Better Sleep

NIHR | Oxford Health Biomedical Research Centre

Better Sleep
Exploiting sleep and circadian science to develop and test interventions that will improve health

BETTER SLEEP MATTERS

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Spring 2025

FROM THE EDITOR'S CHAIR

How can it be that we are already into May 2025?! Time passes so quickly doesn't it? I hope this has been a good year so far for you, and that you will continue to thrive as the year progresses.

It's also hard to believe that our BRC reached its Mid-Term Review point in the spring! A panel of senior academics from across the UK and USA acted as reviewers appointed by NIHR and visited Oxford on Monday 10 March. They heard presentations from each theme and asked questions about progress to date. A lot of work went into preparing our 'Better Sleep' submission and presentation and we are hugely grateful to Dr Ma'ayan Semo and Dr Rachel Sharman for all their dedicated hard work. I was delighted to present at the meeting and was joined by Professors David Ray and Simon Kyle for the Q&A session.

We highlighted many successes in furthering 'Better Sleep' through PPIEP engagement (thank you Leah Holmes and Dan Taylor), collaboration with our partner universities especially Surrey (thank you Professor Simon Archer) and Bristol (thank you Dr Becky Richmond), and working across themes within the Oxford Health BRC and also across the Oxford BRCs, as well as with industry (thank you partners). We are particularly proud of our achievements in supporting early career researchers through pump-priming awards, and of course in bringing in external funding associated with 'Better Sleep', amounting to £20M+, since the start of the BRC. In the end it is all about output (e.g. publications) and impact (e.g. training, service improvement) and we think our record in those respects has been excellent.

Importantly, we are thrilled to tell you the BRC Mid-term Review Feedback was very supportive and complimentary! This gives us a great deal of satisfaction and encouragement as we continue to promote 'Better Sleep' throughout the rest of the BRC award and beyond.

In this newsletter you will find plenty of updates on all that's going in in our theme. Enjoy the read! And ... as always ... sleep well!

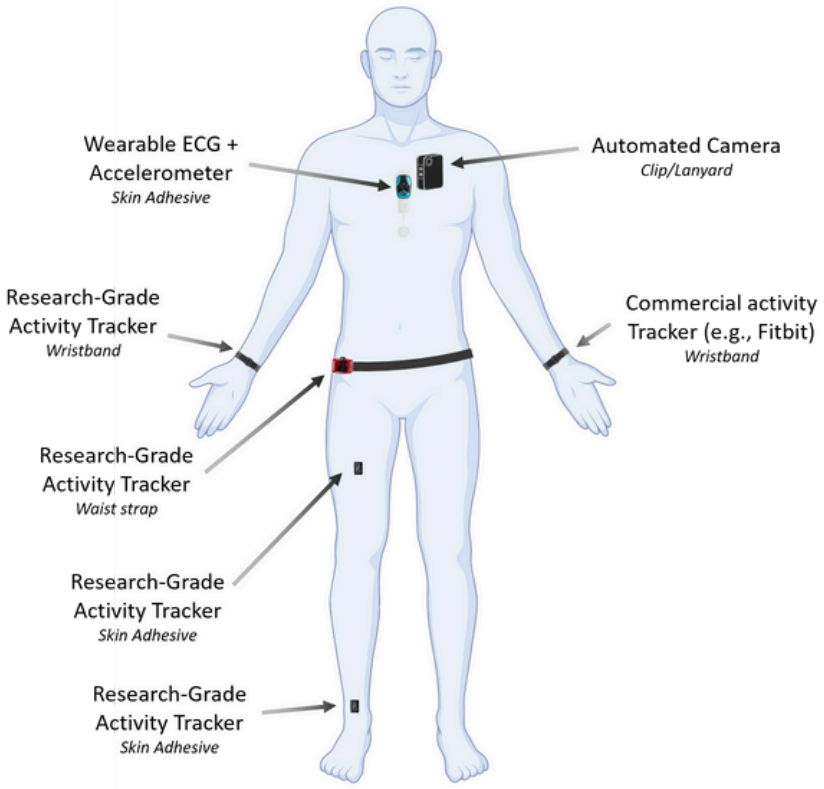
Colin Espie
Professor of Sleep Medicine, University of Oxford

Colin

RESEARCH MATTERS: OXWEARS STUDY SPOTLIGHT

OxWEARS Study:
Oxford Wearable ECG, Activity, Circadian Rhythm and Sleep Validation study
Study team: Ben Maylor, Tatiana Plekhanova, Laura Brocklebank, Stefan van Duijvenboden, Rachel Sharman, Simon Kyle, Fredrik Karpe, Elizabeth Hill, Aiden Doherty

Wearable devices have become a popular tool for tracking physical activity, sedentary behavior, and sleep, providing an alternative to self-reported measures, which are often affected by recall inaccuracies and biases. By capturing continuous data, wearables allow for a detailed view of daily behaviors over a 24-hour period. Despite growing use of commercial and research-grade wearable devices in health research, the accuracy of data from wearables compared to gold-standard methods is still uncertain.



