Understand Sleeplmage Science

The SleepImage Cardiopulmonary Coupling (CPC) analysis is based on continuously and evenly sampled data from electrocardiogram (ECG) or photoplethysmogram (PPG) sensors to generate reports where it may inform or drive clinical management.

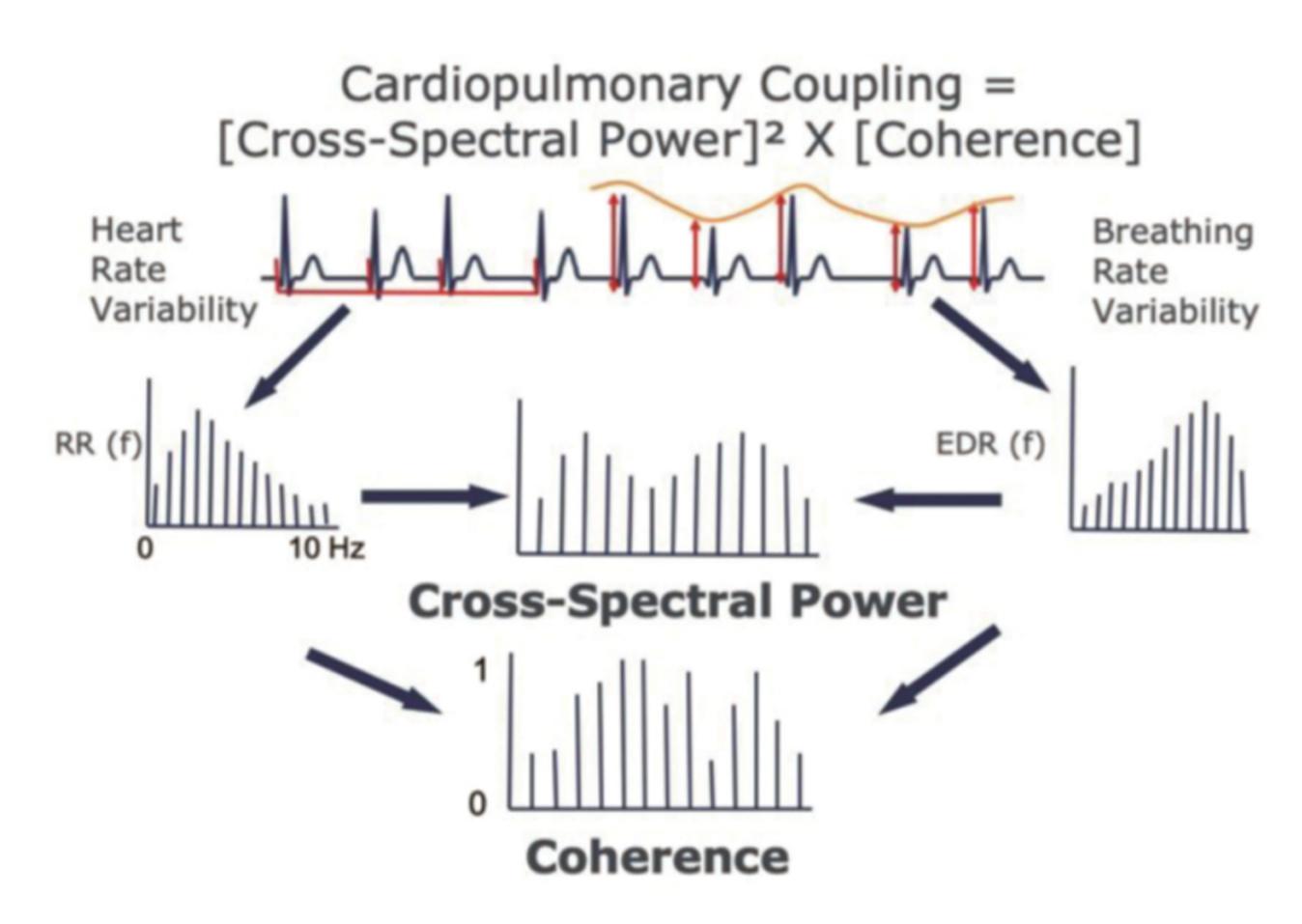


Figure 1. Cardiopulmonary Coupling.

