# SleepWatching India Indian Society for Sleep Research (ISSR) Newsletter Issue 12 30/09/2020





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### Message from President ISSR



Greetings from ISSR for the forthcoming festive seasons. We are passing through a situation which nobody have thought even in dreams. COVID-19 pandemic has done much damage to the mankind and civilization, than any other natural or manmade calamities. We have to get out from this trauma and start life fresh.

We had to postpone many regular activities because of the ongoing pandemic. I apologize sincerely for the inconvenience caused due to the postponement of scheduled events. Now ISSR is slowly restarting its regular activities. Last month we had launched the first webinar. During the pandemic we have published the guidelines for sleep medicine practice which have shared with and circulated to all members. Next month we have a special webinar for general practitioners. We have good news too. Our official journal 'Sleep and Vigilance' has been accepted by Scopus for indexing.

We are presenting our newsletter "Sleep Watching India with added features. We will love to send hard copies in future. However for the time being, please find time to go through the digital edition. You must have noticed the powerful impact of circadian rhythm on your sleep cycle during the COVID-19 pandemic. Try to incorporate at least two lectures; one on 'Circadian physiology' and the other one on 'Circadian Rhythm Sleep-wake disorders' for the benefit of our MBBS students.

While driving we are warned to keep distance. Now we have to keep distance while walking and working.

Please stay safe with mask and social distancing.

Hrudananda Mallick



### **Executive Committee**

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Vice President Dr. Manvir Bhatia

General Secretary
Dr. Kamalesh K Gulia

Treasurer
Dr. Apar Jindal

### **Executive Members**

Dr. Deepak Shrivastava Dr. Manjari Tripathi Dr. Bindu M Kutty Dr. Ravi Gupta Lt. Col Dr. Karuna Datta

Newsletter Editor Dr. Tripat Deep Singh



Hello Everyone,

I am happy to share with you the latest issue of ISSR newsletter. In year 2020, with spread of CORONA virus and several countries imposing lock down a lot of sleep conferences and workshops either got postponed or cancelled. Please go through the "Sleepy Calendar 2020" for more details on cancelled or postponed events.

I changed the cover page of this newsletter in May 2019. I decided to have a photo of sleep related event/activity/things from India on the cover page. Each photo is associated with an interesting story, which you can read in the "ISSR Newsletter Cover Page Stories" section.

**Dr. Pratibha** has contributed to a new section in this issue on **"Sleep and Indian Mythology"**. This time we cover story about Kumbhakarna.

I am thankful to **Dr. Kawish Garg** for agreeing to start a section on "**Sleep and Psychiatry**" on a regular basis from this issue onwards. In this issue he discusses about relationship between "**Sleep and Depression**".

I have included a project report on "Sleep patterns in Adolescents in UAE" done by Mr. Krish Devnani in this issue. He is a Grade 12 student in UAE and did this project as part of his school curriculum. I liked the idea of involving students at a very young age in Sleep science for them to understand the importance of Sleep in their lives. I feel it's a good initiative and idea of including it in ISSR newsletter was to share this good initiative with our readers so that it can be replicated in India as well. I am sure many of you can do a wonderful job on this front.

I am happy to share an artist's vision of Sleep waveforms in "Sleep and Art" section.

I hope the readers will find the information in this issue useful and interesting and I look forward for your valuable feedback to further improve/enhance the future issues. Put "Sleepy Calendar 2020" on your desks. Enjoy reading!!

Sleep Well. Sleep on Time.

Dr. Tripat Deep Singh

### **ISSR Activities**

2018	2019	2020	2021
India Sleep 2018 Staging Together:	7-8 Sep 2019 NSMC, Chennai	ISSR published Guidelines for practice of Sleep Medicine during COVID-19 Pandemic	13 March: Certification examination for Sleep technicians
National Sleep Medicine Course (NSMC)			
National Sleep Technology Course (NSTC)			
ISSR Annual Conference 21-23 Sep 2018			
Advanced Sleep Technology Workshop 7 April 2018, AlIMS Delhi	14-19 April 2019, NSTC, AllMS New Delhi	ISSR conducted webinar on "Safe re-opening of Sleep labs during COVID- 19 Pandemic" in Sep 2020	13 March: Certification examination for Sleep specialists
IBSM exam for Sleep Technologist 22 Sep 2018	14 April 2019, IBSM exam for Sleep Technologist, AlIMS New Delhi	India Sleep, NSMC, NSTC and Certification exams were postponed to year 2021 due to COVID-19 pandmeic	NSMC and NSTC to be announced
World Sleep Society Sleep Specialist Exam, 21 <sup>st</sup> Oct 2018	11 Aug 2019 World Sleep Society Sleep Specialist Exam	Webinar on "ESSENCE OF SLEEP MEDICINE PRACTICE: EMPOWERING THE PRIMARY CARE PROVIDER" on 10 Oct 2020	