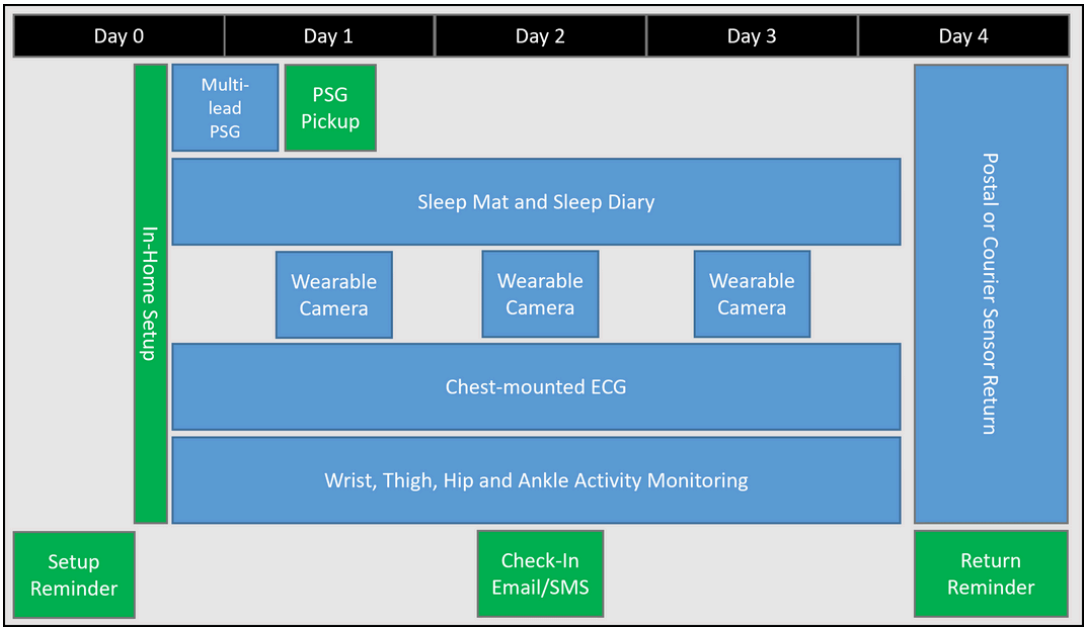
Most validation studies of wearable devices have been limited in scope, often involving small, homogenous cohorts. Many of these studies also fail to share their data, which restricts external validation, data harmonization efforts, and the ability to refine algorithm performance. In response to these gaps, colleagues within the Oxford Wearables Group are collaborating with the Sir Jules Thorn Sleep & Circadian Neuroscience Institute to conduct a new study which aims to collect and generate an openly available dataset that combines numerous wearable sensor data with gold-standard, ground-truth labels. The Wearables group will then use this dataset to train machine learning models to better classify 24-hour physical behaviors. These models will be used to analyze large-scale accelerometer datasets linked with health records, focusing on novel insights into cardiovascular disease prediction, and new approaches to assessing treatments based on physical activity, sedentary behavior, and sleep patterns.

RESEARCH MATTERS: OXWEARS STUDY SPOTLIGHT

The OxWEARS Study builds on previous research (CAPTURE-24) by our group that paired wrist-worn accelerometers with first-person camera images to classify behaviors. While this earlier work has resulted in really useful models for health research, there remains significant potential for improvement, especially in analyzing data from devices worn on different body locations (e.g. chest, wrist, waist and thigh), and incorporating additional sensor data such as gyroscope and photoplethysmography to improve model performance.

Data collection for OxWEARS started in Q4 of 2024 and will recruit >150 participants from the Oxford Biobank stratified across age, sex, and BMI categories. Participants will wear multiple devices, including research-grade accelerometers on the wrist, thigh, waist and ankle, a chest-mounted ECG patch, and a consumer-grade activity tracker on the non-dominant wrist (e.g. Fitbit), over three days and four nights in free-living conditions. Additionally, participants will complete an in-home sleep assessment using polysomnography on the first night, have a Withings sleep mat under their mattress for all nights, and provide first-person perspective camera images during waking hours to enable ground-truth annotations of behaviours.

Simiar to other work by our group, data generated by OxWEARS will be uploaded to an online repository once it has been labelled and annotated, enabling unfettered access by the wiser research community. By refining the accuracy of wearables-derived data, this study aims to drive future research on physical activity, sedentary behavior, and sleep, ultimately improving our understanding of their impact on health and disease prevention.



TEAM MATTERS: TRAINING AWARDS & SMALL PROJECT FUNDING

Lucy Jobbins - DPhil Student in Clinical Neuroscience

Assessing light environment of elderly care homes as a benchmark to inform circadian interventions.

