



# Study of Prisms and Therapy in Attention Loss after stroke (SPATIAL)

## Easy read summary report

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Written with the help of stroke survivors

## **Study Contacts:**

Audrey Bowen or Kate Woodward-Nutt on behalf of the SPATIAL team



(0161) 275 1731



SPATIALstroke@manchester.ac.uk

#### What is this report?

This is a short final report on a 2.5 year project called "**Study of Prisms and Therapy in Attention Loss after Stroke**", or "**SPATIAL**" for short.

It summarises key points about what we did and what we found.

#### Why have I received it?

You, or your family, **kindly took part** or **expressed an interest** in the SPATIAL study and agreed that we could send you this report.

The study included **stroke survivors** who may have **had their stroke some time ago**.

We express our sympathies to anyone since bereaved.

If you have **any questions** about this report or need **support to understand it**, please **contact us** using the **details on the front cover**.

The report is available **online** and **with audio** on our website: https://sites.manchester.ac.uk/spatial/

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## Glossary of terms used in this report

Carer:	A friend or family member who <b>provides support</b> to a stroke survivor.
Cognition:	The <b>thought processes</b> involved in <b>learning, organising</b> <b>and understanding</b> things.
Feasibility	A piece of research done <b>before a main study</b> to answer
study:	the question "Can this study be done?"
Inattention:	A cognitive issue which causes a stroke survivor to <b>miss</b>
	one side of space or objects. The eyes work but the
	person <b>does not see everything</b> .
Prism	A therapy for inattention which we want to evaluate.
Adaptation	
Training:	
Process:	A method which looks at how the research has been
Evaluation:	carried out.
Proof of	Part of the study aimed at <b>testing out</b> how the <b>therapy</b>
Concept:	might work.
Randomised	A study where patients are allocated <b>at random</b> to receive
controlled trial:	one of several treatments. For SPATIAL we compared
	Prism Adaptation Training, as part of occupational
	therapy, with occupational therapy on its own.
SPATIAL:	Study of Prisms and Therapy in Attention Loss after Stroke.
Spatial	A cognitive issue which causes a stroke survivor to <b>miss</b>
neglect:	one side of space or objects. The eyes work but the
	person does not see everything. Also known as
	"inattention".

#### What is the SPATIAL study?

Each year in the UK, over 100,000 people have a stroke. Approximately **one third show "spatial neglect".** This is also known as "inattention". Inattention affects awareness of one side causing the person to **miss that side**. The eyes work but the person does not see everything as the brain does not send the messages.

Patients with inattention caused by stroke:

- stay in hospital much longer and
- **need more support** when they leave hospital

than those without inattention.

Prism adaptation training is a therapy that showed promise in improving inattention in some small studies. However therapies require robust testing in large, randomised controlled trials to find out whether they truly help.

SPATIAL is a feasibility study developed in partnership with



stroke survivors. It started in June 2018 and used several methods to understand more about providing Prism Adaptation Training as part of in-patient occupational therapy for people with inattention after stroke.

#### Who was involved?

The study was run by researchers at:

- The University of Manchester •
- Salford Royal NHS Foundation Trust and •
- The University of the West of England, Bristol.



The other important partner was:

#### **The SPATIAL Patient Advisory Group**

The group members all have first-hand experience of stroke. They helped with every aspect of planning, delivering and understanding the study and helped write this report.



Patient Advisory Group members wearing prism glasses

#### What was the purpose of the study?

We wanted to find out if it was feasible:

- for NHS Occupational Therapists to provide Prism
  Adaptation Training as part of in-patient therapy for people with inattention after stroke.
- to go on to **run a large trial**.

#### What were the research questions?

We wanted to find out:

- How many patients would agree to take part?
- How many patients would stay involved for 12 weeks?
- Where was the best place to do the research?
- Would carers want to take part; and was it necessary to ask them to do so?
- Which staff would be best able to complete the patient assessments?
- If one session of Prism Adaptation Training would increase patients' ability to take part in occupational therapy?
- Were the **research** and **therapy acceptable** to:
  - patients?
  - carers?
  - occupational therapists?



#### How were these questions answered?

SPATIAL had 3 parts



- 1. We carried out a feasibility randomised controlled trial
  - We invited patients to take part in the trial.
  - Three out of four patients who took part had prism adaptation training as part of occupational therapy, for 3 weeks.
  - The other patients who took part continued with their regular occupational therapy.
  - We visited patients **3 weeks and 12 weeks** after the start of therapy to complete assessments.
- 2. We included a proof of concept study
  - We asked patients who took part in the study if we could **video record, or observe,** their first therapy session.
  - We looked at whether Prism Adaptation Training helped people to take a more active part in their occupational therapy.
- 3. We completed a process evaluation
  - We invited some **patients** to take part in **an interview**.
  - We also interviewed some carers and occupational therapy staff.

## What is Prism Adaptation Training?

- Patients put on **prism glasses**.
- These glasses **shift vision** to one side.
- Patients are then asked to point at a target shown by the therapist.
- They continue pointing at targets for up to 5 minutes.
- The prism glasses are removed. They are not regular glasses and are only worn for pointing.



The aim is that patients **adapt to the shifted vision** which could **help with inattention**.

After Prism Adaptation Training patients continue with their usual occupational therapy.

