

THE UNDERESTIMATED FACTOR OF SLEEP

More evidence – objective sleep data as an additional parameter for diagnosis, therapy and treatment monitoring

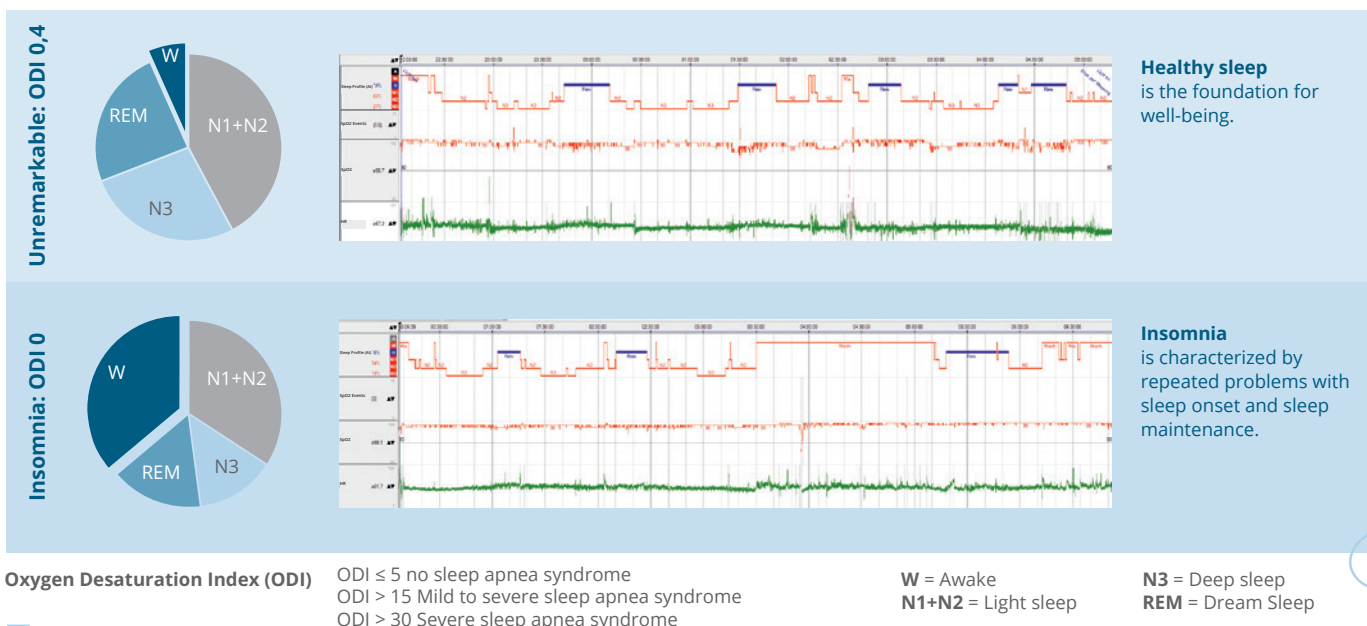
WHEN SLEEP IS DISTURBED, IT AFFECTS THE PSYCHE – AND VICE VERSA.

Sleep disorders such as insomnia are the most frequent comorbidity with mental illnesses. Problems falling asleep and staying asleep, waking up early in the morning, frequent nighttime awakenings, irregular snoring, or morning exhaustion not only interfere with sleep itself—they also have a noticeable effect on mood, resilience, and cognitive performance.

Data from the RKI show that one-third of adults regularly report problems falling asleep or staying asleep. Sleep disorders are therefore not a marginal issue, but a relevant factor in everyday clinical practice – with a significant impact on the course of therapy.

Nevertheless, sleep is usually only assessed subjectively in psychological diagnostics. As a result, patterns, disorders, and correlations often remain invisible, even though they can provide important clues about mental stability and treatment success.

Objective sleep data provide clarity here – as additional evidence that substantially contributes to psychometric procedures.



WHY OBJECTIVE SLEEP DATA MAKES A DIFFERENCE.

Sleep patterns reflect neurophysiological processes that are closely linked to emotional regulation, memory formation, and stress processing. Changes in sleep architecture can indicate disturbances in these processes—often before they manifest clinically.

By recording objective sleep parameters, it is possible to measure for example the effects of antidepressants, behavioral therapies, or relaxation techniques. This opens up new possibilities for reviewing and adjusting therapeutic measures based on data.

