



asa council news

Australasian Sleep Association August 2019

Do you have something of interest you would like to include in the next newsletter?

Forward any items to communications@sleep.org.au.
Your council contributors are:

- **Chronobiology Council** – Gorica Micic & Elise McGlashan
- **Dental Sleep Medicine Council** – Harry Ball
- **Insomnia and Sleep Health Council** – Alix Mellor
- **Neuroscience Council** – Andrew Webster
- **Occupational Health, Safety & Performance Council** – Alex Wolkow
- **Paediatric Council** – Nicole Verginis
- **Primary Care Council** – Luke Katahanas
- **Respiratory Council** – David Stevens
- **Sleep Physicians Council** – Simon Frenkel
- **Surgery Council** – Leon Kitipornchai

Chronobiology Council

We're all sensitive to light, but some are much, *much* more sensitive than others.

Light is the most important cue for our central circadian clock. Although circadian rhythms are endogenously generated, the clock relies on light to remain synchronised, optimising many daily functions including metabolism, sleep, and alertness. In humans, light exposure in the evening suppresses melatonin production and delays circadian rhythms. However, our current understanding regarding the influence of the *intensity* of light exposure is based on dose response curves that pool data *between* individuals, with each point in the curve representing a single individual.

In 1985, an altered response to light was first identified in patients with bipolar disorder, by Professor Alfred Lewy and his team. They found that patients with bipolar disorder, as a group, exhibited increased suppression of melatonin production in response to light, compared to healthy controls. This was the first indication that light *sensitivity*, rather than only exposure, may have important implications for health and wellbeing. Subsequently, increased light sensitivity has been observed in patients with Delayed Sleep-Wake

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Phase Disorder, while decreased light sensitivity has been observed in patients with Seasonal Affective Disorder and unipolar depression. Further evidence suggests that women are more sensitive to light than men, that the onset of puberty is associated with hypersensitivity to light (which may contribute to the circadian delay seen in adolescence), and that antidepressant or mood stabiliser medications increase or decrease the response of the circadian system to light, respectively.

However, outside of these *group differences* in light sensitivity, a recent paper published in *PNAS* also suggests large inter-individual differences in the general population (led by Dr Phillips, Dr Vidafar and Associate Professor Cain from the Turner Institute, Melbourne). The study generated individual-level dose-response curves to light, allowing for individual differences in light sensitivity to be studied in unprecedented detail. The findings demonstrate that, even within a young, healthy group, there are very large inter-individual differences in circadian light sensitivity – showing more than a 50-fold difference in the evening melatonin suppression response between individuals. They also found that in the evening period, around bedtime, humans are incredibly sensitive to even very low lighting. At the group level, they showed 50% melatonin suppression in lighting of just 30 lux – which is much lower than a typical home ceiling light. These findings may have significant implications for our understanding of individual vulnerability to circadian disruption. And, we may want to consider the findings with regard to our own behaviour at home. *You* may not always feel the effects of dim light in the evening, can the same be said for everybody under your roof?

Dr Elise McGlashan & Dr Gorica Micic
Chronobiology Council

Dental Sleep Medicine Council

Oral appliances have been validated through published studies as an effective treatment for snoring and as the chief alternative to CPAP for managing sleep apnoea.

On the back of this research an alternative industry has grown, providing various forms of one size fits all “boil

and bite” devices. The potential for harm from these devices is significant.

A new entry into this market, with massive media exposure, is a “Do It Yourself” appliance – the Sleep Guardian. Impression materials and trays are sent to patients, who then take their own impressions and sends them to a dental laboratory to be manufactured. The appliance is then posted to the patient.

There are several consequential problems with this method which can result in significant harm. Firstly, impression taking is a skilful procedure and suboptimal impressions can result in inadequate coverage of the teeth with the appliance, leading to a high risk for bite changes and overloading of teeth. Another major problem comes from there being no bite registration possible as part of this process. This results in appliances which either advance the mandible too far, with possible temporomandibular joint problems, or not far enough, leading to an inadequate response.

Another problem is that the potential presence of sleep apnoea in these patients is ignored and neglected. One would expect that a majority of people who snore regularly and loudly enough to disturb others have a high likelihood of having sleep apnoea.

