**WEARABLE CAMERA INSTRUCTIONS**

Thank you for agreeing to wear an automated wearable camera.

**How should I wear the camera?**

Please wear the camera clipped to your clothing. If possible, please wear a high necked t-shirt or top on the days you are wearing the camera during the study. This helps the camera stay securely positioned, and stops it from moving about too much. The camera should be worn at chest height, with the lens facing forward.

Please do not give the camera to anyone else. Please keep it away from children and pets to avoid accidents.



When should I start wearing the camera?

We would like you to wear the camera whilst you are awake for 2 days. The day you visited the hospital is day 1, and the next day is day 2. Please record the time you took the camera off when you went to bed in your **Device log**. When you wake up the next morning, please record the time you put the camera back on in your **Device log**.

How long do I need to wear the camera for?

We would like you to wear the camera for as long as possible during your waking hours for 2 days from your MISSION-RA assessment visit. Please continue doing your normal daily activities while wearing the camera.

You will begin wearing the camera after your assessment visit, this is classed as **Day 1**. You will then be asked to wear the camera all day the following day, which is **Day 2**. The following day is **Day 3,** and you will be **asked to remove your camera at a specific time on Day 3, which is outlined in your Device log**. This time will be around the same time as your MISSION-RA assessment visit on Day 1. Taking the camera off at this time on Day 3, means we get 2 full days of data.

At the time outlined on Day 3 of your device log**,** you can remove the camera and then put it in the freepost envelope provided to return to the research team, along with the activity trackers.

How do I know the camera is recording?

When the camera is recording, the display will be on. When you press the **MENU** button on the side of the device, the display will show the battery life, number of images taken, and the memory used. If the display does not wake up when you press the **MENU** button on the side of the device, please contact the lead researcher, Dr Sally Fenton (E-mail: [s.a.m.fenton@bham.ac.uk](mailto:s.a.m.fenton@bham.ac.uk), Tel: 07964 000182).

Should I wear the camera while sleeping?

No, you should take the camera off just before getting ready for bed. However, please complete the **Device log** to let us know what time you removed the camera each night, and also the time you put it back on the next morning.

Should I wear the camera during sports?

If you think the camera will be safe and stay securely positioned whilst you are taking part in sport, then you can wear it during your activity. However, if you are unsure, please remove the device and write down the sport you were doing, and the time started and finished your sport in the **Device log**. The camera should be ok to wear for moderately intense activities, such as quick walking and slow running.

**If you are unsure about whether to wear your device during an activity, please contact the lead researcher Dr Sally Fenton** (E-mail: [s.a.m.fenton@bham.ac.uk](mailto:s.a.m.fenton@bham.ac.uk), Tel: 07964 000182).

When should I NOT wear the camera?

The camera is not waterproof, so please remove it during water-based activities (e.g. swimming, shower, bath). You may also choose to remove the camera or use the lens cover (explained further later in this document) for privacy, when going to the toilet, getting dressed, for changing your children’s clothes or nappies. For safety reasons, please also remove the camera if operating machinery.

Does the camera record sound or conversations?

No. The camera takes pictures every 20-30 seconds but does not record sound. The camera has a wide-angle lens, so if worn at chest height it captures everything within the wearer’s view.

Can I **stop** the camera recording?

We ask that you do not stop the camera recording during the 2 days you are wearing it. If you need to stop the camera recording your activity (e.g. when you are going to the toilet), please use the **privacy lens cover**, by simply turning the lens cover over the lens. Please remember to uncover the lens again once you are happy to continue your recording.

**Can I accidentally stop the camera recording?**

The camera is turned on and off by pressing and holding the **ACTION** button on the side of the device for a few seconds. If you accidentally turn the camera off, you will see the word “Goodbye” flash across the screen, and the display will not show any information when you press the **MENU** button on the side of the device. To turn the camera back on again, press and hold the **ACTION** button for a few seconds, and you will see the word “Autographer” and “Hello” flash across the display. You can check the device is recording by pressing and holding the **MENU** button again.

Do I need to charge the camera?

Yes. You will need to charge the camera overnight, using the plug and USB cable provided. Whilst the camera is charging, use the privacy lens to stop the camera recording images.

What do I do after I have worn the camera for 2 days?

You will be asked to remove your camera at a specific time on Day 3 of your taking part in the study (where Day 1 is the day you had your MISSION-RA assessment). **The time you need to remove your device on Day 3 is outlined on page 2 of your Device log**. If you forget to remove your device at this time, then just remove it as soon as you remember, and record the time you took the camera off in your **Device log.**

Once you have removed the camera, please put it in the return envelope provided. You should continue to wear the activity trackers and complete the surveys in the MISSION-RA app for another 5 days. After you have finished wearing the activity trackers, you can post the activity trackers back to us along with the camera as soon as possible. **The envelope provided to return the camera and activity trackers is freepost, so you will not have to pay anything to return the devices**. We just ask that you put the envelope in a letter box as you normally would any other letter.