The data collected contains information on heart rate, heart (pulse) rate variability (HRV/PRV) as a measure of autonomic drive, as well as tidal volume fluctuations in respiration, called Electrocardiogram Derived Respiration (EDR) and Plethysmograph Derived Respiration (PDR) respectively. CPC is the coupling of HRV (PRV) and EDR (PDR) (Figure 1).

		SleepImage	PSG	HSAT
Patient Population	Asymptomatic	✓		
	Symptomatic	✓	✓	✓
	Children	✓	✓	
	Adult	✓	✓	✓
Types of Testing	Sleep Disorder Evaluation ¹	✓		
	Sleep Disorder Screening	✓		
	OSA Diagnosis in Children	✓	✓	
	OSA Diagnosis in Adults	✓	✓	✓
	Treatment Tracking	✓		
Test Output	Sleep Quality	✓	✓	
	NREM & REM Sleep	✓	✓	
	Phenotype OSA vs. CSA ²	✓	✓	

For the purpose of diagnosing sleep disordered breathing, the FDA-clearance for SleepImage states the following:

"Clinical evaluation has confirmed that the SleepImage System auto-scoring algorithms calculating the SleepImage Apnea Hypopnea Index (sAHI) generate comparable output to human manual scoring of an Apnea Hypopnea Index (AHI) from Polysomnography (PSG) studies, using American Academy of Sleep Medicine (AASM) scoring guidelines for children and adult patients."

Contact Us

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Sleeplmage is a Revolutionary Approach to Managing Sleep Health in Children and Adults

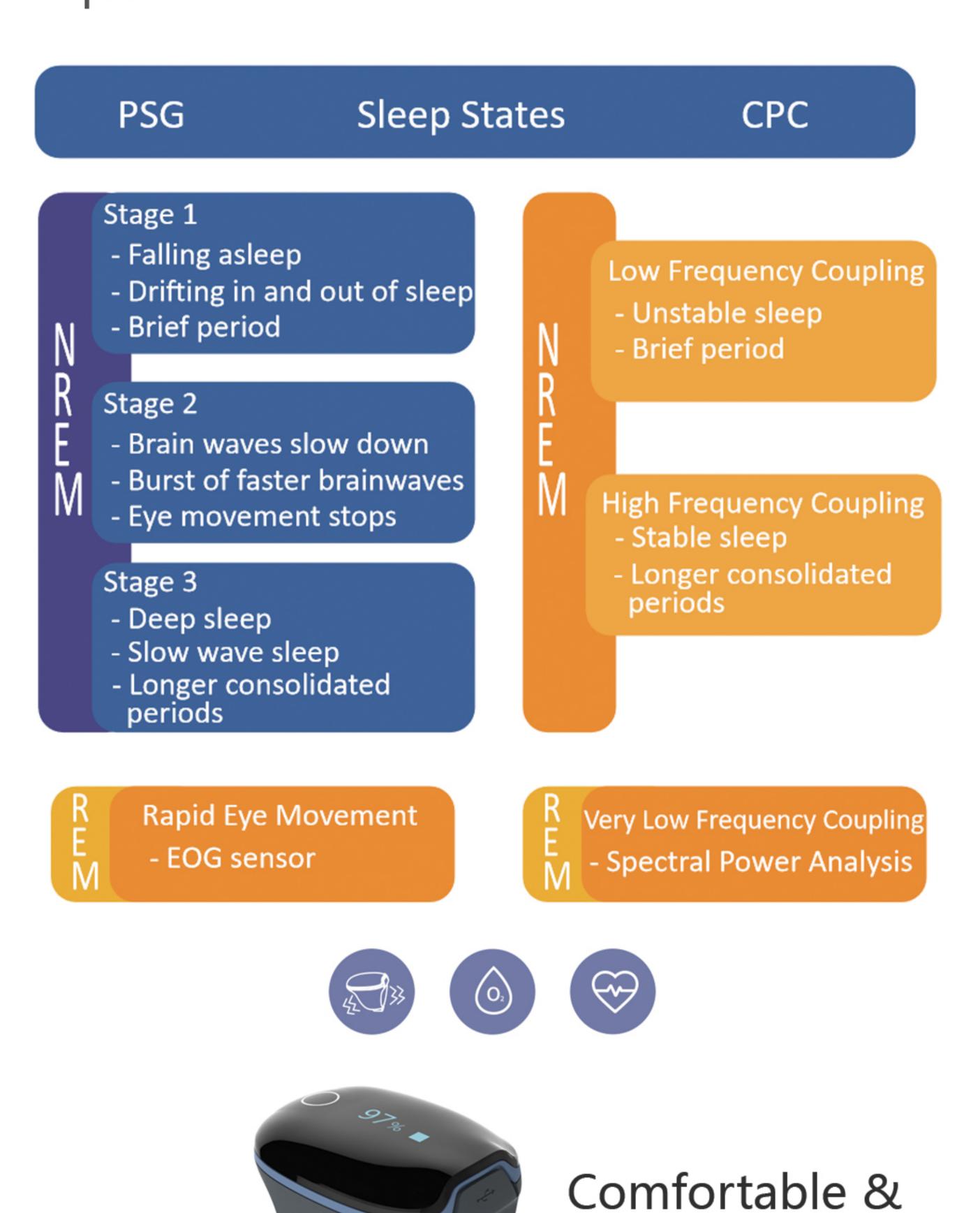
FDA-cleared to:

