

Resource

## MISSION-RA study

Digital health intervention study to help people living with RA engage in physical activity

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The aim of the MISSION-RA project is to develop a digital intervention to help people living with Rheumatoid Arthritis (RA) engage in physical activity, to help improve RA outcomes.

We are looking to recruit people living with RA to be involved in a the “Movingto Support Sustained Improvement of Outcomes in Rheumatoid Arthritis – MISSION-RA” research study, funded by the National Institute for Health Research (NIHR).

The study is being conducted by the University of Birmingham, in collaboration with researchers at the University of Oxford, Loughborough University, and the Universities of Bristol and Southampton. It started at the end of 2021 and will finish in 2026.

The MISSION-RA study aims to develop a new way to help people with RA engage in physical activity. This will be done through designing a smartphone app, and linked wearable activity tracker (the Fitbit). The MISSION-RA app will be co-designed by people living with RA, and will deliver personalised support for physical activity based on user input and artificial intelligence.

### Get involved

The MISSION-RA researchers need people to take part in interviews and focus groups, or to take part in our “activity tracker study” to help us to design the MISSION-RA app.

Who are we looking for? We are currently recruiting up to 250 people living with Rheumatoid

Arthritis. You need to be over 18, have a clinical diagnosis of Rheumatoid Arthritis, and be able to stand and walk – this includes people who need to use an assistive device (e.g. cane or walking frame).

## Activity Tracker Study:

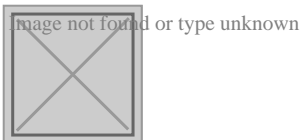
Our activity tracker study aims to develop machine learning models that can accurately detect specific types of physical activity (e.g. standing, walking, stair climbing, cycling), in people living with RA. The aim is to try and use these new models to see how accurately popular activity trackers like the Fitbit, can measure physical activity in people living with Rheumatoid Arthritis.

This is needed because most machine learning models that are currently used in activity trackers like the Fitbit, are not developed using data collected from people living with Rheumatoid Arthritis. This is important as movement patterns may be very different in people living with Rheumatoid Arthritis due to the daily challenges faced, such as symptoms and problems with mobility.

We also hope to be able to use the Rheumatoid Arthritis-specific models we develop to learn about links between activity patterns and health in people with Rheumatoid Arthritis, to provide personalised support for physical activity in the MISSION-RA app.

What would taking part involve? You will be given 3 activity trackers to wear for a week. Two activity trackers would be worn on your wrist, and one on your ankle. We would also ask you to wear a camera clipped to your clothing for 2 days. The camera will take pictures of what you are doing every 20-30 seconds. You will be given instructions on how to use the camera, and your privacy will be protected. During the week you are wearing the activity trackers, we will also ask you to record your symptoms and mood a smartphone app.

The video below provides more information about what to expect if you are interested in taking part.



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Where and when? We would ask you to visit the University of Birmingham to take part. We may also be able to travel to your home for you to take part, or arrange for you to visit the NRAS headquarters in Maidenhead. Your visit will take about 2 hours, and any travel expenses would be paid.

When? Between January 2024 and May 2025.

If you are interested in getting involved in any part of the MISSION-RA study, then please get in touch with [sallym@nras.org.uk](mailto:sallym@nras.org.uk), or contact the Dr. Sally Fenton (the study lead for MISSION-RA), at [mission-ra@trials.bham.ac.uk](mailto:mission-ra@trials.bham.ac.uk)