The aim of this pump priming project is to use a new light sensor to monitor the light environment across multiple days and rooms in elderly care homes, before and after installation of circadian lighting. The impact of this project will inform future sleep and circadian interventions with the aim of supporting people living with dementia. In addition, this project will provide a framework for circadian lighting interventions in multiple contexts where light exposure is generally low, such as hospitals, offices, and prisons. The impact of this project sits within the context of an ageing population with a growing demand for care settings that are equipped to support elderly patients. Sleep and circadian rhythm disruption are common in care homes, negatively affecting residents and staff. Thus, development of circadian interventions to lessen these symptoms must consider how the intervention impacts the light environment. Therefore, funding this project will enable in-depth understanding of the light environment in elderly care homes. Specifically, it will provide comparison of a typical care home lighting environment against existing circadian lighting standards, sources of variability within the built environment, and the potential to improve the light environment. This will provide a springboard for the development of effective interventions to alleviate the burden of sleep and circadian disruption in elderly care homes. Furthermore, this project will facilitate guidelines for the assessment of light and circadian interventions in broader health contexts where outdoor light is particularly inaccessible, including hospitals. Therefore, this project will impact the elderly care sector, and provide insight into best practice for assessing light environments and circadian interventions for human health. Moreover, this project will provide valuable novel skills to the early career researcher running the project.

Dr Megan Kirk-Chang - Senior Researcher in Behavioural Medicine and Mental Health

Investigating Lifestyle Patterns of Sleep, Diet, Exercise, and Mental Health in Adults at Risk of Dementia: A Prospective Observational Case-Control Study for the Prevention of Dementia (PREV-D)

Background: Dementia is the leading cause of death in the UK. While genetic factors are most strongly linked with dementia, research suggests that modifiable lifestyle factors including poor sleep quality, diet, exercise, and mental health may influence the risk of developing dementia. To date, there is little evidence understanding the contribution and interaction of these lifestyle patterns on cognitive function over time, which may help in the future development of targeted prevention strategies aimed at delaying or preventing the onset of dementia.
Objective: This study will assess how sleep, diet, and exercise correlate with mental health and cognitive function outcomes in adults with or without depression and mild cognitive impairment over a 1-year period. We aim to 1) identify which lifestyle factors are most strongly associated with cognitive function, and 2) explore how changes in lifestyle factors affect dementia risk, and 3) investigate the interaction between lifestyle factors, depression, and genetic predisposition to dementia.
Methods: We will employ a 2x2 factorial longitudinal prospective cohort study with a case-control comparison. We will recruit 48 adults, ages 55-75, and stratify based on 4 groups:

TEAM MATTERS: TRAINING AWARDS & SMALL PROJECT FUNDING

1) at-risk asymptomatic, no depression (case control) n = 12; **2)** at-risk asymptomatic, depression n = 12;
3) Subjective MCI, no depression n = 12; **4)** Subjective MCI, depression n = 12

Primary outcomes include global cognitive function. Secondary outcomes include 14-day objective sleep quality and sleep efficiency, assessed via actigraphy and the Insomnia Severity Index (ISI), and self-reported lifestyle behaviours of diet, exercise, social connection, alcohol and smoking status, mood symptoms (depression, anxiety) and emotion regulation.

Potential Impact: This study will provide valuable insights into how specific lifestyle factors (e.g., sleep, diet, exercise) interact with depression and cognitive impairment to influence the risk of dementia. The results will inform personalised health behaviour interventions aimed at preventing or delaying dementia. Additionally, understanding the effects of lifestyle factors on circadian rhythm and emotion regulation may offer insights into broader mental health benefits, potentially informing novel strategies integrating diet, exercise, and metabolic health to address sleep disorders and associated cognitive and psychological conditions.

Dr Rachel Sharman - Senior Postdoctoral Researcher in Sleep Medicine

Investigating the effect of sleep restriction therapy on the perception of sleep/wake state in insomnia: a serial awaking study

Many individuals with insomnia experience a disconnect between their experience of sleep and what is recorded objectively: a sleep/wake discrepancy. The mechanisms driving this disconnect are still unknown, with theories ranging from increased arousal to errors in time-estimating abilities sleep prior to an awakening being misclassified as wake. Sleep restriction therapy (SRT) for insomnia involves reducing the time spent in bed to that of subjective total sleep time, consolidating the sleep period by reducing wakefulness. SRT is effective, yet observed sleep time decreases during the treatment despite participants reporting a subjective improvement in sleep. The mechanisms of SRT remain unclear, with studies suggesting that increased sleep pressure affects sleep depth or reduces arousal during sleep.