A separate area of concern is the use of lasers by some dentists in treating snoring. There are questions about this treatment being within the scope of dental practice, particularly of a procedure abandoned by most ENT surgeons many years ago.

The Australasian Sleep Association (ASA), as well as the Australian Dental Association (ADA), have expressed concerns regarding these developments and are in the process of formulating a response.

On another note, the program for the three-day ASA dental sleep medicine conference in Sydney, October 16-18, has been finalised. The third day will be for practitioners with experience in the field. The International keynote presenter will be Dr Jamieson Spencer from the USA, and the program will include presentations from 6 sleep physicians, an ENT surgeon, and a maxillofacial surgeon, among others.

Some of the speakers will also be presenting at the main Annual Scientific Meeting, Sleep DownUnder, held immediately after, to update the general sleep community on the latest developments in dental sleep medicine.

For more information go to
www.dentalsleepmedicine-asa.com/program/program

Harry Ball
Dental Sleep Medicine Co-Chair

Insomnia and Sleep Health Council

Sleep During Menopause

In our careers in sleep, most of us will have encountered women who have spoken of sleep disturbance during menopause. As the coordinator of a RCT on insomnia treatments, I have spoken to many women who describe their insomnia symptoms as having started, or worsened during menopause. They often ask me why this is. Beyond giving a generic statement of the impact of hormones on sleep and reassuring them that CBTi is effective during menopause, I have tended to steer away from this topic as I felt it was beyond my level of expertise.

Recently, I listened to a wonderful podcast on sleep and menopause by Dr Moira Junge and Dr David Cunningham. They spoke to Endocrinologist and expert in women's health, Dr Sonia Davison. I listen to the *SleepHub* podcast regularly and cannot recommend it highly enough. I especially encourage you to listen to this recent episode on sleep in menopause: <https://sleephub.com.au/podcast-39>

See below for some **key points** from the podcast, which I found useful and that will inform my conversations with clients going forward:

- Menopause is the last egg and last menstrual period. The average age of menopause in Australia is 51–52 years, but hormone changes can begin 10 years before, and can continue for some time after.
- Symptoms extend beyond hot flushes, and can include sleep disturbance, mood instability, 'formication' which Dr Davison compares to 'ants crawling under the skin', and can be associated with restless legs and sleep disruption.
- There is huge individual variability in how women are affected – 20% experience severe symptoms, 20% have no symptoms, and 'every other woman will be somewhere in the middle'.
- It can be hard to tease out what causes sleep problems at this stage of life. Are they related to ageing or health conditions common in this age group? Are they related to hormone changes or to women's multiple roles and busy lives (e.g., dependent parents, still working, older kids etc)?
- One risk factor for acute insomnia becoming chronic insomnia is the ability to regulate emotions and deal

with anxiety. CBT cannot change physiological symptoms, but it can help to cope with them.

- Hormone therapy might be suitable and helpful for some women. Specialist help exists beyond the GP.
- When assessing sleep in a woman in her mid, or even early 40's, it is worth routinely asking, 'Where are you at with menopause?'

As a result of listening to this podcast, I feel more knowledgeable and confident in talking to clients about menopause and its impacts on sleep.

Alix Mellor

Insomnia & Sleep Health Council

Occupational Health, Safety & Performance Council

Upcoming Shiftwork and Working Time Society Conference

The Twenty-Fourth International Symposium on Shiftwork & Working Time will be held this year from September 9 to 13 in Coeur d'Alene, Idaho, USA. Abstract submissions and early bird registrations have now closed, but there is still time to register for what is sure to be a great event. If you plan to attend the symposium, be sure to support some of the council members who will be presenting during the program:

- Prof Siobhan Banks presenting on 'Altering the Timing of Meals to Improve Metabolic Health in Shift Workers'
- Dr Cassie Hilditch presenting on 'Schedule Factors Associated with the Use of Controlled Rest in a Long-Haul Airline'
- A/Prof Jill Dorrian presenting on 'Coping Strategies and Health in Shift Workers'
- Dr Anastasi Kosmadopoulos presenting on 'The quantity and timing of food intake by police officers on rotating shift schedules varies by shift type'
- Dr Amy Reynolds presenting on 'Non-Standard Work Hours and Chronic Health Conditions in Australia'
- Prof Gregory Roach presenting on 'Daylight Light Exposure Affects Circadian Adaptation to a Week of Night Shifts'