#### Who took part?

70% of patients who were eligible took part in the study.

**53 patients** took part. They were:

- an average of **2 weeks after stroke**
- aged from **24 to 89 years**
- 57% were men



**34 carers** took part. They were:

- aged from 24 to 89 years
- 65% were women

**145 staff** were **trained**. We trained **more staff than needed** to make sure that **enough** trained staff were **available**.

- 83 staff actively took part in the study
- 10 staff were interviewed

## What therapy did patients receive?

Three out of four patients were randomised to receive Prism Adaptation Training as part of their Occupational Therapy.

Prism Adaptation Training typically took place:

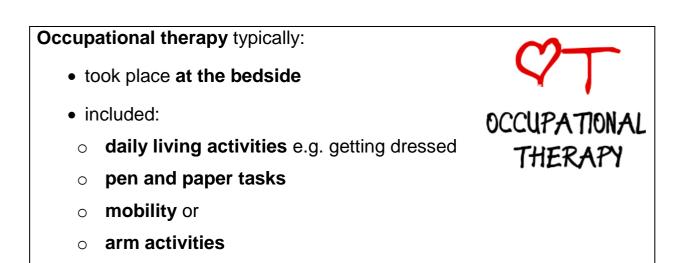
- at the patient's hospital bedside
- with the patient seated in a **wheelchair**
- at the start of the occupational therapy session

Prism Adaptation Training took place for an average of:

- 5 minutes per session
- 7 sessions per patient

Very few (4%) of the 297 Prism Adaptation Training sessions were declined.

All patients continued to receive their regular Occupational Therapy



#### What did the outcome assessments show?

#### **Outcome assessments**

Assessments were completed 3 weeks and 12 weeks after

the start of therapy.

- Drop out was low
  - $\circ~89\%$  of patients completed the 3~week assessments. Of these:
  - 83% patients completed the 12 week assessments.

#### 3 week assessments

- 47 assessments were completed
- **11** (23%) patients had been **discharged** from in-patient care

#### 12 week assessments

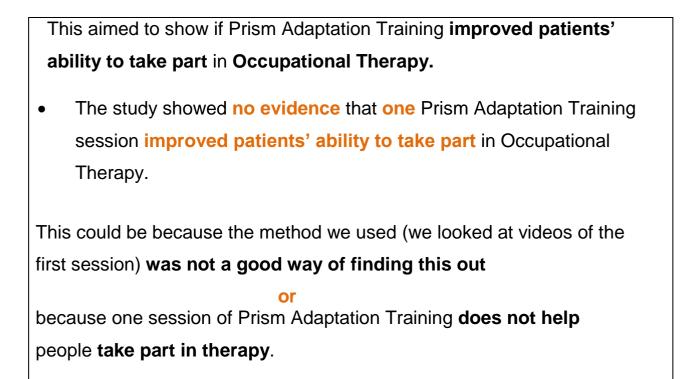
- The assessment was more detailed than the 3 week assessment
- 39 assessments were completed
- Most patients (74%) had left hospital and were assessed at home

The main outcome assessment measured activities of daily living. This was completed by **all 39 patients** at 12 weeks and there was **excellent data completeness**.

> None of the assessments showed any sign that patients who had Prism Adaptation Training did better than those who did not.



## What did the Proof of Concept study show?



#### What did the process evaluation show?

We interviewed:

- 7 patients
- 5 carers
- **10 occupational therapy staff** involved in providing the therapy

Patients were **overwhelmingly positive** about taking part and many said that they would recommend it to others.

But a few people found Prism Adaptation Training boring or tiring.

#### Therapists:

- were **positive about their involvement** in the study
- valued research into treatment for inattention
- would be **keen to take part** in a **follow-up study**

#### What does this all mean?

SPATIAL showed that it would be **possible and acceptable**, to **patients**, **carers and staff**, to conduct **a large research trial** of **therapy** for **stroke survivors with inattention** that begins in **hospital**, **early after stroke**.

## However

None of the assessments suggested that Prism Adaptation Training, as part of occupational therapy as provided in this study, is better than standard occupational therapy, so we cannot justify a large trial of Prism Adaptation Training.

#### What next?

SPATIAL has finished and we have learnt a lot.

Thank you for helping us with the study; you are among the first to hear the study findings.

We also plan to share our findings internationally with clinicians, researchers and others interested in stroke rehabilitation.

We still have a lot more work to do and we are:

- reviewing other prism research to compare our findings
- searching for alternative therapies for inattention
- working with others to **find the best assessments** for inattention
- writing articles to raise awareness and share our findings.

## How can I find out more?

If you have **any questions** about the study or about getting involved in research, you can **contact us on:** 



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There will be **detailed scientific reports** available on our website in late 2021. <u>https://sites.manchester.ac.uk/spatial/</u>

Please let us know if you would like us to send you a copy.



to **everyone** who played a part in this study.

Special thanks to the **Patient Advisory Group** for their **support throughout the study** and for helping make this booklet **easier to read**.



The University of Manchester





Salford Royal NHS

**NHS Foundation Trust** 



The Stroke Association: <u>https://www.stroke.org.uk/</u>

Helpline: 0303 3033 100 or email: helpline@stroke.org.uk.

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The University of Manchester Oxford Road Manchester M13 9PL United Kingdom www.manchester.ac.uk Royal Charter RC000797