This study aims to evaluate sleep perception in people with insomnia before and following the first week of SRT (acute sleep restriction). Participants will first attend the sleep laboratory for two nights of sleep monitoring: baseline and following 1-week SRT/control. At each visit, participants will undergo a serial awakening protocol whereby an awakening will be made at 20-40min randomised intervals throughout the sleep period regardless of sleep stage. After each forced awakening, participants will be asked questions about their sleep/wake perception, sleep mentation, dreaming, and emotion before the awakening. Following the first night, participants will be randomised, 1:1, to SRT or control. The control group will receive SRT following the second serial awakening night. To date, no study has explored how SRT mechanistically influences the experience “of sleep as sleep”. Therefore, this study provides highly novel pilot data for further exploration of SRT mechanisms and factors driving the disconnect between perceived and observed sleep in insomnia. Further, it is unknown how one perceives sleep quality, and therefore, probing consciousness during sleep may aid in defining what drives the feeling of having “better sleep”.

CONFERENCE WORLD: EUROPEAN SLEEP RESEARCH SOCIETY

On 24th to 27th September 2024, the 27th Congress of the European Sleep Research Society (ESRS) took place in the stunning city of Seville, Spain. It was amazing to see over 3500 participants from 80 different countries coming together for this event!

Several members of the team attended the conference to share their research findings. Professor Simon Kyle presented “how does sleep restriction therapy treat insomnia disorder” in the symposium on the mechanisms of sleep restriction therapy for insomnia.

Team members, Dr Katrina Tse, Dr Emily Stanyer and Dr Rachel Sharman also presented their research during the poster session.

> We had a wonderful time catching up with friends and collaborators from Strathclyde, Edinburgh, Glasgow and more at a fantastic joint dinner. This has been an incredible conference, and we are thrilled that Sleep Europe 2028 will be hosted in Edinburgh!

Written by Dr Katrina Tse (Postdoctoral Researcher in Sleep Medicine)

MEET THE BETTER SLEEP TEAM

Dr Forrest Cheung
Postdoctoral Researcher in Sleep Medicine

Before joining the ECSM team, I completed my PhD and postdoctoral research at the University of Hong Kong, focusing on the role of circadian rhythms in the aetiology and pathophysiology of insomnia. My passion for this field stems partly from being a night owl myself, but more importantly, it is driven by a commitment to understanding and improving sleep and mental health. What I enjoy most about being part of this team is the collaborative environment and the abundance of opportunities to engage in diverse research studies. It's exciting to expand my academic work and contribute to impactful projects alongside talented colleagues.

Dr Islay Campbell
Postdoctoral Researcher in Sleep Medicine

I am a postdoctoral researcher currently working on setting up a neuroimaging project investigating the impact of CBT for insomnia on resting-state networks. I completed my PhD at the University of Liege, focusing on investigating the impact of light on brain functions using 7T MRI. Prior to pursuing my PhD, I worked as a clinical research assistant at the Surrey Clinical Research Facility and have a background in genetics.

Dr Anna Szabo
Course Tutor in Sleep Medicine

I joined the Experimental and Clinical Sleep Medicine team in May 2024 as a Course Tutor for the Oxford Online Programme in Sleep Medicine. My main background is in neuroscience, coupled with several years of formal training in psychology and human movement sciences. My research has previously focussed on the relationship between sleep, dementia and memory consolidation in both clinical populations and animal models, but I am generally interested in sleep characteristics across the lifespan and across the phylogeny, and I am quite enthusiastic about methodological considerations in sleep research – topics I hope to have the opportunity to be more deeply involved in the future.

MEET THE BETTER SLEEP TEAM

Dr Claire Durrant
Course Tutor in Sleep Medicine

I gained my PhD from Bristol University, focusing on the effect of novel treatments for severe depression on sleep. Following on from this, I worked with the Psychopharmacology group at Imperial College London as a research associate, supervised by Dr Sue Wilson and Prof David Nutt. My work within the team included exploring the effects of different medications on sleep, EEG and subjective measures. I was really excited to be offered the opportunity to work with the ECSM group as a course tutor for the Oxford Online Programme in Sleep Medicine. I have loved my first few months with this exceptional group and am looking forward working with this dynamic team going forward.

Hannah Wisniewska
Research Assistant in Sleep Medicine

I have joined the lab as a Research Assistant working on the SPECTRUM project. I completed a BSc in Psychology at the University of Leicester and an MSc in Sleep Medicine at the University of Oxford. I am looking forward to developing my skill set within clinical sleep research, and working alongside such a wonderful, inspiring team.

Poppy Green
Research Assistant in Sleep Medicine

I have joined the team as a Research Assistant working across a range of BRC funded studies. Prior to this, I have worked in PTSD research, and completed my BSc Psychology at Durham and my MSc Cognitive Neuroscience at University College London. I am looking forward to researching insomnia, CBT-I, and the link between sleep and both physical and mental health.