Sleep DownUnder 2019 (SDU2019) OHS&P Council Meeting Reminder

Registrations for SDU2019 in Sydney are now open. The OHS&P Council will be holding their annual meeting during the conference program. This meeting is a great opportunity for us to meet as a council and gather ideas for symposia and potential speakers for next year's meeting, as well as ideas for possible webinars in our areas of expertise. It would be great to see as many of our members at this meeting in Sydney as possible. Further details on the exact date, time and location of the meeting will be circulated in the coming months.

Recent Outputs in Drowsiness, Driving and Shift Work Research

The first half of 2019 has been a busy time for drowsiness and driving related research which has seen the completion of the Heavy Vehicle Driver Fatigue Project, as well as the publication of results from several projects focused on drowsiness in shift workers and biomarkers of fatigue.

The Heavy Vehicle Driver Fatigue project was conducted by the Alertness CRC in collaboration with the National Transport Commission (NTC). Led by Alertness CRC Theme Leader A/Prof Mark Howard and Program Leader Prof Shantha Rajaratnam, this two-year study evaluated alertness monitoring technology and the impacts of different work shifts on driver alertness. Major findings from the project demonstrated patterns in alertness and drowsiness that were related to specific work shifts involved in heavy vehicle driving. These findings have the potential to inform future fatigue policy as part of the NTC-led evaluation of the Heavy Vehicle National Law.

Earlier this year, Prof Shantha Rajaratnam and Alertness CRC PhD student Megan Mulhall together with their team published results from an Alertness CRC-led study in nurses that used objective and subjective measures to examine the impact of shift schedules, duration of wakefulness and circadian timing on driving performance during short commutes. Major findings from this project showed sleep-related impairments in driving performance were highest after the first night shift, while inattention related events were higher after consecutive night shifts. These results provide important insights into the risks associated with driving after night shifts, even when commutes are of a short duration. Identifying and validating candidate biomarkers of fatigue has also been a major focus for the Alertness CRC. Among the recent outputs from this program of

work, a study led by Alertness CRC Theme Leader A/Prof Clare Anderson has provided the first proof of circadian- and wake-dependent modulation of polar metabolites across an extended wakefulness period of 40-hours. This project also highlighted the importance of analysing biomarker data at both the group- and individual-level, which is an important implication for future studies examining biomarkers in metabolites.

Later in the year, the OHS&P Council will be hosting a webinar focused on biomarkers of fatigue. Look out for further details on this exciting event in the coming months.

Alex Wolkow

Occupational Health, Safety and Performance Council

Paediatric Council

Guidelines

The NATA accreditation document and the Guidelines for Paediatric Oximetry have been published! The working party for the Home Ventilation is...

- **ASA Paediatric Standards (NATA accreditation)**

Carolyn Daikin & the ASA Paediatric Standards working party successfully reviewed and completed this guideline in 2018 and the latest version of the ASA this guideline is available on the ASA website: <https://sleep.org.au/Public/Resource-Centre/F-Sleep-docs/Standards.aspx>

- **ASA Guidelines for Oximetry**

Jacob Twiss and the ASA Guidelines for Oximetry working party successfully completed this guideline and it was approved by the ASA committee in March 2019. The guideline is available on the ASA website with submissions to various journals to have a letter to the editor summarising the key information and directing readers to the ASA website for the full document: <https://sleep.org.au/Public/Resource-Centre/F-Sleep-docs/Paed-OSA.aspx>

- **ASA Guidelines for Home Ventilation**

Andrew Tai, Jasneek Chawla & the Home Ventilation Guidelines working party have had 4 teleconferences and 1 face to face meeting. Draft 2 of the guideline was presented to the Australasian Paediatric Respiratory Medical Group in March 2019 at TSANZ. At this stage, there is another scheduled teleconference in late July 2019 to review some

feedback. The working party hope to have a final draft for circulation later in the year, once it has gone through all the governance channels of both TSANZ and ASA.