Once your 2 full camera wear days are over, you will also receive a text message and/or email (depending on your preference) to remind you that the camera can be taken off and posted back to us. If we do not receive your devices back within 2 weeks of you starting the study, you will receive an e-mail or text reminder (depending on your preference), to remind you to post them back.

If you lose the return envelope and need another one, please contact the lead researcher, Dr Sally Fenton (E-mail: [s.a.m.fenton@bham.ac.uk](mailto:s.a.m.fenton@bham.ac.uk), or Tel: 07964 000182).

What should I do if members of the public ask about the camera?

If members of the public ask about the camera, please tell them the following:

**“I am volunteering for a research study about my everyday activities. This is a wearable camera. It records images but not sound or conversations. I would be happy to remove it if you would like me to.”**

If they have any concerns or want more information, please give them the research team’s contact details (see tear-off tabs at the bottom of page 8).

How will the privacy of other people I know and work with be protected?

* We ask that you inform those around you (e.g. family, friends, people you live with, direct co-workers) that you are taking part in a research study that requires you to wear a camera for 2 days. You can remove the camera if they ask you to.
* If your work is of a nature that would not allow you to wear the camera (e.g. teaching, law enforcement, medical professionals) then you have the option to wear the camera on your days off to avoid capturing any sensitive images or data while wearing the camera.

On pages 9 and 10 of this document, we have provided **information cards** to help to explain to people you may come into contact with, what you are doing. These cards are for family, friends, employers and co-workers. You can choose to use these cards if you wish, but you do not need to.

We also ask that you please remove the camera if you find yourself recording strangers in places where privacy might reasonably be expected (e.g. a changing room, swimming pool, school, bank, hospital, or airport) or where photography is disapproved of or considered inappropriate (e.g. certain church communities).

If anyone you come into contact with has questions about the project, please ask them to get in touch with the lead researcher, Dr Sally Fenton, using the contact details below:

**Dr Sally Fenton**  
School of Sport, Exercise and Rehabilitation Sciences,

University of Birmingham

Email: s.a.m.fenton@bham.ac.uk

Tel: 07964 000182

I have changed my mind and do not want to wear the camera

If you decide that you do not want to wear the camera, please contact the lead researcher, Dr Sally Fenton (E-mail: [s.a.m.fenton@bham.ac.uk](mailto:s.a.m.fenton@bham.ac.uk), or Tel: 07964 000182), and post the devices back to us using the freepost envelope provided.

What if I have other questions about the camera?

Frequently asked questions have been answered on pages 6 and 7 of this document (see next page). If you have any other questions, please contact the lead researcher, Dr Sally Fenton (E-mail: [s.a.m.fenton@bham.ac.uk](mailto:s.a.m.fenton@bham.ac.uk), or Tel: 07964 000182).

**FREQUENTLY ASKED QUESTIONS**

How is the camera cleaned?

The camera and the attachment clip have been thoroughly cleaned using alcohol-based wipes before they are given to you. If you need to clean the device, please use an isopropyl alcohol-based wipe (70% concentration).

What if the camera breaks or is lost?

Don’t worry. If the camera gets **lost**, please let us know by emailing [mission-ra@trials.bham.ac.uk](mailto:mission-ra@trials.bham.ac.uk), or telephone the lead researcher, Dr Sally Fenton (Tel: 07964 000182). The camera is encrypted so no one will be able to access your images, except for the research team.

If the camera gets **broken**, please let us know by emailing [mission-ra@trials.bham.ac.uk](mailto:mission-ra@trials.bham.ac.uk), or telephone the lead researcher, Dr Sally Fenton (Tel: 07964 000182). Please post it back to us at the end of your 2 days (along with the activity trackers in the freepost envelope provided). We should be able to retrieve any images that have already been captured.

How will my privacy be protected?

You can remove the camera or stop recording at any time if you are feeling uncomfortable. The camera will be encrypted so that only the research team can download and view your images.

You can contact the research team to request specific times of the day in which you would like your images to be deleted in case of sensitive, embarrassing, or private images where you may have forgotten, or not been able, to turn off the camera.

How will the privacy of others be protected?

* We ask that you inform those around you (e.g. family, friends, people you live with, direct co-workers) that you are taking part in a research study that requires you to wear a camera for 2 days. You can remove the camera if they ask you to.
* If you work is of a nature that would not allow you to wear the camera (e.g. teaching, law enforcement, medical professionals) then you have the option to wear the camera on your days off to avoid capturing any sensitive images or data while wearing the camera.

What will happen to the images that are captured?

All images that are captured will be handled in accordance with data protection legislation and used for research purposes only. It will not be possible to anonymise your camera images, but they will be kept in a password-protected folder in a secure system. Your camera images will not be disseminated or published.