Shruti Menon
Research Assistant in Sleep Medicine

I have joined the team as a Research Assistant on the SPECTRUM project. I have worked in mental health research, and completed my MSc in Clinical Mental Health Sciences at UCL. I'm looking forward to delving deeper into clinical sleep medicine research and contributing to our understanding of the link between sleep and anxiety/depression.

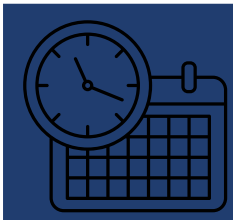
PEOPLE MATTERS: INVOLVEMENT WITH OUR RESEARCH

March 14, 2025 World Sleep Day
Make Sleep Health a Priority

Dr Rachel Sharman's top tips for a good night's sleep

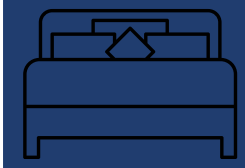
1. Prioritise your sleep

Make time for sleep! Make sure that it's not just an after-thought. Make bedtime a good time of day to rest and relax.



2. Schedule your sleep

Try and have the same bedtime every night of the week if you can.



3. Make your room suitable

It needs to be quiet, dark and cold – around 19°.

4. Prepare for sleep

Our brain needs to quiet down from the day to get good, restful sleep. Around 90 minutes before sleep, dim the lights, relax and get comfy, read a book, and refrain from eating.

5. Don't force yourself to sleep

Get out of bed! Go read a book until you feel sleepy. Once you're feeling tired, go back to bed. The longer you remain in bed unable to sleep, the more your brain will think your bedroom is a place of wake, rather than sleep.

Click **here** for the full video

PEOPLE MATTERS: INVOLVEMENT WITH OUR RESEARCH

To celebrate World Sleep Day 2025 we had an interactive public engagement session at the JR and Dr Rachel Sharman shared her top tips for better sleep.

World Sleep Day 2025

World Sleep Day was celebrated by the Experimental and Clinical Sleep Medicine team, alongside Dr Luca Ratti and the Neurophysiology team, and Barbara Robinson, with an outreach event at the John Radcliffe Hospital. We built on the event's success from last year, and included new activities for attendees to take part in.

As the stall was located near the JR children's hospital, we ensured we had lots of activities aimed at children. The main activities were a live PSG, worn by Research Assistant Hannah Wisniewska and a sleeping brain board game made by DPhil Student Lucy Jobbins. Attendees were fascinated to see how we measure sleep and talking about how brain activity changes in sleep. Children were able to ask Hannah to move her eyes or chin and see the activity change in real time. The board game enabled people to learn more about the brain and sleep, including activities such as building a plasticene brain, learning how different animals sleep, and completing a reaction time task.

Barbara Robinson (NDCN stroke and rehabilitation group) showed people other ways of measuring sleep, such as actigraphy and a low-density headband. Print outs of actigraphy recordings let attendees guess when different events on the recording happened, including exercise, playing video games, and of course sleep!

PEOPLE MATTERS: INVOLVEMENT WITH OUR RESEARCH

The event was again a huge success, with us running out of copies of Jeevun Grewal's (ECSM DPhil student) five principles of good poster. It was a great opportunity for the team to share their research and the importance of sleep with all the different people who attended.

Thanks to the ECSM team involved – Lucy Jobbins, Poppy Green, Forrest Cheung, Hannah Wisniewska, Shruti Krishnakumar Menon, Sum Sekaran and Nicola Barclay. Thanks to Dr Luca Ratti and Barbara Robinson.

Written by Lucy Jobbins (DPhil Student in Clinical Neurosciences).

Joint BRC Health Research Showcase

The next Oxford Health Research Showcase will take place on Thursday 29th May 2025, at Leiden Square, the Westgate Centre, Oxford.

This event will showcase the amazing research taking place within the BRC themes, and will include a stand from the Experimental and Clinical Sleep Medicine group. As this event is taking place in the school half-term, we expect there to be a large number of people in the Westgate, so fingers crossed we will have great levels of engagement from the public!

PEOPLE MATTERS: INVOLVEMENT WITH OUR RESEARCH

Girl Guides Outreach

Dr Rachel Sharman invited the ECSM team along to one of the 1st Wheatley Guides' sessions to teach them all about sleep research! Activities included creating a clay brain with Shruti, learning about sleep helpers and hinders with Dr Katrina, making a pipe-cleaner neuron with Poppy, and learning how different animals sleep with Hannah. Plus, the rangers were able to learn about polysomnography with Lucy (ECSM DPhil student), and practice their newly skills by sticking the electrodes on each other. The evening ended with a live polysomnography demonstration to the whole group, with Lucy showing the rangers' neural activity, and a Q&A session with the team. Check out the questions asked further down this page!

Why do some people sleepwalk/talk?

Can blind people dream?

Why do we struggle to sleep when stressed?

