SINGAPORE SLEEP REVIEW

SINGAPORE SLEEP SOCIETY NEWSLETTER

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Singapore Sleep Society

WORLD SLEEP 2025 SPECIAL

With the World Sleep Congress 2025 approaching in only a few days, we would like to take the opportunity highlight some of the major contributions from our SSS membership to this event. First of all, we would like to acknowledge the efforts by Prof. Michael Chee from the National University of Singapore, who has worked behind the scenes to bring this event to Singapore and, as part of the programme committee, has worked tirelessly to ensure the best possible line up of expert clinical and scientific content. Various other SSS members have actively contributed serving as course and workshop organisers, symposium and session chairs, and of course the many contributions as speakers and poster presenters. We hope that this issue will give a taste of what is to come for those who will attend the congress, and equally a window into the highlights for those who are not able to attend.

SSS AGM

The Singapore Sleep Society Annual General Meeting (AGM) will take place during the World Sleep Congress **(Tuesday September 9th, 4.45pm - 6:15pm)**, in order to accommodate all members who are attending the conference. Members who are not attending World Sleep can equally attend the AGM by email registration.

The AGM will be combined with the launch of the newly formulated **consensus statement on OSA** by the Chapter of Sleep Medicine Physicians of the Academy of Medicine Singapore (see page 2).

Singapore Sleep Society
Sleep Apnea Support Group

http://singaporesleepsociety.org
singaporesleepsociety.sg@gmail.com

SSS AGM 2025

The SSS Annual General Meeting will be held on 9 September 4:45pm

OSA CONSENSUS STATEMENT

Best-practices statement on OSA by the SSS and the AMS Chapter of Sleep Medicine Physicians to be presented at the AGM

KEYNOTE LECTURES

World Sleep and ASSM keynote lectures to discuss school start times and wearable sleep trackers

NEW INVESTIGATOR AWARD

Research on Mandibular Advancement Devices wins New Investigator Award

SLEEP ARCHITECTURE

Sleep restriction affects REM and Non-REM sleep over multiple cycles

STUDENT LIFE

Large-scale sleep tracking reveals changing sleep patterns among university freshmen

ACADEMY OF MEDICINE SINGAPORE
Chapter of Sleep Medicine Physicians

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OSA Consensus Statement

Over the past 2 years, experts from the Chapter of Sleep Medicine Physicians of the Academy of Medicine Singapore (AMS), have worked together with the Singapore Sleep Society (SSS) to formulate a consensus statement on best practices in the diagnosis and treatment of Obstructive Sleep Apnea (OSA) in Singapore. Dr Leow Leong Chai, director of the SingHealth Duke-NUS Sleep Centre and president of the Chapter of Sleep Medicine Physicians of the AMS, explains.

"The field of Sleep Medicine has grown tremendously in the last 20 years and the number of clinicians that practice sleep medicine in Singapore has increased exponentially. As Sleep Medicine is not a recognised subspecialty in Singapore and its practitioners come from widely different backgrounds with significant variation in training and experience, there is a lack of consensus on what constitutes best practice, especially as international guidelines may not be applicable in the local context. As such, we see a great need for the Sleep Chapter, together with the Singapore Sleep Society, to take on a leadership role by coming up with a set of recommendations written by national experts, backed by a robust body of evidence, to help clinicians align with best practices that are adapted to the local context, thus helping to deliver best value and outcomes for our patients."

A panel of experts was convened in January 2024 led by a steering committee formed by members of the Sleep Chapter, Academy of Medicine, representing Respiratory physicians, Otolaryngologists, Pediatricians and Dentists in both private and public. In addition, the consensus voting panel comprised sleep technologists, an Internal Medicine physician, a Public Health physician and a sleep scientist.

The expert panel performed an online literature review to identify several areas of management that required guidance, including the screening, diagnosis, management and long-term care of adult and pediatric patients with OSA. The strength of evidence for these practices was graded following the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) system.5 After this, consensus recommendations were developed based on the retrieved evidence and modified using a modified Delphi-based approach facilitated by email voting (October 2024).