<sup>\*</sup>For more details on each activity please visit <a href="www.issr.in">www.issr.in</a>



### **SLEEPY CALENDAR 2020**

### **January**

**20-23:** SingHealth Duke NUS Sleep Centre-Phiips RPSGT Exam Preparation Course Singapore

### **February**

**10-11:** Pediatric Sleep Scoring Workshop, Serdang Hospital KL Malaysia

**20-23:** Sleep Medicine Trends Florida US

**22-23**: 4<sup>TH</sup> International Sleep Update Delhi India

### March

**6-7:** Myanmar Respiratory Society Conference Yangon, Myanmar

13: World Sleep Day

### June

**13-17:** APSS Sleep Philadelphia US

### **September**

**5-9:** ERS Vienna Austria

22-25: ESRS Seville Spain

### **Events Cancelled**

ATS Sandiego US

SLEEPCON Chennai India

SDSM Annual Conference Malaysia

Singapore Sleep Conference

### October

**9-11:** ICSD SEAASM Kolkatta India

17-21: CHEST Chicago US

### **Events Postponed**

International Surgical Sleep Society meeting (Jan 21)

International Pediatric Sleep Association (IPSA) (Feb 21)

APSR Kyoto Japan (Nov 21)

3<sup>rd</sup> Congress of Asian Society of Sleep Medicine Beijing China (May 21)

### **Events Postponed**

SingHealth Duke NUS Sleep Centre-Phiips RPSGT Exam Preparation Course Singapore and Jakarta Indonesia

National Sleep Technology Course (NSTC) and NSMC Delhi India

Annual Conference of IASSA Ahmedabad India

PSSM Annual Conference Philippines

Chest Congress Bologna Italy

Malaysian Thoracic Society Annual Conference KL Malaysia

Sleep Technologist Certification Exam by ISSR

World Sleep Society Sleep Specialist Exam by ISSR

Sleep Downunder (Nov 21)

# **ISSR Activities**

### ISSR Webinar for Primary Health Care Provider:

### "ESSENCE OF SLEEP MEDICINE PRACTICE: EMPOWERING THE PRIMARY CARE PROVIDER"

Date: 10 Oct 2020 Time: 7pm IST

### Agenda

Topic	Speaker	
Introduction to Sleep Medicine	Dr.Deepak Shrivastava	
What is Sleep?	Dr. V. Mohan Kumar	
Functions of sleep	Dr. H. N. Mallick	
Common Sleep Disorders	Dr. Karuna Datta	
Which Sleep Disorders can be dealt in the periphery	Dr. Ravi Gupta	
Which Sleep Disorders should be referred to Sleep specialists/ Sleep Centre	Dr.Deepak Shrivastava	
Q&A	Dr. Manjari Tripathi, Dr. Vikram Sarabhai, Dr. Sourav Das, Dr. Tripat Deep Singh	
Future webinar update and Vote of	Dr. Kamalesh K Gulia	



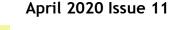


SleepWatching India

### Sep 2020 Issue 12

Sleep Pods have been made available at International Airport Terminal-3 (T3) New Delhi for transit passengers or any departure from T3. You can choose from single or double occupancy, Single occupancy costs Rs.7299 and Double occupancy costs Rs.8299 for 6-8hrs stay. Food and refreshments are also included in the package along with wifi and other facilties.

The picture on the cover page was taken at T3 New Delhi in Dec 2019.



"Night Shelters" is a good initiative by Govt. to care for "Sleep" of homeless people.

In 2019, "Night Shelters" were started in Punjab and Haryana. Delhi started the same in 2015. These are night shelters for home less people for them to Sleep during winter nights. You need to show an ID to get entry into these "Night Shelters" which has been an issue of debate.

