

Sleep watching

ASEAN SLEEP TECHNOLOGY NEWSLETTER NEWS / OPINIONS / INSIGHTS



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“The purpose of performing biocalibration is to have a baseline for scoring reference and to check potential problems such as loose electrodes, dislodged sensors or 60Hz interference.”

–Ms. Yvonne Poh Hui Ling

Interview with Ms. Yvonne on Biocalibration during Level 1 Sleep Study

What is biocalibration and why do we do it?

Biocalibration is a sequence of commands given to the patient to verify and document appropriate responses and reliability of sensor application. The purpose of performing biocalibration is to have a baseline for scoring reference and to check potential problems such as loose electrodes, dislodged sensors or 60Hz interference. Biocalibration is also called Physiological Calibration.

When do we do biocalibration- at the start or end of the study?

In our lab, biocalibration is performed at the start of the study to ensure good quality signals. American Association of Sleep Medicine (AASM Scoring Manual v2.4) recommends to do it at the start and end of the study.

What commands are given during biocalibration?

AASM Sleep Scoring Manual v2.4 recommends the following biocalibration commands–

- Ask the patient to Open eyes for 30 sec
- Ask the patient to Close eyes for 30 second- Alpha activity should appear in EEG leads

- Ask the patient to blink eyes for 5 times
- Ask the patient to look up and down without moving the head 10 times
- Ask the patient to look left and right 10 times without moving the head
- Ask the patient to grit/chew teeth for 5 sec
- Ask the patient to simulate snore or hum for 5 sec
- Ask the patient to breathe normally- ensure airflow and effort channel signal are synchronised
- Ask the patient to hold his breath for 10 sec
- Ask the patient to breathe through mouth for 10 sec
- Ask the patient to breathe through nose for 10 sec
- Ask the patient to flex his left foot 10 times
- Ask the patient to flex his right foot 10 times

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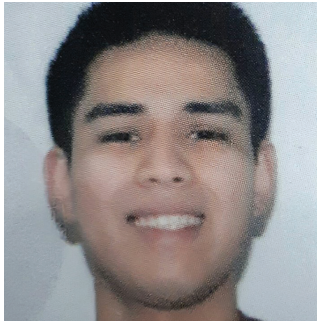
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When do we do biocalibration- before or after giving lights-off command?

Biocalibration is performed before lights-off command. If we do biocalibration after lights-off command, it will unnecessarily prolong Sleep Onset latency.

What should be the impedance for EEG, EOG and Chin EMG leads? What should be the impedance for leg EMG leads?

The impedance for EEG, EOG and chin EMG leads should be below 5k ohms. As for leg EMG leads, impedance needs to be less than 10k ohms.



EFHRAIM JOHN L. TORRES
RTRP, RPSGT

Sleep Technologist, Sleep Lab Philippine Heart Centre, Manila Philippines

“For me, the most challenging aspect of being a sleep technologist is handling pediatric patients. It requires a huge amount of skill and patience.”

-Efthraim John L. Torres

Personal opinions of a sleep technologist

Why did you decide to become a sleep technologist?

I decided to become a sleep technologist in order to expand my knowledge as a respiratory therapist.

What is the most challenging aspect of your profession?

For me, the most challenging aspect of being a sleep technologist is handling pediatric patients. It requires a huge amount of skill and patience. You have to take many factors into consideration. From the fragile skin of the patient to the possible movements he or she may do during the overnight polysomnography. Proper orientation of the parents or guardian also comes into play. You have to be very precise in orienting the parents or guardian of the patient in order to properly handle any possible situation.

What is the biggest change in the profession since you began?

Not much. Most of the changes are usually associated with the scoring guidelines updates provided by the AASM. Ever since I began my career as a sleep technologist, there hasn't been any major change.

What factors do you think affects patient adherence to CPAP?

In my opinion, one of the factors that affects patient adherence to CPAP is proper patient orientation. If the patient understands the importance and the function of CPAP, it will be easier for them to adhere to CPAP. Another factor is correct mask fitting. CPAP, especially at high pressures, has proven to be very uncomfortable to most of the patients. Based on my experience, about half of them are very sensitive when it comes to the mask used during the overnight PSG. I usually let the patient try different masks before the study to provide optimal patient comfort and I have observed a significant increase in patient compliance.

