

# Cognitive Rehabilitation for Attention and Memory in people with Multiple Sclerosis (MS)

<b>Submission date</b> 14/08/2014	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
<b>Registration date</b> 14/08/2014	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 15/01/2020	<b>Condition category</b> Nervous System Diseases	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Many people with multiple sclerosis (MS) experience problems with attention, concentration and memory. They may be offered advice on how to cope with these problems. Cognitive rehabilitation is a structured approach to deal with these problems. The aim of this study is to compare group cognitive rehabilitation programme with usual care. We will look at the usefulness of the rehabilitation in reducing memory and attention problems and what it would cost to deliver this programme in the NHS.

### Who can participate?

Adults aged 18-70 years with MS.

### What does the study involve?

Participants will be in the study on average 16 months from consent to end of follow-up. There will be an initial assessment to find out whether the participant fulfils all the criteria to take part in the study. The second visit will record baseline details and the participants availability to attend group sessions. When enough participants have been enrolled, each participant will be randomly allocated to receive either group cognitive rehabilitation sessions plus usual care or usual care only. Participants allocated to the usual care group will not have to do anything else until their 6 month follow-up appointment. Participants allocated to the cognitive rehabilitation group will be invited to attend 10 therapy sessions lasting about 1.5 hours, which will take place over about 10 weeks and are led by an assistant psychologist. All participants will have follow-up visits at 6 and 12 months. These will include assessments and completion of questionnaires.

### What are the possible benefits and risks of participating?

We do not know whether taking part in the study will help but we expect that some people will find the intervention helps them cope with memory and attention problems. However, the information we get from this study may help us to treat people with MS and attention and memory problems better in future. There are no particular risks involved in taking part in this study.

### Where is the study run from?

Four centres in the UK, based in Nottingham, Sheffield, Liverpool and Birmingham. Updated 22

/06/2017: Five centres in the UK, based in Nottingham, Sheffield, Liverpool, Bristol and South Tees.

When is the study starting and how long is it expected to run for?  
The study starts in September 2014 and is expected to run until August 2018.

Who is funding the study?  
National Institute for Health Research (NIHR) (UK)

Who is the main contact?  
Prof Nadina Lincoln  
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## Contact information

**Type(s)**  
Scientific

**Contact name**  
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## Additional identifiers

**Protocol serial number**  
17196

## Study information

**Scientific Title**  
Cognitive Rehabilitation for Attention and Memory for people with Multiple Sclerosis (CRAMMS): a pragmatic randomised controlled trial

**Acronym**  
CRAMMS

**Study objectives**  
The overall aim is to assess the clinical and cost-effectiveness of cognitive rehabilitation for attention and memory problems in people with multiple sclerosis. The research aims to

determine whether attending group cognitive rehabilitation programmes (the intervention) in addition to usual care, is associated with reduced impact of multiple sclerosis on quality of life when compared to usual care alone (control).

### **Ethics approval required**

Old ethics approval format

### **Ethics approval(s)**

NRES Committee West Midlands South Birmingham, 01/09/2014, ref. 14/WM/1083

### **Study design**

Randomised; Interventional; Design type: Process of Care

### **Primary study design**

Interventional

### **Study type(s)**

Treatment

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

Topic: Neurological disorders; Subtopic: Neurological (all Subtopics); Disease: Multiple Sclerosis

### **Interventions**

Participants will be individually randomised (6:5) to allow for clustering in intervention arm to intervention or control, stratified by recruitment site and minimised by MS-type (relapsing-remitting or progressive) and gender. The randomisation will take place once there are 9-11 individuals who have consented and who are able to attend the same therapy group (location, day of the week and time of day) should they be randomised to receive it.

The intervention is Cognitive rehabilitation, offered in addition to usual clinical care. The rehabilitation is delivered to groups of 4-6 participants for 10 weekly sessions. The programme will be tailored to each patients cognitive status while maintaining a systematic approach to attention and memory by following a treatment manual.

The control group participants will receive their usual clinical care, which may include information on cognitive problems but not cognitive rehabilitation.

### **Intervention Type**

Other

### **Phase**

Not Applicable

### **Primary outcome(s)**

Psychological impact of MS; Timepoint(s): 12 months

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

1. Memory problems in everyday life; Timepoint(s): 6 and 12 months
2. Mood; Timepoint(s): 6 and 12 months
3. Fatigue; Timepoint(s): 6 and 12 months
4. Carer strain; Timepoint(s): 6 and 12 months
5. Quality of Life; Timepoint(s): 6 and 12 months
6. Attention and memory abilities; Timepoint(s): 6 and 12 months

7. Physical impact of MS; Timepoint(s): 6 and 12 months
8. Cost-effectiveness; Timepoint(s): 6 and 12 months
9. Employment status; Timepoint(s): 6 and 12 months
10. Number of reported relapses in the previous six months; Timepoint(s): 6 and 12 months
11. Disability; Timepoint(s): 6 and 12 months

**Completion date**

31/08/2018

## Eligibility

**Key inclusion criteria**

1. Are 18 or over and under 70 years of age. The lower age limit is because MS is usually diagnosed in adulthood and treatment strategies tend to be different for children. People aged 70 and over may start to encounter age-related cognitive problems, which may confound the effects of cognitive problem due to MS. Also, most tests are standardised on this adult age group.
2. Have relapsing or progressive MS, diagnosed at least 3 months prior to the baseline assessment contact with the study team, to allow for adjustment to diagnosis. Report having cognitive problems as determined by a cut-off score of >27 on the patient version of the Multiple Sclerosis Neuropsychological Screening Questionnaire (MSNQ). This cut-off is based on previous research and is two standard deviations below the mean for healthy participants.
3. Have cognitive deficits, defined as performance below the 25th percentile on the Brief Repeatable Battery of Neuropsychological Tests (BRBN).
4. Are able to travel to one of the centres and attend group sessions.
5. Are able to speak English sufficiently to complete the cognitive assessments and take part in group sessions.
6. Give informed consent.

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Lower age limit**

18 years

**Sex**

All

**Total final enrolment**

449

**Key exclusion criteria**

1. Vision or hearing problems, such that they are unable to complete the cognitive assessments, judged by assessor.

2. Have concurrent severe medical or psychiatric conditions which would prevent participants from engaging in treatment, if allocated.
3. Are involved in other psychological intervention trials.

**Date of first enrolment**

01/09/2014

**Date of final enrolment**

23/03/2017

## Locations

**Countries of recruitment**

United Kingdom

England

**Study participating centre****Division of Rehabilitation & Ageing**

Nottingham

United Kingdom

NG7 2UH

## Sponsor information

**Organisation**

University of Nottingham (UK)

**ROR**

<https://ror.org/01ee9ar58>

## Funder(s)

**Funder type**

Government

**Funder Name**

NIHR Health Technology Assessment Programme - HTA (UK)

## Results and Publications

## Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study are/will be available upon request from [nadina.lincoln@nottingham.ac.uk](mailto:nadina.lincoln@nottingham.ac.uk)

## IPD sharing plan summary

Not provided at time of registration

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	01/01/2020	15/01/2020	Yes	No
<a href="#">Protocol article</a>	protocol	08/12/2015		Yes	No
<a href="#">HRA research summary</a>			28/06/2023	No	No