

# Visual scanning training for loss of vision in half the visual field (hemianopia) - SEARCH trial

<b>Submission date</b> 07/01/2021	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 08/01/2021	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 18/03/2025	<b>Condition category</b> Ear, Nose and Throat	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Sight is considered by many as our most important sense. After stroke a common problem is 'hemianopia'; loss of one half of the visual field leaving people with a 'blind' side to their right or left side. Hemianopia occurs suddenly in 30% of stroke survivors with devastating impact on quality of life - individuals cannot drive, bump into people/objects, and can lead to loss of independence, falls and depression. Treatment to help stroke patients compensate for visual field loss is variable and not standardised in the NHS because of uncertainty about what works best and when is the best time to offer treatment. This causes an unacceptable difference in the care individuals receive. Visual scanning training involves repeated practice by the patient at locating different targets on both seeing and blind sides of their visual field. Training can be provided by many methods – some needing paper cards and others needing computers. Paper-based visual scanning training is available to ALL patients; computer training is not. A review of treatment options for hemianopia concluded that visual scanning training is potentially useful. We recently completed a pilot trial (VISION) to test a training card for visual scanning (involving repeated practice by the patient at locating different targets on both seeing and blind sides of their visual field). Our training shows promise and will be carefully investigated in this full trial. We aim to find out how effective paper-based visual scanning training is for hemianopia after stroke.

### Who can participate?

Patients aged 18 or over who have recently had a stroke and are having problems with their vision known as homonymous hemianopia.

### What does the study involve?

In a randomised clinical trial 71 people will undertake eye scanning training and 71 people will undertake sham training; both for 30 minutes daily, 7 days/week over 6 weeks. Everyone will be followed for 6 months. No additional visits are required. We will test peoples' visual reactions and independence in daily activities and compare groups to see if there is more benefit from scanning treatment. For both groups, the researcher will record all vision information taken from the participants' normal eye examination such as level of sight on the vision letter chart and amount of visual field absent with hemianopia. At routine eye clinic visits, they will be asked some additional questions by the researcher about their stroke and their vision, e.g. measures of

reading ability and mobility. We will also ask them to complete three questionnaires at each visit. This will give us information about how their loss of vision impacts on day-to-day activities.

What are the possible benefits and risks of participating?

There is potential for visual scanning training to benefit stroke survivors by improving their adaptation to hemianopia. There is potential for cost-savings in NHS/social care through maximising stroke survivor's use of their remaining vision, so lessening the impact on daily life activities. This trial is important: it addresses an area of treatment for which there is limited evidence and no standard care in the NHS. This treatment is a top priority highlighted by two national surveys involving large numbers of patients and carers. It can take some time for participants to get used to the change in their vision and the treatments to help them adapt, but we do not foresee any additional risks of being involved in this study. We cannot promise that this study will help participants. We expect that the information we get from this study will improve how we deliver treatment in the future.

Where is the study run from?

University of Liverpool (UK)

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

December 2020 to March 2024

Who is funding the study?

The study is funded by Fight for Sight and the Stroke Association

Who is the main contact?

Prof Fiona Rowe (scientific)

rowef@liverpool.ac.uk

Dr Laura Wright (public)

searcht@liverpool.ac.uk

**Study website**

<http://www.searchtrial.co.uk/>

## Contact information

**Type(s)**

Scientific

**Contact name**

Prof Fiona Rowe

**ORCID ID**

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**Type(s)**

Public

**Contact name**

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## Additional identifiers

**EudraCT/CTIS number**

Nil known

**IRAS number**

293576

**ClinicalTrials.gov number**

Nil known

**Secondary identifying numbers**

IRAS 293576

## Study information

**Scientific Title**

A randomised controlled trial of Scanning Eye trAining as a Rehabilitation Choice for Hemianopia after stroke (SEARCH)

**Acronym**

SEARCH

**Study objectives**

The primary objective is to determine the clinical effectiveness of visual scanning training to treat homonymous hemianopia in stroke survivors.