Consensus was reached regarding the indications for OSA screening (who do we need to screen?), how to screen for OSA (e.g. best screening tools to use), and indications for Sleep Testing (who to send for a sleep test) and finally, the best practice recommendations of the various ways to perform Sleep testing in Singapore. This publication is a landmark achievement for the Sleep Medicine community in Singapore.

"From its roots in the Singapore Sleep Society founded by Dr Puvan in 2002 to the establishment of the AMS Chapter of Sleep Medicine in 2021, the Sleep medicine community has grown and become much more united and organized. Its members contributed generously in time and expertise and worked closely and with great enthusiasm, across subspecialties, regardless of private or public sector allegiance", according to Dr Leow. *"This type of collaboration is something quite rare in the medical field and is what has made this document possible. This is a sign of greater things to come! And finally, we hope that this paper will assist clinicians in SG make better and more evidenced based decisions when managing their patients with suspected or confirmed OSA."*

September 5-10 2025

WORLD SLEEP Singapore

Keynotes

Monday, September 8, 2025

Russell Foster, PhD
University of Oxford, United Kingdom
Light, circadian rhythms and sleep: Fundamental mechanisms to new therapeutics

Thomas Penzel, PhD
Charité – Universitätsmedizin Berlin, Germany
Innovations in sleep technology: Advancing diagnosis and treatment of sleep disorders

Tiina Paunio, MD, PhD
University of Helsinki, Finland
Sleep and development: Exploring the impact of sleep on mental health in children

Hiroki R. Ueda, MD, PhD
University of Tokyo, Japan
Towards human systems biology of sleep/wake cycles: The role of calcium and phosphorylation in sleep

Tuesday, September 9, 2025

Lauren Hale, PhD
Stony Brook University, United States
Social determinants and sleep health equity

Bei Bei, PhD
Monash University,
Australia
Behavioral sleep interventions in women across the lifespan

Mary Ip, MBBS(HK), MD(HK)
The University of Hong Kong, Hong Kong
Cardiometabolic consequences of obstructive sleep apnea: Are we making progress?

Célyne Bastien, PhD
Laval University, Canada
Sleep misperception: A waking perspective

World Sleep Keynote: The hard facts about later learning start times

On **Wednesday 10 Sept 2025**, Associate Prof. Joshua Gooley will deliver this keynote lecture to the World Sleep Congress. The topic of class start times is still hotly debated in many societies. Are we setting up school schedules for students to perform their best? Could improvements be made?

While many scientists believe that adolescents' biorhythm is tuned to be awake later at night – and hence not ready for action by the time school starts – it is not a simple matter to just change existing school schedules. Practical obstacles include alignment with parents' work schedules, concerns for traffic congestion, and questions of effectivity – e.g. will students not just go to bed later and later?

We sat down with Dr Gooley for a Q&A preview of his World Sleep keynote lecture.

Q: How did you first come to study the topic of class start times?
A: "*More than a decade ago, I started giving guest lectures in local high schools on the importance of healthy sleep. As part of the teaching, I gathered feedback from students on reasons why they were not getting enough sleep – waking up too early was near the top of the list. At around the same time, Drs Michael Chee and June Lo were launching the "Need for Sleep" study in adolescents to assess the cumulative effects of short sleep on cognitive performance. We then collaborated on a project showing that starting school later had benefits on sleep and wellbeing in a local secondary school. From that point forward, I have been working on the topic of class start times in both adolescents in university students.*"

Dr Gooley's work has examined many important aspects of school timing and sleep. Specifically, his work has combined self-report surveys with objective measurement of sleep, class attendance and performance, and biological measurement of circadian adjustment among students.


Associate prof Joshua Gooley

Q: Without giving away the keynote lecture, what are some of the main findings you hope to highlight?
A: "*In my keynote lecture, I will make the case that starting school too early is harmful for sleep, learning, and wellbeing in university and high school students. Our studies in Singapore show that early class start times impair sleep, class attendance, and performance. Hence, starting class too early undermines health and educational goals. The take-away message is that starting school later is a key strategy for improving performance and health in university students and adolescents.*"

Q: Finally, what do you hope your work contributes to the debate on school/class start times?