With our HomeSleepTest (HST), we pursue a clear diagnostic goal:

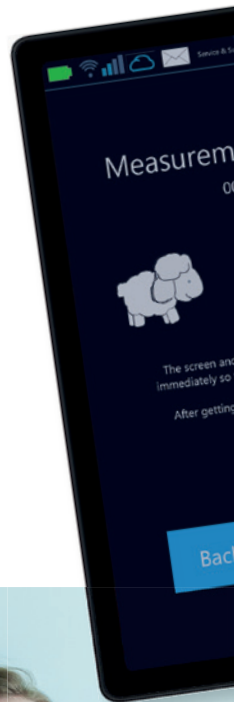
to provide precise information about relevant sleep parameters and to reveal the actual causes of sleep disorders. In combination with our O_{two} Fellwo in particular, we can draw conclusions about respiratory events. This provides an objective basis for selecting, adapting, and tailoring therapeutic measures to the individual patient.



Objective sleep diagnostics – easy to integrate into your daily practice routine

The **HomeSleepTest (HST)** from **SOMNOmedics** enables the valid recording of sleep parameters **directly in your patients' home environment** – without a and without any technical effort on the part of the sleep laboratory practice.

The measurements are available in the password-protected cloud. The evaluation can be performed manually, semi-automatically or automatically. An AI-supported evaluation is in preparation.



SOMNOMEDICS HomeSleepTest: WHICH DATA IS COLLECTED AND WHAT DOES IT TELL US.

The HomeSleepTest records biosignals for sleep diagnostics:

- **3 x EEG** – electrical activity of the brain to determine sleep stages
- **2 x EOG** – eye movements to differentiate between REM and non-REM phases
- **1 x EMG** – muscle activity, e.g., to detect wake-up reactions or movements
- **Impedance** – to determine signal quality over the during the measurement period
- **Audio** (via tablet microphone) – detection of snoring/snoring rhythm
- **Head position** – determination of head position
- **Activity** – head movement
- **Ambient light** – detects light on/off for precise determination of time in bed (TIB)

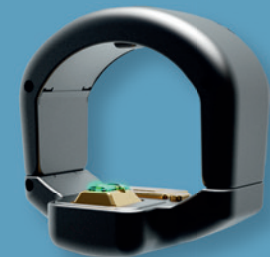
From this, we provide the following information:

Sleep efficiency (%), sleep latency (min), REM latency (min), sleep fragmentation, sleep stages (%), WASO (Wake After Sleep Onset) (min)

Optionally, O_{two} Fellow supplements this data with oximetry screening.

Oxygen saturation (SpO_2 , %):

- Desaturation: oxygen drop $\geq 4\%$, duration ≥ 8 s (parameter adjustable)
→ Oxygen Desaturation Index (ODI)
- Basal SpO_2 : diffusion disorder/alveolar hypoventilation



Heart rate (HR, bpm):

- Heart rate beat-to-beat
- Nocturnal HR fluctuation (NHRF):
 ≥ 8 bpm, duration 3-30 s
- Dipping: Drop in HR during sleep $> 10\%$ (analogous to blood pressure)
- Bradycardia/tachycardia

Position:

- Upright / Lying down: Back, Side
- Determination of TIB

Actigraphy:

- Sleep-wake detection: Reference of events to sleep
- Time in Bed (TIB)

Plethysmography:

- Autonomic arousal: sleep fragmentation
- Cardiac cycle time: detection of cardiac dysfunction

Snoring:

- Episodic snoring, in %
Total Sleep Time (TST)



EASY TO USE FROM HOME.



The HomeSleepTest is used independently by patients in their own home – the evaluation is carried out by the physician.

The lightweight sensors collect precise data on sleep architecture during the night – without the influence of the clinical environment. The measurement is documented in real time via an app and then automatically transferred to the encrypted cloud. Both raw data and analysis data are available there, enabling the attending physician to securely evaluate all derived parameters – in particular the individual sleep profile – for diagnostic and therapeutic purposes. In addition, the app offers the option of direct communication between the patient and physician if necessary, in order to answer questions or extend the number of nights to be measured.



DISCOVER HOW SIMPLE OBJECTIVE SLEEP DIAGNOSTICS CAN BE.



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consultation
Appointment**



Order a demo unit now at:
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