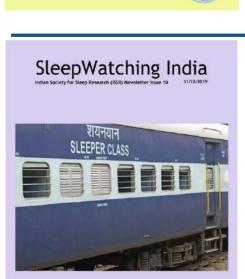
In Delhi, now-a-days some of them are taking refuge in these "Night Shelters" during COVID-19 lockdown.

The picture on the cover page was taken in Patiala, Punjab in Dec 2019.

### Dec 2019 Issue 10

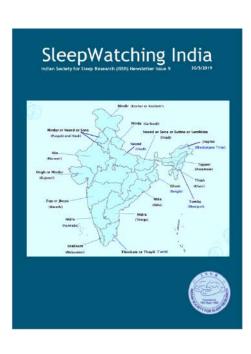
Sleep Medicine and Sleep gained attention of Clinical community after 1981 but Indian Railways have been taking care of travellers Sleep since 1951.

The Sleeper class (SL) is the most common coach on Indian Railways, with ten or more SL coaches attached to train rake, each coach with 9 bays. They are sleeping coaches with 6 (3+3) berths across the width 2 (1+1) lengthwise in every bay without air conditioning. They carry 72 passengers per coach. These coaches have been part of trains since 1951 when fans and lights were made mandatory for every coach.









### May 2019 Issue 9

According to census of India 2001, there are 122 major languages and 1599 other languages in India.

I tried to find the word for Sleep in some of the major Indian languages, which resulted in the cover page pic for Issue 9.

Please feel free to submit the word for "Sleep" in any language that you see is missing in this pic.





Dr. Prathibha KM

Assistant Dean (UG Academics - I MBBS) Professor, Department of Physiology Saveetha Medical College, Chennai

Myths and stories about all walks of life are an integral part of every Indian household. Despite the validity of the stories being doubtful, they open up an interesting treasure box of human beliefs. The following write-up is a collection of stories, deities and beliefs pertaining to sleep from the Hindu and Indian Mythology.

### Kumbhakarna:

An interesting combination of being a meticulous warrior and voracious eater, Kumbhakarna was even envied for his strength and character by Indhra. Kumbhakarna performed sincere penance to impress Brahma along with his brothers Ravana and Vibhishna. Impressed with his devotion, when Lord Brahma appeared, Kumbhakarna was tongue tied (a plan of Indhra, executed by Goddess Saraswathi) and asked Nidrasana (bed for sleeping) instead of Indraasana (the seat of Indra). It is also said he intended to ask for *Nirdevatvam* (annihilation of Devas) and instead asked for *Nidravatvam* (sleep).

The boon which eventually turned out to be a curse entitled Kumbhakarna to six months of sleep and when he was awake, he was unsatiably hungry and ended up even eating humans.

It was with great difficulty and efforts like letting one thousand elephants step over him and numerous trumpets blow into his ears that Kumbakarna was woken up to assist his brother Ravana in his war against Rama. Despite advising Ravana against war, he had to yield to the pressure of his brother and participated in the war against Rama. He managed to imprison Sugreeva, but was eventually killed by Rama.

While one version of the story talks about Kumbhakarna's wives and children, another version describes him to be humanoid or robot like with enormous power and therefore used for wars and otherwise put to sleep, owing to heavy maintenance.





Dr. Kawish Garg

MD, FAPA Medical Director, Geisinger Holy Spirit Sleep Medicine 550 N 12th St Camp Hill PA, USA

### **Sleep and Depression**

Sleep disturbances are commonly observed in depression, in fact 90% of the patients seeking treatment for depression have reported poor sleep quality. It can present as both insomnia and hypersomnia though insomnia is more frequently encountered. Hypersomnia is more of feature of atypical depression or in younger age patients. Insomnia in depression can present in several different forms including sleep onset, middle of the night or late insomnia which is also called as early morning awakening. Generally early morning awakening is considered to be a characteristic of depression, but studies have shown equal prevalence of all 3 different kinds of insomnia.

In the past, insomnia was generally considered to be symptom of depression and less attention was paid to its treatment but research has shown over a period of time that Insomnia and depression has bidirectional relationship and insomnia needs to be treated individually, clinicians should be paying concurrent attention to treatment of both depression and insomnia at the same time. Insomnia has been found to be an independent risk factor for new onset depression (patients with insomnia are at 10 times high risk of develop depression as compared to normal sleepers), relapse or recurrence of depression and failure to achieve remission. Residual insomnia is frequently encountered during treatment of depression which can trigger the relapse of another depressive episode so clinician should be taking an aggressive approach towards treatment of insomnia.