A: "*My hope is that our work will serve as the catalyst for educational leaders and policy makers in Singapore to endorse later class start times. A decade ago, our efforts to move the needle on school start times fell flat due to lack of data in local schools. Now we have a mountain of evidence. Given the recent public health focus on mental health issues in adolescents and young adults, now is the time to re-visit the issue of unhealthy class start times.*"

September 5-10 2025

WORLD SLEEP Singapore

Keynotes, Wed 10 Sept

Takafumi Kato, DDS, PhD
Osaka University, Japan
Advances in dental sleep medicine: Understanding and managing sleep bruxism

Ronald Postuma, MD
McGill University, Canada
REM sleep behavior disorder: Gateway to early diagnosis and therapy in synucleinopathies

Björn Rasch, Dr. rer. Nat
University of Fribourg, Switzerland
Sleep and memory: Current state of research and future needs

Joshua J. Gooley, PhD, Duke-NUS Medical School, National University of Singapore
The hard facts supporting later learning start times

ASSM Keynote: Measuring sleep at scale using wearables

The first keynote lecture at the Asian Society of Sleep Medicine (ASSM) meeting at World Sleep will be delivered on **Saturday 6 September** by Dr Stijn Massar from Centre of Sleep and Cognition, National University of Singapore (NUS). This lecture will focus on the opportunities offered by consumer sleep trackers to measure sleep and its effects on health and wellbeing at scale.

The market for consumer wearable sleep trackers has grown significantly over the past decade. As a result, the amount of data collected by these devices has increased tremendously. This expansion provides opportunities to gain insights into sleep, health, and wellbeing on an unprecedented scale.

In this keynote, Dr. Massar will highlight some of the initiatives that the Centre for Sleep and Cognition has undertaken over the past five years. By partnering with manufacturers, government agencies, and local organizations, the Centre has studied sleep patterns at global, national, and organizational levels. Findings from these studies have provided insights into areas such as geographical and cultural differences in sleep, the impact of the COVID-19 pandemic, and the optimization of shift work schedules.

ASSM
Asian Society of Sleep Medicine

More from SSS members at World Sleep

Special interest group:
World Dentofacial Sleep Society (WDSS): Bruxism
Saturday, September 6, 09:00 am – 05:00 pm
Chair: David Tay (Singapore)
Chair: Mimi Yow (Singapore)

Course: Essentials of sleep surgery: Tools, techniques, and tactics
Sunday, September 7, 01:00 pm – 05:00 pm
Chair: Stanley Liu (United States)
Chair: Shaun Loh (Singapore)
Chair: Maria Suurna (United States)

Panel discussion: Global perspectives
What's working and what's not in OSA diagnosis-Charting the Path Forward
Monday, September 8, 12:45 pm – 01:45 pm
Speaker: Erna Sif Arnardóttir (Iceland)
Speaker: Michelle Zeidler (United States)
Speaker: Ronald Lee (Singapore)
Speaker: Ludger Grote (Sweden)

WSS Task Force recommendations for use of consumer health trackers for sleep tracking
Monday, September 8, 09:00 am – 10:30 am
Chair: Michael Chee (Singapore)
Chair: Clete Kushida (United States)

ISSS symposium: Neurostimulation in the treatment obstructive sleep apnea: Current understanding, challenges and the future
Monday, September 8, 03:15 pm – 04:45 pm
Chair: Song Tar Toh (Singapore)
Chair: Maria Suurna (United States)

The rhythm of rest: Exploring the cognitive and psychological benefits and drawbacks associated with intraindividual variability in sleep
Wednesday, September 10, 12:30 pm – 02:00 pm
Chair: June Lo (Singapore)
Chair: Shirley Xin Li (Hong Kong)

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Mandibular advancement and CPAP treatment of OSA effects on hypertension: New Investigator Award

Reference: Ou, Yi-Hui, et al. (2024). Mandibular advancement vs CPAP for blood pressure reduction in patients with obstructive sleep apnea. Journal of the American College of Cardiology 83.18 (2024): 1760-1772. https://doi.org/10.1016/j.jacc.2024.03.359

OSA is a common risk factor for hypertension. Current guidelines recommend to screen for OSA when treating hypertension. The first-line treatment for OSA, CPAP, is not always well-tolerated and patient adherence can be challenging.

