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Sleep apnoea and memory

Submission date
08/10/2025

Recruitment status
Recruiting

Registration date
11/11/2025

Overall study status
Ongoing

Last Edited
11/09/2026

Condition category
Nervous System Diseases

[X] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[_] Results
[_] Individual participant data
[X] Record updated in last year

Plain English summary of protocol

Background and study aims
This study wants to find out how many people who have memory and thinking problems also have sleep apnoea. It will also look at what symptoms are related to having sleep apnoea in people with memory and thinking problems.

What is sleep apnoea?
Sleep apnoea is when your breathing stops and starts while you sleep. Pauses in breathing are called “apnoeas” and can last from a few seconds up to a minute. Too many apnoeas might affect how deep and restful your sleep is. Many people do not know they have sleep apnoea.

Who can participate?
People attending memory clinics at a participating site.

What does the study involve?
First, patients will be asked to complete a consent form to say they are happy to take part. Some information will be taken from medical records, and participants will be asked to complete some questionnaires (online if possible, but on paper or by telephone otherwise) about themselves and their sleep. Participants will be asked to wear a device called a WatchPAT for one night whilst sleeping at home. The device looks like a watch but also has a finger sleeve and a sticky pad that attaches to the chest. The WatchPAT will check for sleep apnoea. Participants and their GP will be informed of the results (whether they have sleep apnoea) and what the next steps are.

If referred for sleep apnoea treatment in the Bristol area, the study team may ask to take some blood samples before and after treatment to see if levels of certain proteins change after treatment for sleep apnoea.

Taking part is optional. Patients can also decide to take part and change their minds later. This decision won’t have an impact on their healthcare.

What are the possible benefits and risks of participating?
Participants may get a new diagnosis of sleep apnoea. Treating sleep apnoea may improve sleep quality, reduce the risk of other health conditions such as strokes, and help people feel better in the daytime. If someone has severe sleep apnoea or feels very sleepy in the day, they may be asked to stop driving or take a driving test to make sure they and others around them are safe.

This is an observational study which carries no significant risks. The main risks has already been listed (implications on insurance and driving).

Where is the study run from?
The memory clinic that the patient attends and from home. Several memory clinics across the country are taking part. The research is being led by North Bristol NHS Trust, UK.

When is the study starting and how long is it expected to run for?
The study is scheduled to start in late 2025 and recruit until August 2026 (or 10 months from opening). Most participants will only be involved in the study for a very short time, though participants referred for sleep apnoea treatment at the Bristol site may be involved for several months, with blood tests every 4-8 weeks.

Who is funding the study?
1. The National Institute for Health and Care Research (NIHR), UK.
2. Goldman Foundation.

Who is the main contact?
Study coordinator Victoria Gabb, victoria.gabb@bristol.ac.uk

Contact information

Type(s)
Public, Scientific

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Additional identifiers

Integrated Research Application System (IRAS)
340207

Central Portfolio Management System (CPMS)
61703

National Institute for Health and Care Research (NIHR)
207185

Study information

Scientific Title
Sleep apnoea symptoms and prevalence in people attending memory services

Acronym
SAM

Study objectives
The primary objective of this study is to determine prevalence of sleep apnoea in UK memory services, with an exploratory aim to determine whether sleep apnoea prevalence differs between different types of dementia diagnosis. Secondary objectives are to: determine clinical factors/symptoms that best predict sleep apnoea in people who present to memory clinics, determine the feasibility of remote questionnaires for sleep apnoea screening, and pilot methodology for observing the effect of treating sleep apnoea on blood biomarkers for Alzheimer's disease and neurodegeneration.

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 05/09/2025, North West - Greater Manchester South Research Ethics Committee (3rd Floor, Barlow House 4 Minshull Street, Manchester, M1 3DZ, United Kingdom; +44 (0)207 104 8014; gmsouth.rec@hra.nhs.uk), ref: 25/NW/0221

Primary study design

Observational

Study design
Multi-centre observational cross-sectional study with a longitudinal observational cohort sub-study at one site

Study type(s)
Other

Health condition(s) or problem(s) studied
Sleep apnoea in patients attending memory clinics

Interventions
Main study
Participants will be asked to complete questionnaires to identify risk factors and symptoms relating to sleep apnoea and undergo a night of sleep apnoea screening using the WatchPAT polygraphy device. Data will also be collected from medical records. Participants will be informed of their results.

Bloods sub-study
Participants with sleep apnoea who are referred to treatment at the North Bristol site will be invited to undergo blood tests before and after treatment to assess whether blood biomarkers change following treatment for sleep apnoea.

The study will also pilot a methodology for determining the change in serum biomarkers of Alzheimer's disease and neurodegeneration after starting sleep apnoea treatment and report the change over time in biomarkers.

Intervention Type
Not Specified

Primary outcome(s)
The proportion of people in memory clinics who have at least mild sleep apnoea (Oxygen Desaturation Index 3% > 5) according to a single night of overnight polygraphy (WatchPAT)

Key secondary outcome(s)
1. The proportion of people with different aetiological diagnoses in memory clinics who have at least mild sleep apnoea (Oxygen Desaturation Index (ODI)3% > 5) according to a single night of overnight polygraphy (WatchPAT).
2. The proportion of people in memory clinics who have mild (ODI 3% > 5-15), moderate (ODI 3% > 15-30) or severe (ODI 3% > >30) sleep apnoea according to a single night of overnight polygraphy (WatchPAT).
3. Proportion of people in memory clinics who have at least mild sleep apnoea (Oxygen Desaturation Index 4% > 5) according to a single night of overnight polygraphy (WatchPAT).
4. Diagnostic accuracy of STOP-BANG, Epworth Sleepiness scale and extra questions for at least mild sleep apnoea
5. Data completeness for online (or telephone, face-to-face) questionnaires in this population.

Completion date
31/12/2026

Eligibility

Key inclusion criteria
1. Patient attending an NHS memory clinic at an included recruitment site
2. Adults aged 18 or over
3. Patients who are able to consent for themselves

Bloods sub-study only
1. New diagnosis of sleep apnoea
2. Recruited at the Bristol recruitment site
3. Referred to the sleep clinic
4. Consented to optional bloods sub-study when joining the study

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. Adults without capacity to consent to the research study.
2. Being unwilling to use the WatchPAT device.

Bloods sub-study only
1. Being unwilling or unable to travel to the Bristol Brain Centre for blood tests, where blood tests at home are not feasible.

Date of first enrolment
28/11/2025

Date of final enrolment
30/11/2026

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
North Bristol NHS Trust
Southmead Hospital
Southmead Road
Westbury-on-trym
Bristol
England
BS10 5NB

Study participating centre
Bradford District Care Trust
New Mill
Victoria Road
Shipley
England
BD18 3LD

Study participating centre
Cornwall Partnership NHS Foundation Trust
Carew House
Beacon Technology Park
Dunmere Road
Bodmin
England
PL31 2QN

Study participating centre
North East London NHS Foundation Trust
West Wing
C E M E Centre
Marsh Way
Rainham
England
RM13 8GQ

Study participating centre

Northumbria Healthcare NHS Foundation Trust
North Tyneside General Hospital
Rake Lane
North Shields
England
NE29 8NH

Sponsor information

Organisation
North Bristol NHS Trust

ROR
https://ror.org/036x6gt55

Funder(s)

Funder type
Government

Funder Name
National Institute for Health and Care 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

Funder Name
Goldman Foundation

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?
Protocol article		17/07/2026	14/08/2026	Yes	No