Access to the camera images will be limited to the research team at the University of Birmingham and collaborators at the University of Oxford. These researchers will use the camera images to create “codes” for specific types of activities (e.g. walking, stairclimbing). This means the camera images themselves are not what the research team are looking at, but we are really interested in the different activities you are doing whilst wearing the camera. The camera images will be deleted after they have been coded, and the codes will be used to develop the RA-specific computer programme to be used in the MISSION-RA intervention.

**WEARABLE CAMERA INFORMATION CARDS**

**Members of the public:** If members of the public ask about the camera, please tell them the following, and/or provide them with the information card below, which includes the contact details of the research team.

***“I am volunteering for a research study about my everyday activities. This is a wearable camera. It records images but not sound or conversations. I would be happy to remove it if you would like me to.”***

I am volunteering for a research study about my everyday activities. This is a wearable camera. It records images but not sound or conversations. If you have any questions, please contact the study team using the details below:

**MISSION-RA study**

E-mail: [mission-ra@trials.bham.ac.uk](mailto:mission-ra@trials.bham.ac.uk),

Tel: 07964 000182

I am volunteering for a research study about my everyday activities. This is a wearable camera. It records images but not sound or conversations. If you have any questions, please contact the study team using the details below:

**MISSION-RA study**

E-mail: [mission-ra@trials.bham.ac.uk](mailto:mission-ra@trials.bham.ac.uk),

Tel: 07964 000182

I am volunteering for a research study about my everyday activities. This is a wearable camera. It records images but not sound or conversations. If you have any questions, please contact the study team using the details below:

**MISSION-RA study**

E-mail: [mission-ra@trials.bham.ac.uk](mailto:mission-ra@trials.bham.ac.uk),

Tel: 07964 000182

I am volunteering for a research study about my everyday activities. This is a wearable camera. It records images but not sound or conversations. If you have any questions, please contact the study team using the details below:

**MISSION-RA study**

E-mail: [mission-ra@trials.bham.ac.uk](mailto:mission-ra@trials.bham.ac.uk),

Tel: 07964 000182

**INFORMATION FOR FRIENDS AND FAMILY**

You can provide friends and family with a “Friends and family information card”. We have provided some copies of this card in your take home envelope. The card is shown below.

**FRIENDS AND FAMILY INFORMATION**

I am taking part in a study called **MISSION-RA** to help improve the care of people living with Rheumatoid Arthritis by supporting physical activity. The aim of this study is to develop a computer programme that can use data from activity trackers to help people with Rheumatoid Arthritis become more physically active.

To do this, I have been asked to wear a camera which takes images of what I can see and what I am doing, every 20 seconds. The camera does not record sound or conversations.

This data will be used to develop a computer programme, which uses artificial intelligence to automatically recognise specific types of physical activity, such as walking, stair-climbing and swimming. The computer programme will then be used in an intervention tested in the NHS.

**I am asking your permission to wear the camera when I am with you. This could be at home, or whilst we are out and about.**

**What happens to the camera images?**

* The researchers are not interested in the images themselves, but want to know the types of activity I am doing (e.g. walking, driving).
* All images that are captured will be handled in accordance with data protection legislation and used for research purposes only.
* The images will be kept in a password-protected folder in a secure system, which can only be viewed by the research team.
* All members of the research team have been trained in how to securely use these camera images.
* The camera images will be deleted after they have been analysed.

If you have any questions, please contact the MISSION-RA research team at [mission-ra@trials.bham.ac.uk](mailto:mission-ra@trials.bham.ac.uk), or telephone Dr Sally Fenton on 07964 000182.

**INFORMATION FOR EMPLOYERS AND CO-WORKERS**

You can provide employers and co-workers with a “Employer and co-worker” information card. We have provided some copies of this card in your take home envelope. The card is shown below.

**EMPLOYER AND CO-WORKER INFORMATION**

I suffer from a chronic condition called Rheumatoid Arthritis, and I am currently taking part in a study called **MISSION-RA** to help improve NHS care of this condition. The aim of this study is to develop a computer programme that can use data from activity trackers to help people with Rheumatoid Arthritis become more physically active.

To do this, I have been asked to wear a camera which takes images of what I am doing, every 20 seconds. The camera does not record sound or conversations.

This data will be used to develop a computer programme, which uses artificial intelligence to automatically recognise specific types of physical activity, such as walking, stair-climbing and swimming. The computer programme will then be used in an intervention tested in the NHS.

**I am asking your permission to wear the camera whilst I am at work. I will stop the camera recording if I consider any matters arising to be private and confidential.**

**What happens to the camera images?**

* The researchers are not interested in the images themselves, but want to know the types of activity I am doing (e.g. walking, driving).
* All images that are captured will be handled in accordance with data protection legislation and used for research purposes only.
* The images will be kept in a password-protected folder in a secure system, which can only be viewed by the research team.
* All members of the research team have been trained in how to securely use these camera images.
* The camera images will be deleted after they have been analysed

If you have any questions, please contact the MISSION-RA research team at [mission-ra@trials.bham.ac.uk](mailto:mission-ra@trials.bham.ac.uk), or telephone Dr Sally Fenton on 07964 000182.