

# Outdoor swimming as a nature-based intervention for depression

<b>Submission date</b> 30/04/2022	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
<b>Registration date</b> 19/05/2022	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 18/12/2025	<b>Condition category</b> Mental and Behavioural Disorders	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Many people say outdoor swimming improves their mental health. There has been some research showing outdoor swimming helps people with depression, but not enough to say for certain. Social prescribing link workers work with GPs to support individuals to take greater control of their own health. They link patients with community-based activities and non-medical support such as gardening, volunteering opportunities or exercise and sports groups. In this study, social prescribing link workers offer an outdoor swimming course to adults with depression to see if it can help them. This study is a small study called a feasibility study. It will help to decide if it is possible to run a larger clinical trial and, if so, how best to design it. The larger clinical trial would show whether outdoor swimming helps improve depression. It will also give information about who and how it might help.

### Who can participate?

Adults aged 18 years and over experiencing depression (e.g. feeling down or low in mood) and professionals who work with them

### What does the study involve?

People interested in the study can seek information from social prescribing link workers at the study locations. Individuals who decide to take part will either have eight 1-hour sessions of outdoor swimming with a small group, as well as their usual care, or have their usual care only. Usual care may include talking therapies and/or antidepressant medications and community activities. The usual care-only group will be offered the swimming course after the study finishes. The outdoor swimming courses will be run by experienced coaches and will build confidence and water safety skills. During the study, participants will fill out questionnaires that ask about their depression, mental health, wellbeing, and use of health care services. Participants will complete them before the study starts, immediately after the swimming course (or usual care) and 8 weeks later. The researchers will also get feedback from participants, swimming coaches, social prescribing link workers as well as people who declined or dropped out of the study. Their feedback will help to design the full trial. Staff members who participate will be asked to complete questionnaires about their time commitment to the study and asked to provide feedback in a focus group setting.

What are the benefits and risks of participating?

Possible advantages may include being outside, an improvement in mental health and wellbeing, an improvement in physical health, and some may also find being around people beneficial. The water is cold, some people find this unpleasant whilst many report increased feelings of wellbeing. People with underlying physical health conditions should speak to their GP before participating in outdoor swimming. Participants are welcome to wear a wetsuit if they have one or can borrow one. Participants will be encouraged to get out of the water before they become cold. Participants will be given information about what to bring with them, how to warm up after swimming and encouraged to bring a hot drink in a flask to have at the end. The mental health questionnaires used in this study include sensitive questions around suicide, which may be upsetting. The research team will support participants, the team will also direct participants to further support as necessary. The team includes mental health professionals and researchers trained in mental health first aid.

Where is the study run from?

Sussex Partnership NHS Foundation Trust (UK)

When is the study starting and how long is it expected to run for?

April 2022 to April 2023

Who is funding the study?

National Institute for Health and Care Research (NIHR) (UK)

Who is the main contact?

Dr Heather Massey

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## Contact information

### Type(s)

Principal investigator

### Contact name

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### Type(s)

Scientific

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## Additional identifiers

**Clinical Trials Information System (CTIS)**

Nil known

**Integrated Research Application System (IRAS)**

309748

**ClinicalTrials.gov (NCT)**

Nil known

**Protocol serial number**

CPMS 52526, IRAS 309748

## Study information

**Scientific Title**

Outdoor swimming as a nature-based intervention for depression: a feasibility randomised control trial

**Acronym**

OUTSIDE

**Study objectives**

1. To assess the feasibility of undertaking a definitive fully-powered randomised control trial (RCT), comparing an introductory outdoor swimming course, offered in addition to usual care, compared to a group receiving usual care only, in people who have mild to moderate depression.
2. Determine recruitment and retention rates, acceptability of randomisation and measures used to inform the sample size calculation for a definitive fully-powered RCT.
3. Understand the experience of study participants by using focus group discussions, questionnaires and interviews.

## **Ethics approval required**

Old ethics approval format

## **Ethics approval(s)**

Approval pending, London - Surrey Research Ethics Committee (London - Surrey Nottingham Centre, The Old Chapel, Health Research Authority (HRA), NG1 6FS, UK; +44 (0)207 1048 088; surrey.rec@hra.nhs.uk), ref: 22/LO/0268

## **Study design**

Single-centre feasibility randomized control trial

## **Primary study design**

Interventional

## **Study type(s)**

Treatment

## **Health condition(s) or problem(s) studied**

Depression

## **Interventions**

The randomisation procedure will be set up and tested by the trial statistician using <https://www.sealedenvelope.com><sup>TM</sup> with 1:1 allocation to either the intervention or control group with stratification by location and random permuted blocks.

This is a feasibility RCT with 1:1 allocation to a swim course and usual care intervention or usual care group. The study includes a qualitative evaluation of participants' experiences of the outdoor swimming intervention with a focus on better understanding barriers and facilitators to engaging in outdoor swimming. Eighty-eight people meeting eligibility criteria for mild to moderate depression are randomly allocated to receive either their usual care along with eight 1-hour sessions of an introductory outdoor swimming course or their usual care. Participants are asked to complete survey measures at baseline, post-intervention or at the same point for the usual care control group and again in follow-up, 8 weeks later. In addition, participants are invited to focus groups to discuss their experiences of the study.