### PSG correlates of depression

Routinely Polysomnogram is not recommended for sleep in depression unless indicated i.e. concerns regarding sleep disordered breathing or other primary sleep disorders. Following PSG characteristics been observed in patients struggling with depression:

- 1. Increased sleep latency, increased wake after sleep onset, early morning awakenings and reduced sleep efficiency
- 2. Reduced REM latency, increased duration of 1st REM period, increased REM density and increased total REM %age

3. Decreased slow wave sleep with altered distribution (generally increased amount of slow-wave sleep is observed in 1st NREM period, but that is reversed in depression, second period of NREM found to have higher slow wave sleep as compared to first, this is called as Delta sleep ratio and is important predictor of treatment response. Patients with higher delta sleep ratio shows better response to treatment as compared to lower delta ratio. Increase in slow wave sleep following treatment with antidepressant indicates better response)

Researchers have further investigated relationship between different sleep architectural abnormalities and depression and came up with several different explanations. Increased sleep architectural abnormalities indicate more depression severity and some changes like reduced REM latency and decreased slow wave sleep can even persist for long duration despite achieving remission from depression. These findings may indicate the vulnerability or risk to develop recurrent episode of depression in future. Similar abnormalities are also observed in first degree relatives of patients with depression.

In order to understand the link between insomnia and depression from biological perspective, several different hypotheses been proposed. One of them is monoamine hypothesis which shares similarities between sleep and depression. Sleep is interplay of different neurotransmitters, especially of importance are serotonin, norepinephrine and acetylcholine. All of these neurons are active during the wakefulness, but during the NREM sleep, norepinephrine and serotonin activity decreases and acetylcholine activity is pretty much absent which is different from REM sleep, during the REM sleep, acetylcholine neurons are guite active as wakefulness and norepinephrine/serotonin activity is pretty much absent. It has been suggested that dysregulation of the similar neurotransmitters is also observed in depression and responsible for REM sleep abnormalities in depression. Reduced serotonin and norepinephrine activity lead to REM disinhibition, so there is increased propensity to REM sleep. Many of antidepressants affect these neurotransmitters and cause REM suppression, so at one point, it was suggested that this is primary pathophysiology of depression and it responds to REM suppression but this is not absolutely true as there are several other antidepressants which do not affect REM sleep, but still helpful in treatment of depression, for example bupropion, so there are alternate explanations which are constantly being investigated.

Another hypothesis is alteration of hypothalamic pituitary adrenal axis, with hyperactivity observed in both depression and insomnia. Generally, cortisol secretion is decreased during the normal sleep, but increased cortisol has been found to be present in patients with both insomnia and depression. Patients with insomnia tend to have elevated inflammatory markers like IL-6 and TNF- $\alpha$ , similar findings observed in patients with depression. Another important hypothesis is alteration of circadian rhythm, which is controlled by clock center in suprachiasmatic nuclei in anterior hypothalamus. Patients with depression are observed to have advanced circadian rhythm, which is responsible for causing early REM onset and early morning awakenings. Patients with depression, who had genetic polymorphisms in their CLOCK gene, were found to have more severe insomnia as per some studies but needs to be investigated further.



Adults don't get enough sleep.

Adults need 7+ hours of sleep per night.

OR MORE



Lack of sleep is linked to several chronic diseases and conditions, including:









DIABETES

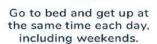
**HEART DISEASE** 

**OBESITY** 

DEPRESSION









Keep bedrooms quiet, dark, and a comfortable temperature.



Remove electronic devices from the bedroom.



Avoid large meals, caffeine, and alcohol before bedtime.



Being active during the day can help you fall asleep at night.

Learn more about good sleep habits at www.cdc.gov/sleep





Krish Devnani

Grade 12, American Community School Abu Dhabi, UAE.

I did a Questionnaire based survey on Sleep habits of adolescents of my school as part of my school project while studying in UAE. I will share my findings and suggestions with my school in the form of infographic. The main findings and suggestions based on the findings are described below.