- Measure Sleep Quality
- Measure Sleep Duration
- Evaluation Sleep Disorders
- Aid Diagnosis of Sleep Apnea
- Track Sleep Disorder Treatment



How Does SleepImage Work?

SleepImage is a cloud-based Sleep Evaluation, Diagnostic and Management System, using a Single-Sensor technology with Automated Output for Children and Adults that is FDA-cleared to be comparable to Polysomnography (PSG) to aid Clinical Diagnosis of Sleep Apnea.



Never slip from

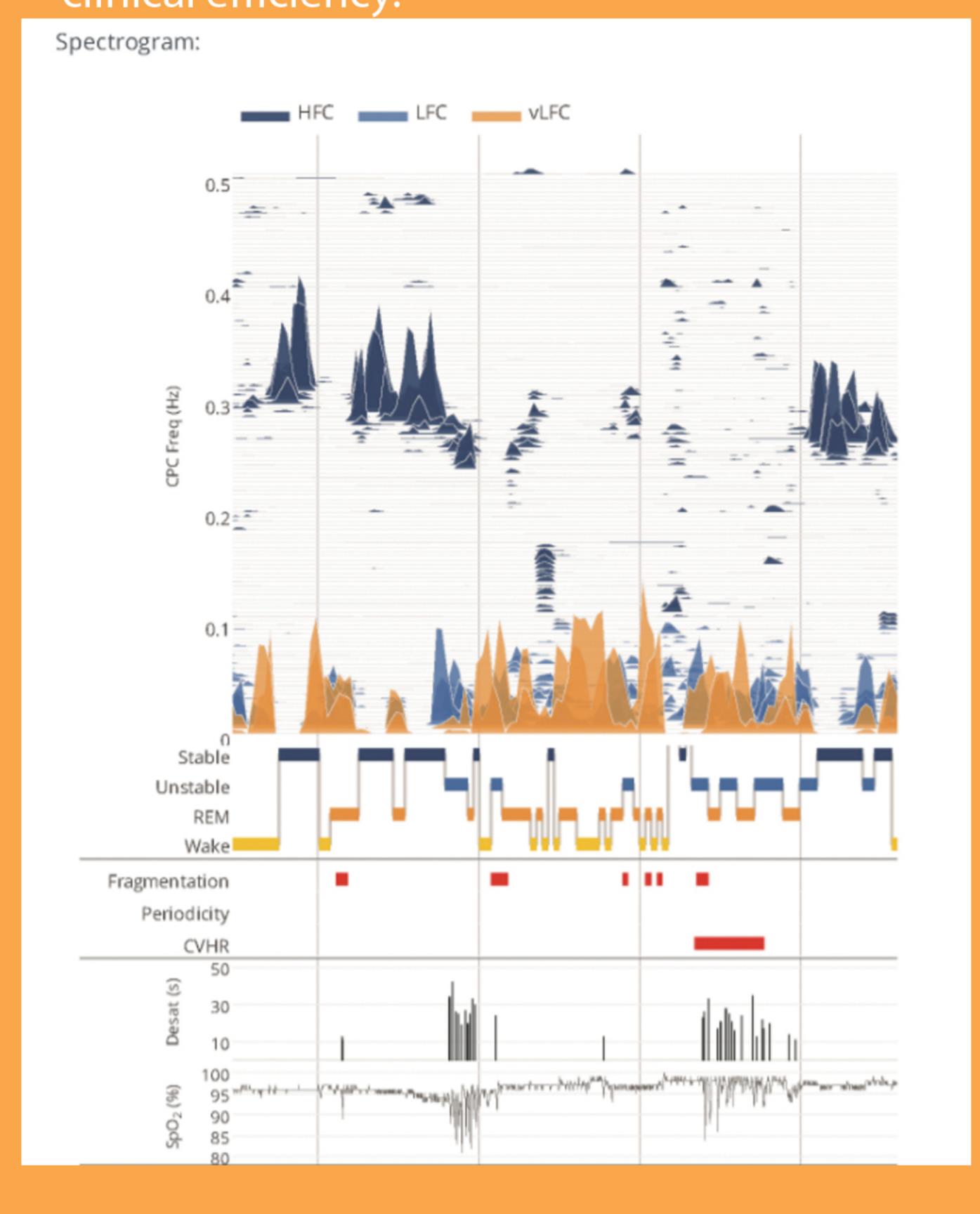
your finger

Continuous monitor SpO₂

& Heart rate



Regardless of the practice, the SleepImage Report is easy to understand and accelerates decision making resulting in increased clinical efficiency.



Sleep Quality Index (SQI)

Sleep Quality Index (SQI) is a summary index of the CPC biomarkers of sleep quality, sleep stability, fragmentation and periodicity, and provides a meaningful unit of measure of sleep health. The SQI is displayed on a scale of 0-100 with expected values for both children and adults. The SQI is useful to track sleep health over time, whether to identify the need for further clinical investigation or to track therapy.

Apnea Hypopnea Index (sAHI)

Sleep Apnea SleepImage automatically calculates an Apnea Hypopnea Index(sAHI) that is FDA-cleared as comparable to manually derived AHI from PSG studies.

Respiratory Disturbance Index (sRDI)
Intended to aid in the characterization of respiratory events during sleep.

Categorization of Sleep Apnea by American Academy of Sleep Medicine (AASM)							
for adults and children (event/hr)							
	No Sleep Apnea	Mild Sleep Apnea	Moderate Sleep Apnea	Severe Sleep Apnea			
Adults	AHI/REI < 5	5 ≤ AHI/REI ≤ 15	15 ≤ AHI/REI ≤ 30	AHI/REI ≥ 30			
Children	AHI/REI < 1	1 ≤ AHI/REI ≤ 5	5 ≤ AHI/REI ≤ 10	AHI/REI ≥ 10			

SleepImage analyzes the SpO₂ data to generate desaturation events, display an SpO₂ graph and automatically calculate SleepImage Apnea Hypopnea Index (sAHI) by combining CPC-analysis and hypoxic events that are detected through the SpO₂ signal where a qualifying event is characterized by a minimum of ten (10) seconds in duration and a 3% oxygen desaturation.