



uk biobank

Brain Health Study

MRI Information Sheet

We will ask you to have an MRI scan as part of the Brain Health Study. This is so researchers can look at the structure of your brain and how it is connected.

This leaflet tells you more about what to expect during the MRI scan. You can also watch videos of other participants having an MRI scan on our website at <https://www.ukbiobank.ac.uk/brain-health-study>.

Your safety and well-being are our priority, and our friendly staff will guide you through every step of the process.

What is MRI?

In the Brain Health Study, we would like you to have an MRI scan of your brain. The scan will take just over half an hour.

MRI means Magnetic Resonance Imaging. It uses a strong magnet and radio waves to produce detailed pictures of your body.

The MRI scanner is a large tube which is open at both ends.



What will happen before the brain scan?

- Before you can have a brain scan, we will need you to answer some safety screening questions to check you are able to have the scan. We will ask questions about your medical history both before the visit when arranging your appointment over the phone with our Participant Resource Centre, and again in person on the day of your visit.
- Please complete the enclosed MRI Pre-imaging Questionnaire before your visit and bring it with you as a reminder.
- We will ask you some questions about your medical history again at your visit, before you have the scan.

If you are coming with a Study Partner, they may be able to help you answer these questions if you are unsure. Your answers will be checked carefully by trained members of staff.

What will I wear during the scan?

- You will be asked to change into a pair of loose-fitting cotton trousers and a top in a private changing room.
- When you visit the research centre, it would help to wear clothes that are easy to change out of and into.
- You will need to leave any loose metal objects (such as money, watches, jewellery, hair grips, dentures, hearing aids and spectacles) in a secure locker.
- If you have a monitor fitted (such as a glucose monitor), you will need to remove this for the duration of the centre visit. Our staff cannot do this for you.

What will happen during the brain scan?

During the MRI scan you will be asked to lie flat on the scanner bed. We will provide blankets, and knee supports to make you as comfortable as possible. The radiographer will place a helmet-like covering over your head and face. You will be able to see as it does not fully cover your eyes. The bed will then move you into the scanner head-first.



The radiographer will operate the scanner from a room next door. They will be able to watch you through a window and you will be able to talk to them during the scan if you need to. You will also have a buzzer to tell them if you wish to stop at any time.

If you need them, it may be possible for your Study Partner to be in the room with you during the scan. Study Partners will also have an MRI safety check to make sure that they are able to join you. During the scan, you will hear loud thumps, taps, chirrups, and pinging noises. This is normal and safe but might be surprising at first.



There are no known long-term effects on hearing, but some of the scanning process can be loud (e.g., as loud as a food mixer (approximately 90 dB)) for short periods. You will be given ear protection to make the process more comfortable.

The brain scan is split into several small sections, each around 3-5 minutes in length. The radiographer will check that you are comfortable and happy to continue in between sections.

What might prevent me having an MRI scan?

You have been sent an MRI Pre-imaging Questionnaire with this leaflet. To make sure it is safe for you to have an MRI scan, please fill out this form carefully (with help if needed). Trained members of staff will then go through it again with you at your research centre visit.

MRI scans use a magnet so you may not be able to have one if you:

- have an electrical implant (e.g., a heart pacemaker or a shunt) in your body or,
- have previously had surgery to your brain that includes an implant like a clip or a coil.

Some medical problems may make it difficult for you to have a scan (e.g., being unable to lie still on a flat surface for half an hour).

If you would like to be in the study but think you might not be eligible to have a brain scan, please telephone us (0800 0 276 276) so that we can check this for you.

Will I find out the results of my scan?

No, you will not receive the results of the tests or a diagnosis. This is because the information we are collecting is for research purposes and is not checked by a doctor.

However, we will contact you and your GP if the radiographer doing your brain scan sees something abnormal and unexpected that may be medically important.

In another UK Biobank study, 1 out of every 100 people scanned had abnormal appearances on their brain scans. For half of these people, the abnormality turned out to be nothing to worry about.

Abnormalities might turn out to be something harmless like a cyst or a technical issue with the scan. It could also be related to a condition that you and your GP already know about. However, other abnormalities might affect how your body functions, your quality of life, or your lifespan.

In case it is something more serious, we will ask for your permission to tell you and your GP if we notice something in your scan.

What are the possible RISKS of the MRI?

An MRI scan is a painless and safe procedure. The radiographer will make you as comfortable as possible.

Taking part in this study should not cause you any harm. We take great care to prevent magnetic objects from entering the MRI room. Before you enter, we will ask you some questions to confirm your suitability for the scans.

While very rare, tattoos can sometimes get warm in the scanner. Please tell the person operating the scanner immediately if you feel this happening.

If you think you might be claustrophobic, please talk to a member of staff, or let the person operating the scanner know before you start.



Who do I contact if I have any questions?

If this leaflet does not answer your questions, please:

- visit our website at <https://www.ukbiobank.ac.uk/brain-health-study>
- phone us free of charge on 0800 0 276 276 (Monday to Friday 9am to 5pm); or
- email us at ukbiobank@ukbiobank.ac.uk.

If you would like to contact the person in charge, please:

- send a letter to Professor Sir Rory Collins, Principal Investigator, UK Biobank, 1-2 Spectrum Way, Adswold, Stockport, Cheshire, SK3 0SA, or
- send an email to ukbiobank@ukbiobank.ac.uk

We will reply to your letter or email promptly in writing, unless you ask us to phone you.

Thank you for your continued support of UK Biobank

By being part of UK Biobank, you are helping to drive scientific discoveries that are improving human health.

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