**Ethics approval required**

Old ethics approval format

**Ethics approval(s)**

Approved 12/03/2021, Wales Research Ethics Committee 1 Cardiff (Health and Care Research Wales, Castlebridge 4, 15-19 Cowbridge Road East, Cardiff, CF11 9AB, UK; +44 (0)2920 785738; Wales.REC1@wales.nhs.uk), REC ref: 21/WA/0030

**Study design**

Multi-centre blinded randomized parallel two-arm trial

**Primary study design**

Interventional

**Secondary study design**

Randomised controlled trial

**Study setting(s)**

Hospital

**Study type(s)**

Treatment

**Participant information sheet**

Not available in web format, please use contact details to request a participant information sheet

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

Adult stroke survivors with confirmed objective evidence of stable homonymous hemianopia

**Interventions**

Participants will be randomised via a secure (24-hour) web-based randomisation system controlled centrally by the University of Liverpool to receive either arm A visual scanning training or arm B sham training (in a ratio of 1:1).

Arm A is a paper-based visual scanning training package; consisting of training sheet and training instructions. It is portable, self-administered, does not need expert set-up, does not require expertise to use it or support its use, and can be used at home or any care facility.

The control (arm B) is sham training comprising a series of slow, tracking eye movements undertaken with both eyes open (versions) and with each eye covered in turn (ductions). These movement patterns do not engage scanning eye movements. A training sheet and instructions will be provided, similar to the intervention arm.

The treatment period for both arms is 6 weeks and the total follow up period is 26 weeks.

**Intervention Type**

Behavioural

**Primary outcome measure**

Visual function measured using the National Eye Institute Visual Function Questionnaire 25 (NEI VFQ-25) score at baseline and 26 weeks

## Secondary outcome measures

At baseline and 26 weeks:

1. Daily activity measured using the Nottingham Extended Activities of Daily Living (NEADL)
2. Quality of life measured using the EQ-5D-5L questionnaire
3. Visual impairment impact of stroke measured using the BIVI-IQ questionnaire
4. Visual field measurement (Esterman programme)
5. Visual scanning performance measured using a table-top scanning task (determining speed of detection and accuracy of detection)
6. Adverse events measured using patient records

## Overall study start date

01/12/2020

## Completion date

31/03/2024

# Eligibility

## Key inclusion criteria

1. Clinically diagnosed stroke
2. Aged 18+ years
3. Stable hemianopia
4. Able to engage in training
5. Informed/proxy consent
6. Written and informed consent obtained from the participant and agreement of the participant to comply with the requirements of the study

## Participant type(s)

Patient

## Age group

Adult

## Lower age limit

18 Years

## Sex

Both

## Target number of participants

157

## Total final enrolment

160

## Key exclusion criteria

1. Inability to undertake treatment (e.g. severe cognition problems)
2. Unwilling to participate
3. Presence of severe visual inattention
4. Other serious concomitant medical condition (e.g. life expectancy <6 months)

**Date of first enrolment**

01/05/2021

**Date of final enrolment**

31/07/2023

## **Locations**

**Countries of recruitment**

England

Scotland

United Kingdom

Wales

**Study participating centre****University of Liverpool**

Institute for Population Health

Waterhouse Building Block B

1-3 Brownlow Street

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L69 3GL

**Study participating centre****Salford Royal NHS Foundation Trust**

Stott Lane

Salford

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**Study participating centre****Betsi Cadwaladr University LHB Trust**

Wrexham Maelor Hospital

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LL13 7TD

**Study participating centre**

**Wirral University Teaching Hospital NHS Foundation Trust**

Arrowe Park Hospital  
Arrowe Park Road  
Upton  
Wirral  
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CH49 5PE

**Study participating centre**

**St Helens and Knowsley Teaching Hospitals NHS Foundation Trust**

Eye Clinic  
Ipswich Hospital  
Heath Road  
Whiston  
United Kingdom  
L35 5DR

**Study participating centre**

**East Suffolk and North Essex NHS Foundation Trust**

Royal Oldham Hospital  
Rochdale Road  
Ipswich  
United Kingdom  
IP4 5PD

**Study participating centre**

**Pennine Acute Hospitals NHS Foundation Trust**

Royal Oldham Hospital, Rochdale Road  
Oldham  
United Kingdom  
OL1 2JH

**Study participating centre**

**Warrington and Halton Teaching Hospitals NHS Foundation Trust**

Warrington Hospital, Lovely Lane, Warrington, Cheshire  
Warrington  
United Kingdom  
WA5 1QG

**Study participating centre**

**Lancashire Teaching Hospitals NHS Foundation Trust**

Royal Preston Hospital, Sharoe Green Lane, Fulwood , Preston, Lancashire  
Preston  
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PR2 9HT

**Study participating centre**

**University Hospitals Dorset NHS Foundation Trust**

Eye Unit, Royal Bournemouth Hospital, Castle Lane East  
Bournemouth  
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BH7 7DW