RESEARCH MATTERS: PUMP PRIMING APPLICATIONS NOW OPEN

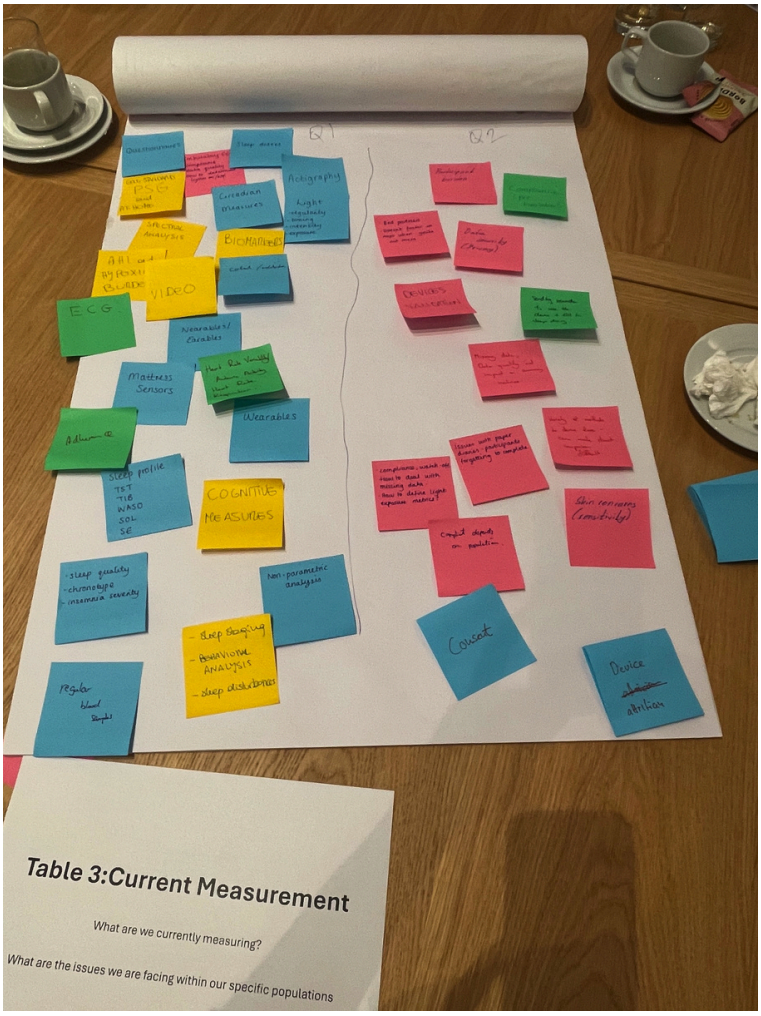
- Cognitive behavioural therapeutics (CBT and its component therapies)
- The role of nutrition, cardio-metabolic factors and exercise
- Understanding the stress response
- The benefits of natural and artificial light interventions
- Developing novel markers and outcome measures
- Improved monitoring sleep and circadian processes
- The application of data science methodologies at scale

NIHR Oxford Health BRC theme Better Sleep is pleased to announce its third round of pump-priming grants.

These are available to all University of Oxford, University of Surrey and NHS groups working on projects falling within the scope and aims of the Better Sleep theme. Novel projects addressing sleep and circadian biology and medicine in human participants will be considered. Applications are particularly encouraged for projects exploring: the role of nutrition, cardio-metabolic factors and exercise, understanding the stress response, and light interventions. Applications are open to anyone working with or sponsored by an OH-BRC Better Sleep key researcher. Pump priming grants are expected to provide pilot/proof-of-concept data to support future grants and fellowship applications. Applications from early-career researchers are welcomed.

Two grants are available for up to £12,000. Please contact Dr Ma'ayan Semo for more information: bettersleep@ndcn.ox.ac.uk.

OXFORD SLEEP AND CIRCADIAN RHYTHMS RESEARCH TECHNOLOGIES WORKSHOP



On the 30th of January, the first Oxford Sleep and Circadian Rhythms Research Technologies workshop took place at Reuben College, Oxford. Members from the University of Surrey joined the University of Oxford team to share their research findings, providing insights into exciting contactless sleep technologies, intervention work, and genetic studies.

The round table discussions provided a great opportunity to discuss the issues experienced by both teams when measuring sleep and circadian rhythms in various populations and the need for validation studies in the future. The workshop highlighted the importance of collaboration across groups in advancing sleep research.