### Main Finding's-

- 1. Factors delaying circadian rhythm
- Students' academic performance
- Usage of electronic devices prior to sleeping
- Participation in extracurricular activities
- Consumption of caffeinated beverages
- 2. The recommended hours of sleep for high schoolers is 8-10 hours. While most students are aware of this, only 19% receive this amount of sleep.
- 3. It is recommended to refrain from using electronic devices before going to bed. However, only 5% of students abide to a healthy bedtime routine.
- 4. A sport which involves cardio is known for improving the quality of sleep; students which didn't participate in sport didn't receive the recommended hours of sleep.
- 5. Consumption of caffeine can interfere with the body's circadian rhythm; this can lead to sleepiness, and can thus hinder academic performance.
- 6. Due to academic pressure, high school students may opt to sacrifice their sleep, in order to improve their academic performance.

### Suggestions:

- 1. Work with family members, friends, or even guidance counselors to limit the level of academic stress.
- 2. Refrain the use of electronics to 30 minutes or less prior to sleeping.
- 3. Improve time management skills in order to accommodate for extracurriculars.
- 4. Consistent consumption of caffeinated beverages can interfere with your circadian rhythm; limiting its consumption reportedly improves academic performance.

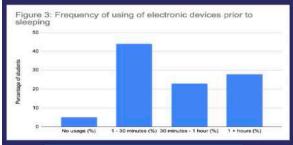
### Sleep patterns amongst adolescents in the UAE

### Factors delaying circadian rythm

- Students' academic performance Usage of electronic devices prior to
- Participation in extracurricular activities
- Consumption of caffeinated beverages

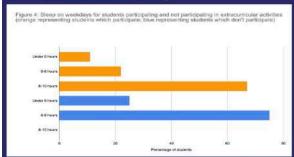


It is recommended to refrain from using electronic students abide to a healthy bedtime routine



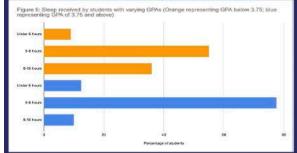


A sport which involves cardio is known for improving the quality of sleep; students which didn't participate in sport didn't receive the





Due to academic pressure, high school students may opt to sacrifice their sleep in order to improve their academic performanc



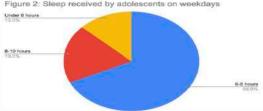
### how much sleep is enough?



highschoolers is 8-10 hours. While most students are aware of this, only 19% recieve this amount of sleep

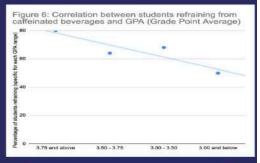
Figure 1: Perceived sleep requirement for adolescents 8-10 hours 6-8 hours

Figure 2: Sleep received by adolescents on weekdays





Consumption of caffeine can interfere with the body's circadian rhythm; this can lead to sleepiness, and can thus hinder academic performance.



### **Suggestions:**

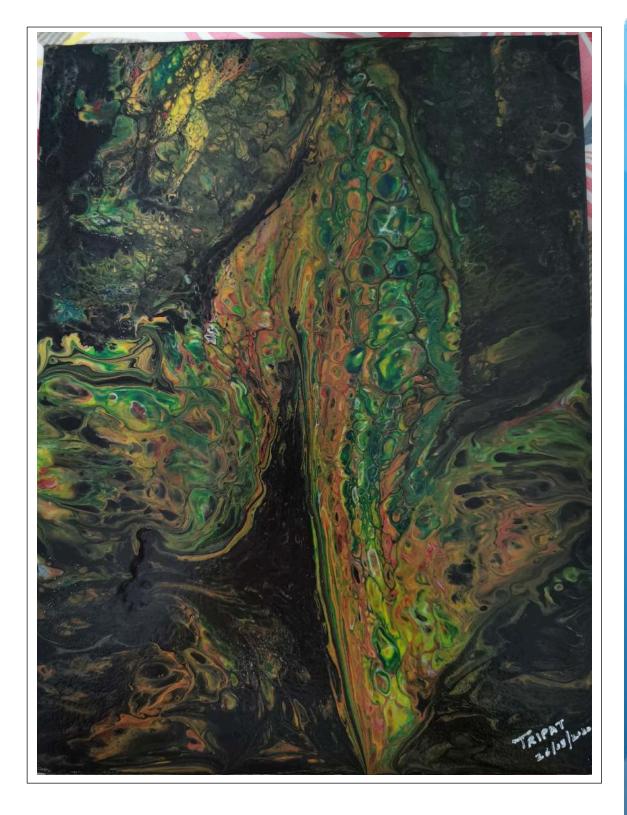
- 1) Work with family members, friends, or even guidance counselors to limit the level of academic stress.
- 2) Refrain the use of electronics to 30 minutes or less prior to sleeping.
- 3) Improve time management skills in order to accommodate
- Consistent consumption of caffeinated beverages can interfere with your circadian rhythm; limiting its consumption reportedly improves academic performance.

