

SCORING GUIDELINES FOR GAMMA

SLEEP STAGING

Manually stage the sleep according to R&K rules.

SCORING OF RESPIRATORY EVENTS

DEFINITIONS OF APNEA/HYPOPNEA EVENTS

Apnea - No indication of airflow in nasal pressure, no detectable breathing pattern in the thermistor, a clear amplitude reduction in effort, followed by an associated desaturation.

Hypopnea – A discernable decrease in flow in nasal pressure channel and/or thermistor with an associated oxygen desaturation.

SCORING PROCEDURE

Using the <Event Scoring> display view and at least a 120-sec window,

- 1) Determine a discernable decrease in the SUM channel defined as a >50% decrease in the mean amplitude of the three largest breaths preceding the onset of the event,

or

a clear reduction in amplitude that is <50% with an associated oxygen desaturation of $\geq 3\%$.

- 2) Measure the duration and desaturation of event

- a) Measure from the beginning of the last expiration on the SUM to the beginning of the next inspiration on the SUM to determine the 10-second criterion by clicking the beginning and end of the event.
- b) If not 10 seconds, delete the event mark.
- c) Mark the desaturation event on the SaO₂ channel following the respiratory event, beginning within 30 sec. of the end of the respiratory event.
- d) Delete the desaturation event for a hypopnea if the desat is <3%.
- e) Determine that the desaturation occurs in sleep. Events that begin in sleep and end in wake are always scored. Events that begin and end in wake are never scored.
- f) Mark the beginning and end of the event in the SaO₂ channel corresponding to the desaturation. Duration of desaturation events should not be greater than 120 sec.

- 3) Mark the corresponding event in the SUM channel as either hypopnea or apnea.

For apnea vs. hypopnea, determine if there is airflow in the nasal pressure channel.

Criteria for no flow:

- a) Does not follow previous pattern of flow

and/or

- b) is <20% of the mean amplitude of the three largest breaths in the two minutes preceding onset of the event.

and

- c) has an interruption of airflow that is ≥ 10 sec. in duration.

If there is flow, mark a hypopnea if associated with a desaturation of $> 3\%$.

If there is no flow, mark an apnea regardless of the desaturation level.

Without the presence of an adequate signal in the nasal pressure channel, use the nasal/oral thermistor channel for determination of flow.

SCORING OF LEG MOVEMENTS

Using the <Event Scoring> display view, score LMs according to the following definitions.

Definition of a Leg Movement

A leg movement shall have a minimum to maximum duration of 0.5 to 5.0 seconds and have an amplitude of at least 50% of the subject's voluntary leg flexion are recorded during pre-sleep calibrations.

Example: Pre-sleep calibration of leg flexion = 2 cm. Amplitude of leg movement EMG must be at least 1 cm to be considered.

Movements occurring within 4 seconds of each other, are counted as one movement. Movements, which are separated by at least 4 seconds, are counted as separate movements.

Movements that occur during wake epochs are not counted.

SCORING OF AROUSALS

Score arousals based on ASDA rules (see attachment).

- 1) Arousals occurring within 3 seconds of the end of a respiratory event are marked as RespA.
- 2) Arousals occurring within 1 second before or after a LM are marked as LMA.
- 3) Spontaneous EEG arousals occurring without an associated event are marked as Arousal.