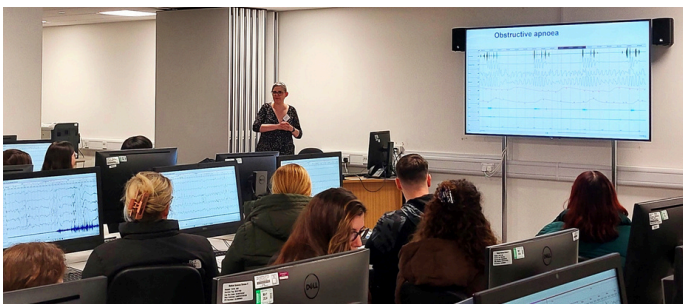
Written by Shruti Menon (Research Assistant in Sleep Medicine)

TRAINING MATTERS: TEACHING AND TRAINING

Measurement in Sleep Masterclass

On 9-10 December 2024, we welcomed 24 participants – four of whom were supported by Better Sleep scholarships – to our two-day Masterclass in Sleep Measurement at the Sleep and Circadian Neuroscience Institute at the University of Oxford. Led by Dr. Lizzie Hill (University of West England Bristol) and Dr. Rachel Sharman (University of Oxford), the course provided an in-depth, theoretical and practical introduction to common sleep measurement techniques.

Participants were guided through polysomnography recording and scoring methods according to the AASM guidelines and could learn about the basics of the Multiple Sleep Latency Test and the Maintenance of Wakefulness Test. They were also able to put theory into practice in a hands-on workshop on wiring-up and attended practical sessions on both sleep staging and the scoring of respiratory events and leg movements. Attendees were also introduced to actigraphy, again with hands-on analysis opportunities. A session on wearable and alternative technologies and their potential use in sleep medicine and research completed the programme.



Interested in participating? Applications are now open for our next Masterclass in Sleep Measurement on 30 June and 1 July 2025. Six Training Scholarships (half course fee) will be offered, supported by the Biomedical Research Centre - Better Sleep Theme.

Scan the QR code for more information!

Cognitive Behavioural Therapy for Insomnia Masterclass

Developed by Dr Dimitri Gavriloff and Prof. Colin Espie, this two-day online masterclass aims to give a grounding in Cognitive Behavioural Therapy for Insomnia to healthcare professionals. Better Sleep offers several funding scholarships to applicants working within the NHS who fulfil NIHR NMAHP criteria or those working in the NHS in a therapeutic role.

Click here to find out more about our next course.

SLEEP MATTERS: IN THE CLINIC WITH PROF. COLIN ESPIE

Insomnia Disorder

Can't get to sleep, can't get back to sleep? Struggling with poor days because of poor nights? Yes, this edition of the Newsletter we are talking about insomnia.

Such a common condition that pretty much everyone knows what it's like to lie awake tossing and turning, to be in and out of broken sleep, and to awaken up unrefreshed in the morning. However, it's estimated that 10-12% of the population suffers from a chronic insomnia disorder, defined by contemporary diagnostic systems as difficulty initiating and/ or maintaining sleep or early morning awakening occurring 3 or more nights per week for a minimum of 3 months.

Have a look at the Sleep Condition Indicator (SCI) on the next page which we developed some years ago as a screening measure to see how your sleep measures up. High scores mean better sleep and lower scores falling into the grey zone suggest possible insomnia. A cut-off score of 16 can be used as a threshold for possible insomnia.

You can see from the SCI that insomnia often has consequences on our mood or performance. Indeed, like for many medical conditions it is this impact that leads to us seeking help. When we break our leg, we go to A&E because of the functional consequences - we can't walk! In the past insomnia was often seen as a troublesome nuisance, that was probably caused by something else. However, the overwhelming evidence now is that chronic insomnia itself has significant consequences. For example, having establish insomnia doubles risk for developing depression or relapsing into depression, and elevates risk for diabetes and hypertension. We are also gathering more and more evidence that treating insomnia not only improves sleep but also improves mental health.

SLEEP MATTERS: IN THE CLINIC WITH PROF. COLIN ESPIE

Sleep Condition Indicator

	Score				
	4	3	2	1	0
Thinking about a typical night in the last month:					
How long does it take you to fall asleep?	0-15 min	16-30 min	31-45 min	46-60 min	≥61 min
If you then wake up during the night... how long are you awake for in total? (add up all the awakenings)	0-15 min	16-30 min	31-45 min	46-60 min	≥61 min
How many nights a week do you have a problem with your sleep?	0-1	2	3	4	5-7
How would you rate your sleep quality?	Very good	Good	Average	Poor	Very poor
Thinking about the past month, to what extent has poor sleep:					
Affected your mood, energy, or relationships?	Not at all	A little	Somewhat	Much	Very much
Affected your concentration, productivity, or ability to stay awake?	Not at all	A little	Somewhat	Much	Very much
Troubled you in general?	Not at all	A little	Somewhat	Much	Very much
Finally:					
How long have you had a priblem with your sleep?	I don't have a problem/ <1 month	1-2 months	3-6 months	7-12 months	> 1 year

Add up your score using the scoring amounts at the top of the SCI. Your score is out of 32. A score of 16 or less indicates possible insomnia. A higher score means better sleep.