### Contact:

For further queries, feel free to email me at deynanikrish@gmail.com

Krish Devnani

# leep Habits Survey in Adolescent



**K-Complex**: An artist's version of one of the most prominent waveforms, K-Complex, observed during Stage N2 of Sleep. An upward waveform followed by downward waveform suddenly emerging from a complex EEG background activity.

Artist: Dr. Tripat Deep Singh.



### ALL INDIA INSTITUTE OF MEDICAL SCIENCES

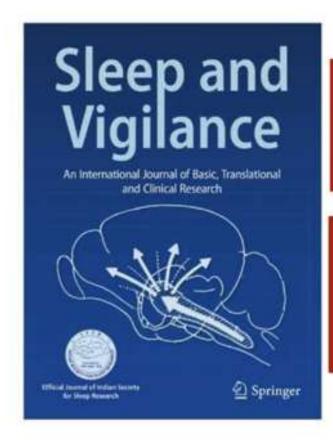
### RISHIKESH

Starts Fellowship Program in Sleep Medicine. Eligibility: MD (Medicine, Psychiatry, Physiology, Pulmonology) Duration: 2 yr





## Starts BSc Sleep Lab Technician Course Duration: 3 yrs



An International Journal of Basic, Translational and Clinical Research

Editors-in-Chief: R. Gupta; S.R. Pandi-Perumal

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A global podium for biomedical and clinical researchers to present and discuss their work

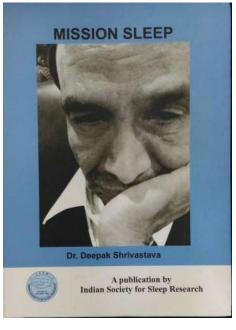
Covers research on the nature and definitions of sleep, as well as sleep medicine and disorders and more

Published in collaboration and with editorial support from the Indian Society for Sleep Research (ISSR)

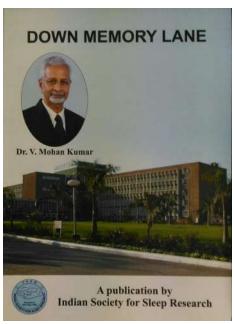
This journal is a forum for biomedical and clinical researchers to present research articles, case reports, clinical investigations, review articles and short communications. Covers sleep at the molecular and genetic level, imaging, medical topics and more.

On the homepage of Sleep and Vigilance at springer.com you can

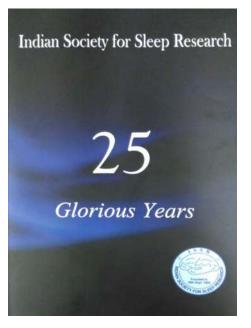
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- Find submission information



The book is ISSR tribute to Dr. Deepak Shrivastava's contributions to the field of Sleep Medicine and his active role in the development of Sleep Medicine in India. The book was released during the ISSR 25yr celebration Conference in Goa in SEP 2017.

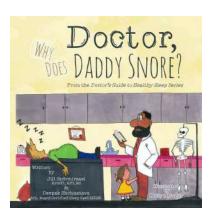


The book is ISSR tribute to DR. V. Mohan Kumar for his contributions to the field of Sleep Science and its development in India. The book was released during the ISSR 25yr celebration Conference in Goa in Sep 2017.



This book is a compilation of the ISSR achievements in 25yrs since its inception. The book was released during the ISSR 25yr celebration Conference in Goa in Sep 2017.