What factors tend to influence patient choice of mask?

I believe that the first thing that tends to influence the patients choice of mask is the size of the mask. Many patients feel claustrophobic if bigger masks are used. Next is the gel or silicon surrounding the mask. Many patients choose the mask that has the larger or softer silicon because it gives the most comfort.



DEASI ANGGRAINI
MD, Ori

Otolaryngology Department, Persahabatan Hospital, Jakarta

Deasy MD, Ori gives highlights at the 2nd United Airway Symposium and Workshop 28-29 April 2017

The Comprehensive Diagnosis and Management of Obstructive Sleep Apnea in Pediatric and Adults

Organized by: Deasi Anggraini, MD, Ori from Otolaryngology Department, Persahabatan Hospital, Jakarta, Indonesia collaboration with Philips Indonesia

No. of Participants: Around 200 from all over Indonesia

International Speakers: Prof. Sung Wan Kim, PhD (Korea), Tripat Deep Singh, MBBS, MD, RPSGT, RST (Singapore), Wei -Chung Hsu (Taiwan)

Workshop day 1: Rhinopharyngolaryngoscopy and Mueller Manuever, How to Interpret PSG

Workshop day 2: How to use CPAP, Practical Technique in OSA Surgery



Traditional Dance in Opening Ceremony



Participants attending Rhinopharyngolaryngoscopy and Mueller Manuever Workshop



Speaker in Symposium and Workshop



Group Photo of Speakers and Participants



Scientific session

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DR. DEEPAK SHRIVASTAVA
MD, FAASM, FACP, FCCP, RPSGT, University of New York and University of California, Davis

Professor of Medicine, Sleep, Pulmonary and Critical Care, UC Davis School of Medicine

Deepak Shrivastava is a sleep physician in California. He is devoted to medical education and research. Dr. Shrivastava is board-certified in sleep medicine, pulmonary medicine, critical care medicine, internal medicine and polysomnography technology.

RPSGT Exam Corner – Frequently Asked Questions

1 What is the minimum voltage increase to score a Limb Movement?

- A. 8 μ V
- B. 50 – 60 μ V
- C. 1 μ V
- D. 100 μ V

2 Which of the following is a characteristic of sleep during the second trimester of pregnancy?

- A. Total sleep time (TST) decreases to pre-pregnancy levels
- B. Slow-wave sleep (SWS) decreases
- C. REM sleep decreases
- D. Shortness of breath decreases

3 Twitching movements of the fingers, toes, and mouth that may occur during stage W, non-REM, and REM sleep are known as

- A. Bruxism
- B. Excessive fragmentary myoclonus (EFM)
- C. REM sleep behavior disorder (RBD)
- D. Rhythmic movement disorder (RMD)

4 Which of the following is a reason to start a CPAP study higher than 4 cm?

- A. The patient is returning to lab for re-titration.
- B. The patient had a high apnea-hypopnea index during the diagnostic study.
- C. The patient has an elevated body mass index.
- D. Both A and C are correct.

5 What causes EKG artifacts in the EEG and EOG channels?

- A. Improper EKG patch placement
- B. M1 and M2 being placed directly on the auricular branch of the posterior auricular artery
- C. Incorrect filter settings on the EEG and EOG channels
- D. None of the above

ANSWERS

Question 1:

Answer is A. 8 μ V

Reference: https://go.aastweb.org/Resources/PDF/A2Zzz18_2/TechnicalCorner.pdf

Question 2:

Answer is A. Total sleep time (TST) decreases to pre-pregnancy levels

Question 3:

Answer is B. Excessive fragmentary myoclonus (EFM)

Question 4:

Answer is D. Both A and C are correct.

Reference: Rationale: <http://www.aasmnet.org/Resources/clinicalguidelines/040210.pdf>

Question 5:

Answer is B. M1 and M2 being placed directly on the auricular branch of the posterior auricular artery

Reference: Rationale: https://go.aastweb.org/Resources/PDF/A2Zzz17_4/Artifact.pdf

Sleep⁺watching

Sleep watching past issues

To access the past issues of sleep watching, please go to the below webpage
www.philips.com.sg/healthcare-consumer/sleep-apnea/resources#sleep-physicians-newsletters

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