

SINGAPORE SLEEP REVIEW

SINGAPORE SLEEP SOCIETY NEWSLETTER

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PRESIDENT'S MESSAGE

A new year has started, and the Singapore Sleep Society is looking forward to a new season of exciting activities. As a new executive committee has taken office, it is my honour to serve as President of the society for the 2022-2024 term.



After almost three years of COVID restrictions, we are excited to bring back in-person events in 2023. In conjunction with World Sleep Day, March 2023, the sleep society will organise several live meetings, among which a Medical Symposium and a Public Forum. In the new year, we will also resume the distribution of the Singapore Sleep Review. Through this newsletter, we will keep our members informed about recent research, events, and news in sleep medicine and science. We are looking forward to reconnect with our colleagues in sleep medicine.

Dr Sridhar Venkateswaran
President, Singapore Sleep Society

RESEARCH HIGHLIGHTS

Sleep Quality and Burnout in Singapore Healthcare workers

Reference: Chen Z, Foo ZST, Tang JY, Sim MWC, Lim BL, Fong KY, Tan KH, Sleep quality and burnout: A Singapore study, *Sleep Medicine* (2023), <https://doi.org/10.1016/j.sleep.2022.12.026>.

A large-scale survey conducted among SingHealth employees found that sleep quality is strongly related to burnout symptoms. Burnout consists of

three components. Exhaustion, depersonalisation, and a lack of perceived accomplishment. The study showed that all three symptoms were increased in workers who had poorer sleep quality. The study included 4777 respondents (11.6% physicians or dentists, 14.3% allied health professionals, 44.2% nurses, and 29.9% non-clinical staff).



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BURNOUT

Burnout and poor sleep quality are strongly connected in Singaporean healthcare workers

HYPNOTICS

Combined Cognitive Behavioral Therapy and gradual reduction of hypnotic medication dosage to treat insomnia

OSA

A systematic review evaluates the performance of portable and wearable devices in diagnosis of Obstructive Sleep Apnea

Reducing Hypnotic Medication

Reference: Edinger, J., Wamboldt, F., Johnson, R., Simmons, B., Tsai, S., Morin, M., Holm, K., Use of a Blinded Hypnotic Tapering Strategy to Promote Hypnotic Discontinuation, *SLEEP* (2021), zsab270, <https://doi.org/10.1093/sleep/zsab270>.

Hypnotics medication is often the main treatment for insomnia. However, long-term hypnotics use can lead to tolerance and dependency. Many chronic hypnotics users wish to discontinue usage if effective treatment can be achieved otherwise.

Cognitive Behavioral Insomnia Therapy (CBT-I) is an effective non-pharmacological alternative to hypnotics treatment. When CBT-I is implemented in combination with gradual tapering of medication dosage, can be effective to build-off the dependency on hypnotics. A randomized controlled trial among 78 insomnia patients with chronic hypnotic use, tested the effectiveness of different tapering strategies. Typical tapering strategies rely on relatively rapid reduction (25% per two weeks) of medication dosage. Furthermore, open-label tapering provides the patient with information of the dosage reduction when it happens. These factors could affect patient anxiety and insomnia relapse. In this study, a slower tapering pace was tested (10% reduction per 2 weeks), and a blinded strategy was tested. All participants completed a 20-week blinded tapering period.

At the end of the tapering period, 90-96% of patients in both tapering conditions (fast and slow) were successfully abstinent from benzodiazepine or benzodiazepine receptor agonist medication.



Patients in a non-tapering control condition, in which medication dosage was kept constant, only 8%. After 3-months follow-up, the abstinence rate in the tapering groups was still around 70%. Tapering pace did not matter for the effectiveness. Both the fast (25%) and slow (10%) tapering conditions achieved similar abstinence rates. Blinded tapering resulted in higher abstinence (93%) than open-label tapering (77%), but this difference did not reach statistical significance. Participants in the blinded tapering group also reported a stronger reduction in insomnia symptoms and fewer withdrawal symptoms than those in the open-label group.

Conclusion

Blinded tapering in combination with CBT-I is a promising strategy to reduce hypnotic medication use.



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Portable Evaluation of OSA

Reference: Khor, Y., Khung, S., Ruehland, W., Jiao, Y., Lew, J., Munsif, M., Ng, Y., Ridgers, A., Schulte, M., Seow, D., Soon, W., Churchward, T., Howard, M., Portable evaluation of obstructive sleep apnea in adults: A systematic review, *Sleep Medicine Reviews* (2023), 101743, <https://doi.org/10.1016/j.smrv.2022.101743>.

At-home sleep testing can help alleviate the costs of lab-based diagnosis of Obstructive Sleep Apnea (OSA). Portable, wearable, and contactless devices are available to use as an initial test, or to test patients that are unable to present to the sleep lab.

Compared to full attended Polysomnography (Type 1 PSG), these devices are classified based on the usually have fewer channels and less oversight. Type 2 PSG devices have the same channels but do not need constant technician attendance. Type 3 devices have a minimum of 4 channels including ventilation or airflow, ECG or heart rate, and oxygen saturation. Type 4 devices have at least 2 channels, usually oxygen saturation or airflow.

A systematic review compiled 180 studies, evaluating the diagnostic performance of these devices against Type 1 PSG. Most studies tested Type 3 (n = 48) or Type 4 devices (n = 76). Although some studies found lower performance of portable devices, a majority of studies found adequate sensitivity and specificity for detecting apnea-hypopnea events >5/hour (between 75-100% for most studies). Studies that evaluated Type 2 devices (n = 8) found similarly high performance outcomes. Performance was better when more severe OSA cases were tested.

Conclusion

Portable diagnostic tests for OSA show adequate performance in most cases.



The Benefits of a Midday Nap

Reference: Leong, R., Lo, J., Chee, M. Systematic review and meta-analyses on the effects of afternoon napping on cognition, *Sleep Medicine Reviews* (2023), 101666, <https://doi.org/10.1016/j.smrv.2022.101666>

A daytime nap can alleviate the sleep pressure built up over the day and can help to restore cognitive capacity. A systematic review consolidated the findings from 60 experimental studies on the effects of napping on cognitive performance.

Across different types of tests, the strongest benefits of naps were found for vigilant attention and memory. Naps ranging from 30 min – 120 min, and between 12 noon to 4pm all showed benefits. Effect sizes across cognitive domains were small to medium, which is fairly good for health behaviours like taking naps. While supportive of napping for that purpose, naps are not a panacea for poor nocturnal sleep, and adverse outcomes on health especially for older adults have been reported elsewhere. Future work will continue to examine their benefits, attendant negative associations and the conditions associated with these divergent outcomes.



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CALENDAR

25 MARCH

NTFGH World Sleep Day Public Symposium

Date: 25 March 2023
Time: 8:30 am to 12:30 pm
Venue: Ng Teng Fong General Hospital
Scan or click the QR code to register



25 MARCH

SingHealth World Sleep Day Public Webinar

Date: 25 March 2023
Time: 11am to 1 pm
Venue: Online
Scan or click the QR code to register



25 MARCH

NTFGH Medical Professional Symposium

Date: 25 March 2023
Time: 13:30 to 17:15 pm
Venue: Ng Teng Fong General Hospital
Scan or click the QR code to register



25 MARCH

SingHealth GP & Health Professional Webinar

Date: 25 March 2023
Time: 2 to 4 pm
Venue: Online
Scan or click the QR code to register



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.



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