# A NEW, INNOVATIVE TOOL TO IMPROVE INSOMNIA DIAGNOSTICS 



INSOMNIA - THE MOST PREVALENT \& UNDIAGNOSED SLEEP DISORDER

Convenient sleep recording in your home


## DOCTOR

The patient is given the Home Sleep Test (HST) for one or multiple nights to pre-screen for any potential underlying sleep disorder, especially insomnia.

## PATIENT

The HST is so easy to use that the sensor can be applied by the patient in the comfort of their own home.

TABLET An app guides the patient from the simple application through to the start of the measurement in a few easy steps. The HST sends data to the tablet via Bluetooth.

## CLOUD

After the recording is complete the data is automatically uploaded to a secure cloud.

## REPORT

Upon completion, the measurement is analyzed and a report is made available in the cloud. The scoring can be verified by the doctor by viewing the raw data captured.
$3 \times$ EEG* signals
Frontopolar application Fp1:M1
$2 \times$ EOG
Left/right eye movement
EMG
Muscle tone

IMPEDANCE
To determine signal quality during the duration of the recording

SOUND
Detection of snore and snore rhythm

Sound (magnified)

- Supine position

POSITION
Detection of head position
Up = upright
$R=$ right
L = left
$\mathrm{P}=$ prone
Su = supine
ACTIVITY
Head movement

LIGHT
Ambient light: determines lights off / on for accurate time in bed (TiB)

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*two more EEG signals are available to plot in the software
$30 \%$ of the adult population suffer from insomnia - in comparison, only 3-5\% of adults have obstructive sleep apnea syndrome (OSAS).
Insomnia can be diagnosed if a sleep disturbance occurs at least three times per week (over 3 months).
However, there has been to date no efficient screening procedure to collect objective data for insomnia until now!
The Home Sleep Test (HST) is a cost-effective, easy-to-use home screener that allows objective sleep determination over several nights. It can determine sleep stages and sleep fragmentation from cortical arousals. The HST provides information about the distribution of deep, light and REM sleep as well as the duration of the periods of wakefulness.
Because the HST continuously records electrode impedence, the signal quality can be determined and artefacts can be excluded from the analysis. Ambient light, body position and movement help determine Time In Bed (TIB) and other sleep related parameters. The tablet microphone records snoring and the snoring rhythm, through which an obstruction of the upper airways can be determined or ruled out.


## Specifications:

- $43 \times 38 \times 11 \mathrm{~mm}, 30 \mathrm{~g}$
- Up to 36 hours recording duration
- 256 Hz sampling rate
- 2 hours charge time after one night
- Data transfer to cloud
- Continuous electrode impedance recording



## Package includes:

$\checkmark 1$ HST sensor \& charger
$\checkmark 1$ Tablet
$\checkmark 1$ SIM-card (optional)
$\checkmark$ HST-App
$\checkmark$ Cloud access (software-key)
$\checkmark 5$ disposable $\mathrm{Ag} / \mathrm{AgCl}$ electrodes
$\checkmark$ Electrode cream
$\checkmark 1$ Bag

