Polysomnography Scoring Course

General Information

Polysomnography Scoring Courses is held at the

SLEEP AND ALERTNESS CLINIC

Med-West Medical centre

750 Dundas St. W., Suite 2-221, Conference Room

Toronto ON M6J 3S3

Conducted by:
Nada Huterer, MD(B&H, *NLO), RPSGT
Pintu Bhuiya, MBBS, RPSGT

Instructors:
Inna Voloh, MD(Russia, *NLO), RPSGT
Naheed K. Hossain, MBBS, RPSGT
Dragana Jovanovic, BSc, RPSGT
Yulia Kaushansky, BSc, RPSGT
Sharon Chung, PhD

Course Times:

Total 11 sessions course.

All sessions will take place on 11 consecutive Fridays (except holidays) from starting date.

The time and date of the next course is 10 a.m. on October 8, 2010.

Registration Policy:

To register please contact our Clinic at:

sleepalertnress@rogers.com

Number of participants: Limited to maximum of 15 (fifteen).

CME: CEC (Continuing Education Credits) Program Application is submitted for approval by the Canadian Sleep Society at the beginning of the course. Previous course was approved for 22 hours of CEC. The Board of Registered

Polysomnographic Technologists (BRPT) recognizes CEC hours approved through the CSS for sleep-related continuing education.

Certificate: Upon completion of the course each participant will be provided by a certificate of attendance.

Payment Policy: Cost - $550.00 for each participant. Payment can be made by check or money order payable to "Sleep and Alertness Clinic".

POLYSOMNOGRAPHY SCORING

This comprehensive 11 sessions PSG Scoring course is designed for the beginner or p racticing te chnologist/physician wanting t o en hance t heir k nowledge a nd skills with all aspects of sleep scoring in both the adult and pediatric population.

Course Outline:

1. Sleep staging

2. Arousals & Artifacts

3. Scoring of respiratory events

4. Interpretation of ECG

5. Parasomnias/Nocturnal seizures

6. Sleep related movement disorders

7. Other techniques: Dim Light Melatonin Onset (DLMO); Driving simulator; Scoring of REM density; Nocturnal Penile Tumescence (NPT); Actigraphy

8. Daytime Tests: Multiple Sleep Latency test (MSLT) & Maintenance of Wakefulness Test (MWT)

9. Specifics of pediatric scoring

10. Hands-on training

11. Review of scored data

1. Sleep Staging Concepts

A comprehensive introduction of normal sleep architecture will be followed by a presentation of the characteristics of the various sleep stages. The participants will learn how brain (EEG), eye movement (EOG), and mental/ sub-mental m uscle (EMG) s ignals are u sed t o d efine N on-REM a nd REM sleep. Individual epoch examples will illustrate how these variables, viewed collectively, p rovide d iagnostic i nformation r egarding n ormal a nd/or abnormal sleep. The new AASM scoring guidelines will be discussed in depth.

2. Arousals and Artifacts

Arousals will be defined and illustrated helping in understanding how to identify these disturbances of sleep. Artifact Recognition: Participants will learn how to recognize various artifacts encountered on the polysomnogram. Examples will be presented familiarizing with the specific characteristics of each type.

3. Scoring of Respiratory Events

Candidates will be informed in detail about the type of sensors used for monitoring breathing in sleep and detection of respiratory events. Definition and classification of apneas (obstructive, central, mixed) and definition(s) of hypopneas. Rules for scoring Respiratory Effort Related Arousals (RERAs). Rules for scoring hypoventilation. Cheyne-Stokes breathing pattern.

4. Interpretation of ECG

Optimal placement of electrodes for recording of one lead ECG. Interpretation of one lead ECG with respect to normal heart rhythm and arrhythmias. Definition of bradycardia and tachycardia in sleep. Recognition of different types of cardiac arrhythmias is rehearsed and severity of arrhythmias is discussed.

5. Parasomnias and Nocturnal Seizures

Classification and characteristics of NREM and REM parasomnias. Characteristics of nocturnal seizures including associated EEG changes. Examples will be shown and a simple test of proficiency will be conducted.

6. Sleep Related Movements Disorders (SRMD)

SRMD include Restless Legs Syndrome (RLS), Periodic Limb Movements in Sleep (PLMS), Sleep Related Bruxism, Sleep Related Rhythmic Movement Disorder (body rocking, head banging head rolling, others), Excessive Fragmentary Myoclonus (EFM), Hypnagogic Foot tremor (HFT) and Alternating Leg Muscle Activation (ALMA). Participants will learn definitions and scoring rules for all aforementioned conditions.

7. Dim Light Melatonin Onset (DLMO); Driving simulator; Scoring of REM density; NPT; Actigraphy

Melatonin as a biological marker of circadian rhythm is discussed. The relevance of melatonin assessment in the sleep clinic is elucidated. The procedure for DLMO in full is reviewed.

Driving Simulator: Driving simulator as a tool for measurement of alertness is discussed and demonstrated with other performance devices.

Scoring of REM density: Significance of REM sleep and REM density in depressed patients is discussed

Nocturnal Penile Tumescence using the 'Rigiscan'

Actigraphy: Actigraph principals, indications for use and interpretation of data

8. Daytime Tests: Multiple Sleep Latency test (MSLT) & Maintenance of Wakefulness Test (MWT)

Measuring of Excessive daytime sleepiness (EDS); History of development of the MSLT and MWT; Clinical and Research protocols; AASM recommendation for MSLT and MWT protocols; Actual scoring of MSLT and MWT (examples of PSG r ecording, c alculations o f s leep o nset, session t ermination t ime a nd results); Discussion on factors that can affect MSLT and MWT results (i.e. sleep deprivation, medications, etc).

9. Specifics of Pediatric Scoring

Characteristics of sleep pattern in children: general considerations; Specifics of sleep architecture from infancy through adolescence; Developmental changes in sleep-wake patterns in children and adolescence; Review of scoring rules and normative values.

10 & 11 Scoring Polysomnogram

Every participant will be given a PSG record to score. The scoring will be reviewed by the instructors and discussed with participants.