


QATAR BIOBANK MRI AND COGNITIVE FUNCTION TESTING PARTICIPANT INFORMATION



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Qatar Biobank (QBB) is a centre within Qatar Foundation for Education, Science and Community Development, founded in collaboration with Hamad Medical Corporation and the Ministry of Public Health to aid medical research on prevalent health related conditions in Qatar. Through the collection of samples and information pertaining to the health and lifestyle of a large part of the population of Qatar. Qatar Biobank (QBB) will facilitate vital health research in Qatar.

What is a Magnetic Resonance Imaging (MRI) Scan?

Magnetic Resonance Imaging (MRI) is a method of imaging the body using a large magnet. The magnet is a circular tube which is open at both ends with a table that can move through the tube. The scanner can visualize the bones, tissues, organs and other structures within the body. Qatar Biobank will not use any contrast medium during the scanning procedure.

MRI scans at Qatar Biobank are performed only by highly trained radiographers with expert knowledge in MRI scanning.

Why am I being asked to participate?

As part of the Qatar Biobank cohort study eligible participants who have completed at least their initial visit are being invited to participate in an additional phase involving MRI scanning and CANTAB cognitive function testing. An MRI scan of your brain and whole will be performed, which will take approximately 55 minutes.

What does an MRI scan involve?

You will be asked to complete an MRI safety questionnaire prior to beginning the procedure to ensure it is safe to perform the procedure. Qatar Biobank radiographers have to be certain that you meet the safety standards before entering the MRI scanning room.

Once the radiographer has decided it is safe to proceed, you will be asked to change into Qatar Biobank specific clothing which contains no metal clips, zippers or buttons. You will be asked to lie very still on a table which is surrounded by a magnetic tunnel which is open at both ends. Lightweight coils will be placed over the area of the body being scanned, the coils help to create the images. You will be required to wear headphones during the procedure as the scanner is noisy and this will protect your ears and make you more comfortable. We will perform a brain scan and a whole body scan which will last approximately 55 minutes in total. The scan is painless and does not involve any sort of x-ray or radiation. You will be in communication at all times with the radiographer through an intercom system and a call buzzer system. The radiographer performing the scans can see you at all times.

What will happen during the MRI Scan?

During the scan you will be asked to lie very still on a table, moving during the scan can affect the quality of the images obtained. The table will move through the scanner at different points during the scan. The scanner makes loud knocking sounds and this is normal. Some scans may require you to hold your breath for short periods of time at specific points. You will hear a voice asking you to take a breath and this command is also visible on the viewing headset. During the scan you may experience tingling in your hands and feet and may feel an increase in body temperature. These are normal sensations, however if you feel uncomfortable please use the call buzzer to speak with the radiographer.

Are there any possible side effects from having an MRI scan?

MRI scans are painless and safe. Unlike X-rays and some other imaging tests, an MRI scan does not use radiation. However pregnant women are not advised to have an MRI scan during the first trimester unless clinically indicated. Although the scan is thought to be safe, the long-term effects of strong magnetic fields on a developing baby are not yet known. Therefore please let us know if you are pregnant or there is any possibility of being pregnant.

What if I am anxious or claustrophobic?

Please inform your radiographer if you are anxious, claustrophobic or have trouble in enclosed spaces. The radiographer can speak to you throughout the procedure via an intercom and you can listen to relaxing music via the headphones. There are images projected onto the wall and ceiling of the MRI room during the scan.

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Do I have to fast before my MRI scan?

Fasting for the scan is not necessary, however you may be asked to come to Qatar Biobank fasted as preparation for other tests being performed during your visit?

Results and Incidental Findings

The images generated through the scans are for research purposes only and not intended for diagnostic or healthcare purposes. There is a possibility that while reviewing your MRI scans there may be unexpected results. Qatar Biobank is working with radiologists at Sidra Hospital and Hamad Medical Corporation who will review any scans identified with an abnormal finding. There will be no cost to you for the review of your scans by a radiologist. The scans reviewed by the radiologists will not contain any personal information except your age and relevant medical history collected as part of the research. QBB will contact you to discuss your results if the radiologist reviewing your scans feels that further investigation of the findings is required by your own physician. Medical follow up, diagnosis or treatment is not a part of the Qatar Biobank cohort study and QBB does not have that capability but we will refer you to Hamad Medical Corporation for further investigations.

Cognitive Function Testing

Why am I being asked to participate?

Cognitive function testing is an invaluable method to help researchers to understand the role of specific brain functions. The Cognitive function testing will use a simple assessment system on a touchscreen device using a series of 5 tests that can assess memory, executive function, attention and processing speed, cognitive assessment and rapid visual processing. The series of tests will take approximately 30 minutes to complete.

What does the cognitive function testing involve?

A trained member of Qatar Biobank staff will explain the tests to you. You will be asked to ensure that you are not distracted during the tests and so mobile phones should be switched off or placed out of reach until after the test is completed. You will be

asked to answer a contraindication questionnaire to ensure if it is appropriate to proceed with the testing. Once this has been completed you will be asked a series of pre-test questions to gauge your readiness for the test. All information is confidential and anonymized before being shared with researchers. You will complete a series of 5 different tests each on a touchscreen device using your dominant hand. You will be given verbal instructions through a headset about each test. You will be given an opportunity to practice each test before the live testing begins.

What if I have visual or hearing problems or problem with my dominant hand?

You will be asked to wear headphones throughout the testing. The headphones should reduce any external noise but through the headphones you will receive verbal instructions about each test and the actions required to complete each of the tests. If you normally wear a hearing aid you will be asked to ensure you wear this to complete the test. Before the tests start there is an audio alert check to ensure that you can hear clearly enough to complete the test. You will also be given an opportunity to practice each test before the live testing begins.

If you would normally wear glasses for reading or using a computer at home you will be asked to ensure you are wearing them throughout the test.

If you are unable to see the screen clearly or unable to hear the instructions you may be excluded from completing the tests.

Are there any possible side effects from performing cognitive function testing?

There are no known side effects from performing the cognitive function tests.

Results and Incidental Findings

The results of each test will be presented in a report which will be available to each participant. This report will summarize your cognitive assessment session in Qatar Biobank. CANTAB cognition function test is not a diagnostic tool and the report that you will receive should not be interpreted as indicating a diagnosis for any mental disease.

Questions

Please do not hesitate to contact Qatar Biobank if you have any questions about your MRI scan

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(QF-QBB-CLI-IS-005, REV 00)