**Study participating centre**

**United Lincolnshire Hospitals NHS Foundation Trust**

Trust Headquarters, Lincoln County Hospital, Greetwell Road, Lincoln, Lincolnshire  
Lincoln  
United Kingdom  
LN2 4AX

**Study participating centre**

**Imperial College Healthcare NHS Foundation Trust**

St. Marys Hospital, Praed Street, London  
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W2 1NY

**Study participating centre**

**Bradford Teaching Hospitals NHS Foundation Trust**

Bradford Royal Infirmary, Duckworth Lane, Bradford, West Yorkshire  
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BD9 6RJ

**Study participating centre**

**King's College Hospital NHS Foundation Trust**

King's College Hospital, Denmark Hill, London  
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United Kingdom  
SE5 9RS



**Study participating centre**

**Bolton NHS Foundation Trust**

The Royal Bolton Hospital, Minerva Road, Farnworth, Bolton, Lancashire  
Bolton  
United Kingdom  
BL4 0JR

**Study participating centre**

**Sheffield Teaching Hospitals NHS Foundation Trust**

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S10 2JF

**Study participating centre**

**University Hospitals Birmingham NHS Foundation Trust**

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B9 5SS

**Study participating centre**

**Oxford University Hospitals NHS Foundation Trust**

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OX3 9DU

**Study participating centre**

**Countess of Chester Hospital NHS Foundation Trust**

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United Kingdom  
CW1 4QJ

**Study participating centre**

**Mid Cheshire Hospitals NHS Foundation Trust**

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E1 1FR

**Study participating centre**

**Leighton Hospital**

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United Kingdom  
CW1 4QJ

**Study participating centre**

**Whipps Cross University Hospital**

Whipps Cross Road  
Leytonstone  
London  
United Kingdom  
E11 1NR

**Study participating centre**

**The Royal London Hospital**

Whitechapel Road  
Whitechapel  
London  
United Kingdom  
E1 1FR

**Study participating centre**

**Moorfields Eye Centre at Croydon University Hospital**

530 London Road  
Thornton Heath  
United Kingdom  
CR7 7YE

**Study participating centre**

**Cheltenham General Hospital**

Sandford Road  
Cheltenham  
United Kingdom  
GL53 7AN

**Study participating centre**

**Cambridgeshire Community Services NHS Trust**

Therapy Hub

Bedfordshire Hospital NHS Foundation Trust and Dunstable University Hospital, Lewsey Road  
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**Study participating centre**

**Milton Keynes University Hospital**

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**Study participating centre**

**Calderdale Royal Hospital**

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**Stoke Mandeville Hospital**

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HP21 8AL

**Study participating centre**

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**Study participating centre**

**Yeovil District Hospital NHS Foundation Trust**  
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**Study participating centre**

**Moorfields Eye Centre at St George's Hospital**  
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## Sponsor information

### Organisation

University of Liverpool

### Sponsor details

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### Sponsor type

University/education

### Website

<http://www.liv.ac.uk/>

### ROR

<https://ror.org/04xs57h96>

## Funder(s)

### Funder type

Charity

### Funder Name

Fight for Sight

### Alternative Name(s)

Fight for Sight, Inc., National Council to Combat Blindness, Fight for Sight (U.S.), FFS

### Funding Body Type

Government organisation

### **Funding Body Subtype**

Trusts, charities, foundations (both public and private)

### **Location**

United States of America

### **Funder Name**

Stroke Association

### **Alternative Name(s)**

### **Funding Body Type**

Private sector organisation

### **Funding Body Subtype**

Associations and societies (private and public)

### **Location**

United Kingdom

## **Results and Publications**

### **Publication and dissemination plan**

The results from different participating sites will be analysed together and published as soon as possible in a high-impact peer-reviewed journal, maintaining participant confidentiality at all times.

### **Intention to publish date**

31/05/2025

### **Individual participant data (IPD) sharing plan**

At the end of the trial, after the primary results have been published, the anonymised individual participant data (IPD) and associated documentation (e.g. protocol, statistical analysis plan, annotated blank CRF) will be prepared in order to be shared with external researchers. All requests for access to the IPD will be reviewed by the CI.

### **IPD sharing plan summary**

Available on request

### **Study outputs**

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">HRA research summary</a>			28/06/2023	No	No
<a href="#">Results article</a>		13/03/2025	18/03/2025	Yes	No