## **Intervention Type**

Mixed

## **Primary outcome(s)**

- 1 Recruitment is measured by the number of eligible people consenting to participate in the study by October 2022
2. Retention of participants is measured by the number remaining engaged in the study activities for the duration of the study

## **Key secondary outcome(s))**

1. Feasibility measures:
  - 1.1. Swimming course attendance (intervention arm only) will be measured by totaling the number of sessions each person attends at the end of the study
  - 1.2. Completion of questionnaires (in both arms) will be measured by totaling the number of questionnaires completed at baseline, post-intervention or at the equivalent timepoint for the

usual care control group and in follow-up

1.3. Serious Adverse Events (SAEs) and adverse events will be recorded as they arise during the study

1.4. Completeness of data collected in both arms, at each timepoint. This will be measured by the number of questions completed by participants at baseline, or at the equivalent timepoint for the usual care control group and in follow-up.

2. Participant-reported outcomes:

Each measure will be recorded at baseline, post-intervention or at the same timepoint in the usual care control and at follow up:

2.1. Depression symptom severity is measured by the Patient Health Questionnaire-9 (PHQ-9)

2.2. Anxiety symptom severity is measured by the General Anxiety Disorder-7 (GAD-7)

2.3. Wellbeing is measured using the Short form of the Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS)

2.4. Connectedness to nature is measured using the connectedness to nature scale

2.5. Loneliness is measured using the loneliness scale

2.6. Self-compassion is measured using the Sussex-Oxford Compassion for Self-Scale (SOCS-S)

2.7. Mindfulness is measured using the Five-Facet Mindfulness Questionnaire (FFMQ-15)

3. Health economic outcomes measures to assess health-related quality of life and medical resource use; each measure will be recorded at baseline, post-intervention or at the same timepoint in the usual care control and at follow up:

3.1. Health-related quality of life is measured using the EQ-5D-5L

3.2. Recovering quality of life is measured by using the ReQoL-10

3.3. The type and intensity of usual care, use of other health and social care services, such as GP visits, inpatient/outpatient care, A&E, medication use, travel time and cost to travel to and from all different treatments/appointments attendances, estimated using the Clinical Service Receipt Inventory

3.4. Health-related productivity losses measured using the IMTA Productivity Cost Questionnaire

**Completion date**

15/04/2023

## Eligibility

**Key inclusion criteria**

1. Participants give fully informed consent to participate

2. Mild and moderate severity depression, as determined by the PHQ-9 (scores 5 -19)

3. Self-reported ability to swim a minimum distance:

3.1. For sea (50 m, 2 lengths of a normal swimming pool)

3.2. Lake (25 m, 1 length of a normal swimming pool) locations

3.3. No swimming experience required for outdoor unheated swimming pool (lido)

4. Adults aged 18 years or older

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Mixed

**Lower age limit**

18 years

**Upper age limit**

99 years

**Sex**

All

**Total final enrolment**

0

**Key exclusion criteria**

1. People wishing to participate in a sea location who are not able to swim 50 m (2 lengths) in an indoor or fully heated outdoor pool
2. People wishing to participate in a lake location who are not able to swim 25 m (1 length) in an indoor or fully heated outdoor pool
3. Currently under the care of a secondary mental health NHS service
4. Risk of suicide or recent suicidal intent or attempts or self-harm requiring medical treatment
5. Other mental health problems to a severe degree
6. History of cardiac abnormalities (e.g., ischaemic heart disease/angina and congestive heart failure)
7. Immediate (first degree) relative history of cardiac events (GP consultation will be required for inclusion)
8. Respiratory conditions triggered by cold
9. Coldwater urticaria (a skin reaction to cold that appears within minutes after cold exposure)
10. Non-freezing cold injuries/Raynaud's
11. Not able to speak English to a level that would enable them to understand safety instructions

**Date of first enrolment**

20/05/2022

**Date of final enrolment**

04/09/2022

## **Locations**

**Countries of recruitment**

United Kingdom

England

**Study participating centre**

**ONSIDE advocacy**

Williamson House

14 Charles Street

Worcester

England  
WR1 2AQ

**Study participating centre**  
**Parliament Hill Surgery**  
113-117 Highgate Road  
London  
England  
NW5 1TR

**Study participating centre**  
**Caversham Group Practice**  
4 Peckwater Street  
Kentish Town  
London  
England  
NW5 2UP

**Study participating centre**  
**Prince of Wales Group Surgery**  
52 Prince of Wales Road  
London  
England  
NW5 3LN

**Study participating centre**  
**Litchdon Medical Centre**  
Landkey Road  
Barnstaple  
England  
EX32 9LL

**Study participating centre**  
**Caen Medical Centre Site**  
Caen Medical Centre  
Braunton  
England  
EX33 1LR

# Sponsor information

## Organisation

Sussex Partnership NHS Foundation Trust

## ROR

<https://ror.org/05fmrjg27>

# Funder(s)

## Funder type

Government

## Funder Name

National Institute for Health Research

## Alternative Name(s)

National Institute for Health Research, NIHR Research, NIHRresearch, NIHR - National Institute for Health Research, NIHR (The National Institute for Health and Care Research), NIHR

## Funding Body Type

Government organisation

## Funding Body Subtype

National government

## Location

United Kingdom

# Results and Publications

## Individual participant data (IPD) sharing plan

## IPD sharing plan summary

Data sharing statement to be made available at a later date

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>		21/10/2025	18/12/2025	Yes	No
<a href="#">Protocol article</a>		13/07/2023	17/07/2023	Yes	No
<a href="#">HRA research summary</a>			28/06/2023	No	No
<a href="#">Participant information sheet</a>	Participant information sheet	11/11/2025	11/11/2025	No	Yes



[Study website](#)

Study website

11/11/2025 11/11/2025 No

Yes