A recent randomized trial led by researchers from the National University of Singapore tested the efficacy of an alternative OSA treatment with a mandibular advancement device for blood pressure reduction. A total of 321 patients with high blood pressure were screened for OSA. Two-hundred and twenty-one patients were found to have moderate to severe OSA and were randomly assigned to mandibular advancement or CPAP treatment. Only patients who were not already treated for OSA were included to ensure all patients were unbiased to either treatment type. Patients randomized to the mandibular advancement arm were fitted with a personal mandibular advancement device (MAD) worn through the night to advance the lower jaw and reduce airway obstruction. Patients in the CPAP arm received auto-titrating continuous positive airway pressure treatment. After an acclimatization period, all patients received treatment for 6 months after which they paid a follow-up visit to assess clinical endpoints.

The primary aim of the study was to test for non-inferiority of MAD compared to CPAP treatment to lower blood pressure markers in hypertensive patients. As such, the 6-month follow-up results showed that the MAD group had significantly lowered 24-hour blood pressure, whereas the CPAP group showed no significant improvement.

This study will be presented at the World Sleep Congress 2025 as part of the New Investigator Award symposium.

Speaker: Yi hui Ou (Singapore)
Date: Tuesday 9 September, 09:26 am
Venue: Room 329

Mandibular advancement device versus CPAP on cardiovascular health and quality of life in OSA — a pre-specified 12 months follow up of outcome

This report was previously published in the Singapore Sleep Review Volume 2, Issue 2, May 2024

The improvements in the MAD group were particularly evident during the asleep blood pressure measurements. Both groups showed improved daytime sleepiness, with no differences between groups. Furthermore, no group differences in blood test-based cardiovascular biomarkers were found.

Importantly, 6-month adherence seemed to be slightly higher for the MAD group, with an average usage of 5.45 hours per night versus 4.98 hours per night for the CPAP group. On the other hand, CPAP seemed to be more effective in treating OSA-specific outcomes with a residual apnea-hypopnea index of 2.0 events per hour versus 10.8 events per hour for the MAD group. The MAD group also seemed to report fewer side effects than the CPAP group.

Conclusion
Treatment of OSA through mandibular advancement is non-inferior to CPAP in lowering blood pressure. MAD therefore may be a viable alternative for CPAP to treat OSA and high blood pressure in hypertensive patients.

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Longitudinal Changes in Sleep in University Freshmen

Reference: Soon, et al, A longitudinal study of sleep in university freshmen: facilitating and impeding factors, Sleep, 2025;, zsaf156, https://doi.org/10.1093/sleep/zsaf156

Starting university marks a major life transition that often involves adaptation to new responsibilities including managing study schedules, extra-curricular activities, and social engagements. With many freshmen moving out of their parental homes for the first time, juggling such responsibilities with maintaining healthy life routines, including sleep habits, may prove challenging.

In a 20-week intensive longitudinal tracking study, researchers from the Sleep and Cognition Laboratory, followed 638 freshmen through their first semester at the National University of Singapore (NUS). Students wore a wearable sleep tracker and provided daily reports on their sleep, wellbeing, and school experiences.

The study found that the NUS students averaged slightly over 6 hours of sleep on weekdays. Interestingly, while students had relatively stable bedtimes over the semester (average bedtime 01:53am), they progressively pushed back their wake time over the second half of the semester. This resulted in longer sleep duration, but at the cost of skipping morning classes.