Sleep DownUnder 2019 16-19 October, Sydney

This conference is looking to have wonderful varied content with John Axelsson (Stockholm University), Frances Chung (University of Toronto) and Julie Quinlivan (Professional Services Review) as our invited speakers. Looking forward to seeing many familiar faces and meeting new members of the Paediatric Sleep Community at our annual scientific meeting.

Other Upcoming Conferences / Dates for the Diary:

- **World Sleep 2019** 20-25 September, 2019, Vancouver, Canada. Oral abstract submissions have now closed. Poster abstract deadline: August 1, 2019 <https://worldsleepcongress.com/worldsleep2019>
- **Sleep 2020 (Associated Professional Sleep Societies (APSS) 2020** 13-17 June 2020, Philadelphia, USA
- **6th International Pediatric Sleep Association (IPSA)** 21-24 October 2020, Brisbane www.pedsleep.org/event-3227663
- **International Conference on Stillbirth, Neonatal Death and Sudden Unexpected Death in Infancy** 22-24 October 2020, Brisbane www.stillbirthcre.org.au/events/2020-isaispid-international-conference
- **Sleep Down Under 2020** 22-24 October, 2020, Brisbane

Nicole Verginis
Paediatric Council

Primary Care Council

Whilst Primary Care needs to become more involved in the management of sleep disorders, the development of an agreed evidence-based model still eludes us.

There are a few practical working models in existence around the ANZ, but we still wait for engagement at the research level to help shape these working models

further. The Primary Care Council still looks to expand its member base in order to provide a better voice in the development of such models in order to effectively manage uncomplicated Sleep Disorders at the Primary Care level. We invite interested parties to attend the Primary Care Council meeting to be held during the Sleep Down Under conference in Sydney later this year.

Luke Katahanas
Primary Care Council

Respiratory Council

October 2018 was the annual Sleep Downunder conference, which showcased respiratory research from around Australia.

It was encouraging to see a growing number of paediatric respiratory studies being undertaken, as well as research into emerging technologies, such as smartphone apps, to assist with recoding respiratory signals whilst asleep. Special mention, and congratulations to Laura Gell, a PhD candidate from Flinders University, for winning the 2018 Young Investigator for her presentation "Investigating the physiological mechanisms underlying airflow recovery following obstruction in obstructive sleep apnea".

The first half of 2019 has seen a number of interesting respiratory papers published. There have been numerous studies examining the effectiveness of smartphone apps in diagnosing nocturnal respiratory events, reflecting the growing nexus between engineering and sleep. Benedikt Hofauer from Germany recently published their findings of selective upper airway stimulation for treating obstructive sleep apnea. Not only did their surgically implanted device reduce AHI, there was a high responder rate. Matthew Chan, from the Chinese University of Hong Kong, led an international collaboration which established undiagnosed obstructive sleep apnea was significantly associated with increased risk of cardiovascular complications in post-operative patients.

Finally, Danny Eckert has accepted a Matthew Flinders Fellowship at Flinders University. Congratulations, and good luck for your future research endeavours in your home town.

David Stevens
Respiratory Council

Sleep Physicians Council

The Sleep Physicians Council has had a busy period but, unfortunately, regulatory issues rather than clinical pursuits, have predominated.

Changes to Private Health Insurance reimbursement for in-laboratory polysomnography came into effect on April 1, 2019. Members of the Sleep Physicians Council were involved in discussions with the Parliamentary Inquiry into Sleep Health Awareness, with the Department of Health and with representatives of private insurance companies to lobby for the inclusion of polysomnography in the more basic private health insurance tiers. The tiers in which sleep studies are covered by various insurers is quite variable, with some including sleep studies only as part of Gold level coverage and others including in lower tiers. Nonetheless, the changes have certainly reduced patient access for private in-laboratory polysomnography. The impact of this on public hospital waiting lists is being actively monitored by the ASA and the results will be fed back to the Department of Health.