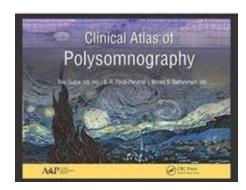
Author: Dr. Deepak Shrivastava



Author: Dr. Manvir Bhatia



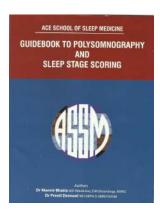
**Author:** S. R. Pandi-Perumal



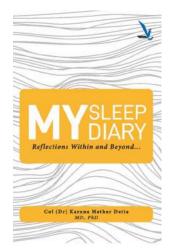
**Authors:** Dr. Ravi Gupta, S. R. Pandi-Perumal, Ahmed S Bahammam



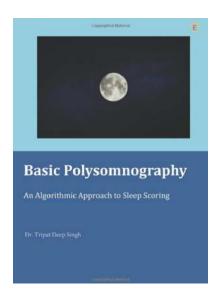
Author: Dr. Himender Makker



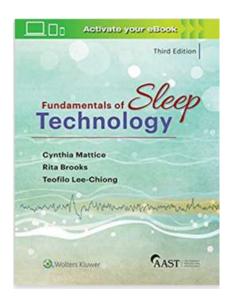
Dr. Manvir Bhatia and Dr. Preeti Devnani



Author: Lt. Col. Karuna Datta



Author: Dr. Tripat Deep Singh



Associate Editor: Dr. Tripat Deep Singh

### National Sleep Medicine Course (NSMC) History (2006-2019)



2006- Dr. H.N.Mallick, AIIMS New Delhi



2009- Dr. Manvir Bhatia, Sir Ganga Ram Hospital, New Delhi



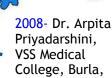
2016- Dr. Ravi Gupta, HIMS, Dehradun, Uttrakhand



2015- Dr. Kripesh Sarmah, Guwahati, Assam



2011- Dr. Preeti Devnani, Mumbai,



Odisha

2013- Dr. Suresh Kumar, Sri Balaji Medical College, Chennai, Tamilnadu



2019- Dr. Apar Jindal, Chettinad Academy of Research and Education, Chennai



2010- Dr. Kamalesh Gulia, Sri Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, Kerala







2007 & 2012-Dr. Bindu Kutty, **NIMHANS** Bangalore,

Karnataka



2017 & 2018: Lt.

Col Dr. Karuna Datta, Goa

### **ISSR Membership**

The Indian Society of Sleep Research (ISSR) works to protect sleep health and promote high quality patient care. These goals are dependent on the support of the professionals working in the field. Membership with the ISSR funds the activities executed for the benefit of all who practice sleep medicine or conduct sleep research.

The ISSR works to improve sleep health through advocacy, education, and strategic research and practice standards.

The Society will have Life members, Regular members and Corresponding members. In addition to membership the Life time members will receive subscription to-

- 1. Journal of Sleep and Biological Rhythm
- 2. "Sleep and Vigilance" Journal
- 3. Sleep Medicine Journal
- 4. ISSR News letter
- 5. ISSR Literature Updates

We encourage you to become member of ISSR and members to renew their membership so that we have your support in continuation of the field of Sleep Medicine.

For more details on membership please visit www.issr.in

### Professional Sleep Societies and Web links

American Academy of Sleep Medicine (AASM)

American Association of Sleep Technologist (AAST)

American Board of Sleep Medicine (ABSM)

European Sleep Research Society (ESRS)

Australasian Sleep Association

Asian Sleep Research Society (ASRS)

Indian Sleep Disorder Association (ISDA)

Indian Society for Sleep Research (ISSR)

Indian Association of Surgeons for Sleep Apnea (IASSA)

South East Asian Academy of Sleep Medicine (SEAASM)

Board of Registered Polysomnography Technologists

(BRPT)

World Sleep Society

American Association of Physicians of Indian Origin-Sleep

(AAPIOS)

www.aasmnet.org
www.aastweb.org
www.absm.org
www.esrs.eu
www.sleep.org.au
www.asrsonline.org
www.isda.co.in
www.issr.in
www.iassa.in
www.seaasm.org
www.brpt.org

www.worldsleepsociety.org www.weartweb.com/aapios/



Letter to the Editor:
Dr. Tripat Deep Singh
MBBS, MD (Physiology), RPSGT, RST
International Sleep Specialist
(World Sleep Federation Program)

Our readers are invited to write to the editor regarding their views on the published material and also to contribute interesting content or updates in the field.

Email us on sleepwatching@yahoo.com.sg