SLEEP MATTERS: IN THE CLINIC WITH PROF. COLIN ESPIE

Treatments for insomnia have been many and varied. Here's a favourite ''remedy' that was published in the Glasgow Herald and cited in an editorial in the SEPT. 29, 1894 British Medical Journal:

Soap your head with the ordinary yellow soap; rub it into the roots of the hair until your head is just lather all over, tie it up in a napkin, go to bed, and wash it out in the morning. Do this for a fortnight. Take no tea after 6pm. I did this, and have never been troubled with sleeplessness since. I have lost sleep on an occasion since, but one or two nights of the soap cure put it right. I have conversed with medical men, but I have no explanation from any of them. All that I am careful about is that it cured me.

Not that the BMJ then, or now, ever thought that soap was a real solution! Nevertheless, it does illustrate that what we do about sleeplessness is very important. The evidence base internationally is now agreed that the most effective treatment for insomnia disorder is cognitive behavioural therapy (CBT). This is illustrated in the recent (2023) update to the European insomnia guideline:

Cognitive-behavioural therapy for insomnia is recommended as the first-line treatment for chronic insomnia in adults of any age (including patients with comorbidities), either applied in-person or digitally

With medication as a second-line intervention:

When cognitive-behavioural therapy for insomnia is not sufficiently effective, a pharmacological intervention can be offered

At Oxford we are proud to be contributing to understanding what components of CBT work and for whom, as well as understanding the mechanisms of action of interventions like behavioural sleep restriction therapy.

Espie et al. (2014) The Sleep Condition Indicator: a clinical screening tool to evaluate insomnia disorder. BMJ open, 4(3), e004183. https://doi.org/10.1136/bmjopen-2013-00418

Riemann et al. (2023) The European Insomnia Guideline: An update on the diagnosis and treatment of insomnia 2023. Journal of sleep research, 32(6), e14035. https://doi.org/10.1111/jsr.14035

COLLABORATION MATTERS: KAVLI CORNER

Kavli Oxford has been awarded $250,000 by the Kavli Foundation, U.S.A for a 2-year project aimed at establishing an ethics hub at Kavli Oxford.

Dr Mackenzie Graham, Senior Research Fellow, joins us on secondment from Oxford's Ethox Centre to co-lead on our project, 'Building societal considerations into the heart of basic research'

For your interest, please read more about our project at https://www.kavlifoundation.org/news/building-societal-considerations-into-the-heart-of-basic-research

The funding is part of the Kavli Foundation's Science and Society programme.

"The Kavli Institute at Oxford is world-leading in science, pushing frontiers at the intersection of physical and cellular science. Their leadership to embed experts to consider ethical and societal implications of work, throughout the research cycle, is also ground-breaking. It is very rare but exceptional, to embed ethicists focused on exploring the societal implications of research, as opposed to research ethics and regulatory compliance." - Science and Society Director, Brooke Smith.

As we continue to explore the synchronicities among us, we are hopeful that this project will be integral in bringing many of us together, strengthening our institutional interdisciplinary capability. We look forward to collectively tracking the impact of the project, over time.

BETTER SLEEP MATTERS

UPDATES FROM THE BETTER SLEEP THEME

BRC Mid-Term Review

We are thrilled to announce that we received very positive feedback in our BRC Mid-Term Review! It highlighted our successful PPIEP engagement, collaborations with our partner universities, and our work across other Oxford Health BRC themes and industry partners. Additionally, we were able to support early-career researchers through pump-priming grants, which we will continue to do in the next round of pump-priming awards!

OCDEM collaboration

We have previously reported on the amazing work the team at the OCDEM CRU do, and we are thrilled to announce our continued collaboration with them. This will be through the SPECTRUM study, and potentially as a location for a future sleep lab.

EIN meeting

Researchers will soon be heading to the European Insomnia Network meeting in Amsterdam. Dr Emily Stanyer will be presenting data from the RESTORE study.

PPIEP

We will be joined by our PPIEP group from the Better Sleep Research Advisory Network on 7th July. PPIEP is a key aspect of our research, so this collaboration will provide necessary perspectives from the PPIEP members and ensure our work is both relevant and impactful.

SELECTED RECENT PUBLICATIONS

- Tamm, S., Katrina, Y. K., Hellier, J., Saunders, K. E., Harmer, C. J., Espie, C. A., ... & Kyle, S. D. (2025). Emotional Processing Following Digital Cognitive Behavioral Therapy for Insomnia in People With Depressive Symptoms: A Randomized Clinical Trial. JAMA Network Open, 8(2), e2461502-e2461502. doi: 10.1001/jamanetworkopen.2024.61502
- Pu, H., Bailey, L. C., Bauer, L. G., Voronkov, M., Baxter, M., Huber, K. V., ... & Rastinejad, F. (2025). Pharmacological targeting of BMAL1 modulates circadian and immune pathways. Nature Chemical Biology, 1-10. doi: 10.1038/s41589-025-01863-x

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