This study will be presented at the ASSM/World Sleep Congress

Structural Factors Impeding or Facilitating Freshmen Sleep Habits

Speaker: Chun Siong Soon(Singapore)
Date: September 7, 2025, **Time:** 11:20am
Room: 329

Sleep Architecture and Sleep Restriction Schedules

Reference: Koa TB, Ong JL, Lo JC. Changes in sleep architecture during recurrent cycles of sleep restriction: a comparison between stable and variable short sleep schedules. Sleep Adv. 2025 Mar 15;6(2):zpaf016. https://doi.org/10.1093/sleepadvances/zpaf016

Insufficient sleep is highly prevalent in modern society. This is often compounded by irregular sleep schedules and repeated cycles of chronic sleep restriction and temporary recovery. These detrimental sleep routines may adversely impact the physiology and restfulness of sleep. No studies to date have systematically examined this severity and extent of this impact.

A laboratory-controlled sleep study subjected 59 participants to a 15-day experimental sleep protocol. A stable restriction group underwent two cycles of short sleep (5 x 6hours/night) and recovery sleep, while a variable restriction group cycled through different sleep durations (4, 6, 8 hours).

Compared to a control group who slept 8 hours each night, both restriction groups showed a marked curtailment in REM and N2 sleep, commensurate with the sleep opportunity provided. These reductions were equally present in the first and second cycle of restriction. Slow wave sleep was mostly preserved though the sleep restriction protocol.

This study will be presented at the World Sleep Congress

Sleep architectural changes during recurrent cycles of sleep restriction: comparing stable and variable short sleep schedules

Speaker: Tiffany Koa (Singapore)
Date: September 8, 2025, **Time:** 09:52am
Room: 330

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ASSM
Asian Society of Sleep Medicine

Keynote 1: Stijn A.A. Massar (Singapore)
Sat 6 Sept, 1:35pm

One million and one nights: Harnessing wearable sleep tracking data to accelerate population health insights

Keynote 2: Yang Dan (United States)
Sun 7 Sept, 10:20am

The How and Why of Sleep

Keynote 3: Ki-Young Jung (Republic of Korea)
Sun 7 Sept, 1:40pm

Restless legs syndrome across Asian countries

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Singapore

Singapore 2025 WORLD SLEEP September 5-10

More from SSS members at World Sleep

Devices and AI for myofunctional therapy in OSA
Sunday, September 7, 02:20 pm – 02:36 pm
Speaker: Chu Qin Phua (Singapore)

ASSM: Philips Sleeposium: Frontiers of Sleep Sciences in 2025
Pillars of Progress: Patient Safety and OSA Leadership in 2025
Sunday, September 7, 12:30 pm – 01:30 pm, Sponsor: Philips
Chair: Leow Leong Chai (Singapore)

Challenges of acute non-invasive ventilation in patients with schizophrenia
Sunday, September 7, 05:00 pm – 05:00 pm
Speaker: Rui Ya Soh (Singapore)

Tales from the edge: What can we learn about sleep from non-WEIRD (Western, Educated, Industrialized, Rich, and Democratic) sleep research?
Wednesday, September 10, 09:00 am – 10:30 am
Chair: Adrian Willoughby (Singapore)

Philips Sleep Studio: Digital Management of OSA Patients (Industry Workshop)
Wednesday, September 10 , 08:30 am - 09:30 am
Panelist: Sridhar Venkateswaran

Waking up the workforce: Exploring the impact of sleep on workplace performance, decision-making, and outcomes
Wednesday, September 10, 12:30 pm – 02:00 pm
Chair: Stijn Massar (Singapore)

Singapore Sleep Society

Membership Application and Fees

Ordinary members
$30/year – sleep professionals with a medical degree, PhD or equivalent.

Associate members:
$10/year – any person involved in the field of sleep disorders without the above qualification.

Supporting members:
Corporations and individuals supporting the society financially.

Complete the application form and email to:
singaporesleepsociety.sg@gmail.com

Singapore Sleep Society

http://singaporesleepsociety.org

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