We have been approached by a number of members who operate private sleep laboratories, advising that some insurers (Medibank Private in particular) are mandating that unless the laboratory attains NATA accreditation (by July 1, 2019 in some cases!) they will cease reimbursement for sleep studies at that site. Although the Sleep Physicians Council is very supportive of NATA accreditation, it is also clear that for many private sleep laboratories, NATA accreditation is not immediately feasible, due to resource constraints. To that end, the ASA has provided a letter of support for any members who are attempting to negotiate with private insurers, to maintain access for their patients: www.sleep.org.au/common/Uploaded%20files/Public%20Files/Professional%20resources/Sleep%20Documents/Position%20Statement%20Sleep%20Service%20Accreditation%202019_03_11.pdf

The Sleep Physicians Council has also been actively involved in framing the Clinical Committee's response to both the proposed changes to MBS consultation item numbers (including unworkable time-tiering) – via the ongoing MBS Review Taskforce process – and the feedback regarding the updated sleep study item numbers which came into effect last year. The Council

continues to advocate strongly for its broad membership in response to the numerous regulatory threats that we have faced over the past couple of years. The key is to maintain accessible and affordable consultations with Sleep Physicians, in public and private settings, along with timely access to appropriate sleep testing.

The Sleep Physicians Council welcomes feedback and data on wait times for consultations and testing in public and private settings, along with indications as to the proportion of apparently insured patients who find themselves suddenly ineligible for private hospital-based sleep studies, post April 1, 2019. We will use these data points to help frame a strong ASA response to these threats to access and equity in patients accessing care for their sleep disorders.

Simon Frenkel and John Swieca
Sleep Physicians Council

Surgery Council

The past 12 months have seen important steps taken in surgery for OSA in Australasia.

Members of the council have been heavily involved in a variety of international meetings as well as multicentre international trials regarding the role of surgery in the treatment of Sleep Disordered Breathing.

The **6th International OSAS Surgery International Course** ran at the Nicholson centre in February, once again arranged by Julia Crawford (Sydney) as well as Richard Lewis (Perth) as invited faculty. This cadaver dissection and lecture series is the definitive international instructional resource on OSA surgery and serves as both an introduction for ENT surgeons unfamiliar with the field as well as an update for those with more extensive experience.

The **10th International Surgical Sleep Society Meeting** was held in New York in May and featured Stuart MacKay (Wollongong) as well as Julia Crawford and Richard Lewis amongst a broad range of invited speakers. A research day preceded the meeting and was focused on the future directions in Hypoglossal Nerve Stimulation and further integration of this technology into existing OSA treatment paradigms. Other hot topics addressed during the meeting included the Personalised treatment of OSA (Andrew Wellman, Alan Schwartz, Tucker Woodson), the role of advanced surgical techniques in Paediatric OSA, Perioperative care of OSA (Frances Chung), Sleep in Women (Meir Kryger)

as well as panels on traditional and emerging surgical techniques.

The surgery council is looking forward to the upcoming publications of SAMS trial (multicentre multilevel surgical RCT) and Better Sleep study investigating the on the Nyxoah mini-hypoglossal nerve stimulator. Several council members are involved in the next phase Nyxoah trial and looking to further define and expand anatomical indications for implantation.

Upcoming meetings

We are looking forward to welcoming **Stacey Ishman** from Cincinnati once again and **Ryan Soose** from Pittsburgh for the **Sleep Downunder** meeting. Both surgeons are prolific researchers, run busy university practices and have dual-board certification in both ENT and Sleep Medicine. Dr Soose will talk on the practicalities of Hypoglossal nerve stimulation which we hope to have as an available treatment option locally in the near future.

Leon Kitipornchai
Surgery Council

Dates for the Diary

Sleep DownUnder 2019

Date: **16-19 October 2019**

Venue: **International Conference Centre Sydney, Australia**
14 Darling Dr, Sydney NSW 2000

For more information: www.sleepdownunder.com/program/interactive-program

Annual Dental Sleep Medicine Course

Date: **16-18 October 2019**

Venue: **International Conference Centre Sydney, Australia**
14 Darling Dr, Sydney NSW 2000

For more information: www.dentalsleepmedicine-asa.com

Sleep DownUnder 2020

In conjunction with the International Paediatric Sleep Association (IPSA),
Paediatric Sleep Congress

Date: **22-25 October 2020**

Venue: **Brisbane**

Sleep DownUnder 2021

Date: **4-6 November 2021**

Venue: **Canberra**



114/30 Campbell Street, Blacktown NSW 2148 Tel: +61 (0)2 9920 1968 Fax: +61 (0)2 9672 3884
admin@sleep.org.au www.sleep.org.au ABN 51 138 032 014