Working hours <b>ONLY*</b>	Radiographer	1 Researcher plus 1 Medic/Anaesthetist	-

## Hours:

**Working hours** 08:00 – 18:00 Mon-Fri

**Extended hours** 06:00 – 08:00 Mon-Fri

18:00 – 20:00 Mon-Fri

08:00 – 20:00 Sat/Sun

**Late Evening** 20:00 – 22:00 Mon-Fri

\*All Category 3 scans should be discussed with the Centre Director. Scanning out of hours may be permitted if appropriate cover is provided.

## Scan Types:

**Category 0** Phantom scanning.

**Category 1** Simple scanning, with **no task fMRI** or other additional experimental manipulation, on healthy and non-vulnerable subjects.

**Category 1a** Task fMRI or other additional experimental manipulation on healthy and non-vulnerable subjects. A clinical event (e.g., cardiac arrest) is not expected and the subject population doesn't require special care.

**Category 2** Vulnerable subjects (e.g., very young, elderly, epilepsy, stroke, reduced mobility) or low risk intervention (e.g., simultaneous tDCS, contrast, IV drugs that do not

affect metabolism, gases) There is an increased risk of clinical event, or the subject population requires special care.

### **Category 3**

High Risk (IV drugs that affect metabolism, anaesthetics, acutely ill subjects). There is a specific risk of clinical event.

#### **Operators:**

##### **Trained Operator:**

An operator who has completed their operator training, including yearly updating emergency evacuation training, basic life support (BLS) or higher and their scanner operator driving test.

##### **Advanced Operator:**

An operator who has significant experience in scanning subjects, is competent to deal with an emergency, as determined by the senior FMRIB staff, and has yearly updating of basic life support plus automatic defibrillation device (BLS+AED) or higher.

**Radiographer:** A trained radiographer who has yearly updating of basic life support plus automatic defibrillation device (BLS+AED) or higher.

#### **Researchers:**

##### **Experienced Researcher:**

A trained researcher who is competent to run their experiment. They should have had supervised experience of running MRI experiments and demonstrate safe working around the scanners. This does not include short term undergraduate or MSc project students. The Centre Director will give clarification if in doubt.

##### **Specifically Trained Researcher:**

An experienced researcher who has specific training (medical or otherwise) in the intervention being used, or in dealing with subjects from that population group, as stated in the relevant ethics application.

##### **Medic/Anaesthetist:**

A currently practicing medic or anaesthetist with appropriate honorary or substantive clinical contract with an NHS Trust and trained in Advanced Life Support (ALS).

#### **Pager holder:**

When scanning a subject alone in the control room, or scanning a phantom during extended hours, the operator must give the pager (small two-way radio handset) to a competent person who will be always within FMRIB. If the holder wishes to leave the building, they must formally hand-over the pager to another similarly qualified/responsible person who will cover in their absence e.g., lunch break.

<b>Subject populations</b>	
Psychiatric patients (currently remitted or well controlled)	Category 1a
Elderly (fit and well)	Category 1a
Children under 16	Category 1a
Elderly (infirm)	Category 2
Children under 12	Category 2
Using mobility aids	Category 2
Epilepsy	Category 2
Stroke or TIA	Category 2
Psychiatric patients (currently unwell)	Category 2
Neurodegeneration (dementia/PD/MND)	Category 2
Severe visual impairment	Category 2
Acutely ill	Category 3
Decreased GCS	Category 3
Haemodynamically unstable	Category 3

<b>Experimental manipulations</b>	
Task related fMRI	Category 1a
Monitoring or recording from devices connected to subject	Category 1a
TMS/tDCS before scanning	Category 1a
IV drugs that don't affect consciousness	Category 2
Administration of gases	Category 2
TMS/tDCS during scanning	Category 2
MR contrast	Category 2
Pain device	Category 2
Laser	Category 2
CHEPS	Category 2
IV drugs that affect consciousness	Category 3
Anaesthetics	Category 3