WITHINGS

Reviewer's guide
Sleep Analyzer



Sleep Analyzer
Under-mattress sleep tracker



CLINICALLY VALIDATED

Get to know Sleep Analyzer

For the first time, a home sleep sensor provides lab-precise metrics along with the benefit of convenience — there is nothing to wear thanks to an unobtrusive mat designed for one-time setup under the mattress.

Sleep Analyzer contains the world's most advanced sensors and technology to analyze your sleep and detect sleep apnea, a highly prevalent and underdiagnosed disease.

With precise results and easy to understand insights in the Health Mate app, anyone can discover how to improve sleep quality for better health.

VITAL PARAMETERS

- Sleep cycles: light, deep, REM
- Sleep Score based on quality featuring duration, depth, interruptions, time it takes to fall asleep and wake up
- Medical-grade sleep apnea detection
- Snore detection: episodes & overall duration
- Continuous heart rate tracking: peak, lowest & average

SIMPLE & SMART

- Under the mattress—nothing to wear, compatible with all mattresses*
- One time set up
- Health Mate app (IOS & Android)
- Wi-Fi synchronization, wake to immediate in app results
- Shareable medical reports
- IFTTT compatibility

*Compatible with spring, foam, latex and memory foam layer mattresses. Tested on mattresses 4 to 15 inches (10 to 40 cm) thick.

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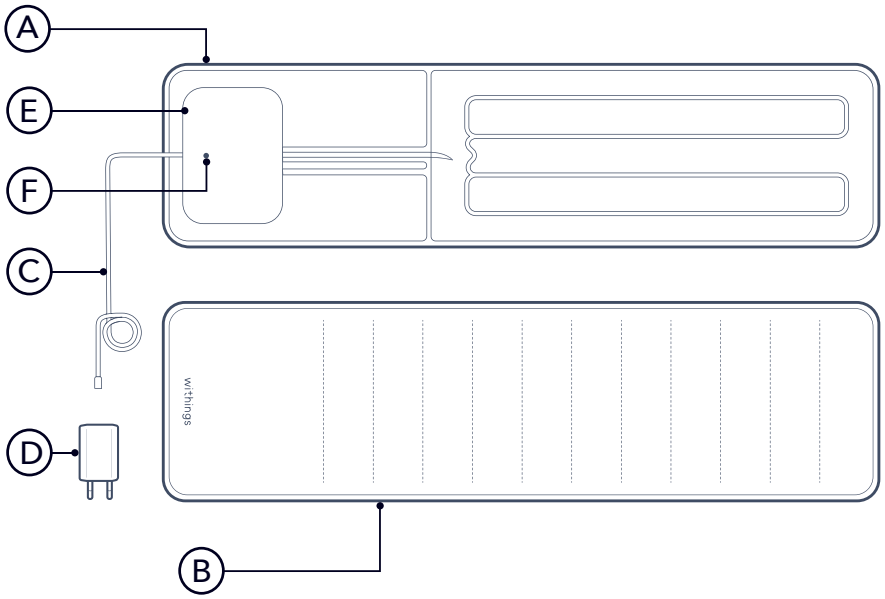
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1. Overview

Ⓐ Air bladder
Ⓑ Textile cover
Ⓒ USB cable
Ⓓ USB power adapter
Ⓔ Sound sensor for snore detection
Ⓕ Setup LED

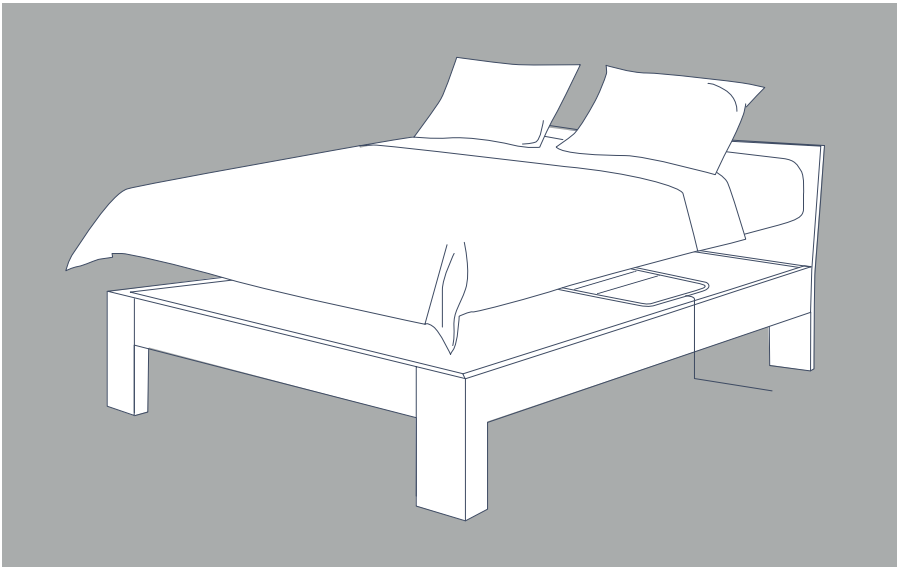


You can deactivate the sound sensor by going to the device's settings in the Health Mate app.

2. Getting Started

How to install Sleep under your mattress

With Sleep Analyzer, you don't need to change your habits. Install it once, and the device will monitor you while you sleep.



The sleep analyzer should be placed between the mattress and what is underneath: the box spring or bed platform. Lay it so the mat is placed at heart level.

Before your first night with Sleep Analyzer, download the free Health Mate app, available for iOS and Android and create an account at go.withings.com.

To install the device, enable Bluetooth on your smartphone, tap Install, and follow the steps. At the end of the installation, follow the calibration instructions. Calibration is a crucial step that adapts Sleep Analyzer to your particular mattress or setup. During installation,

do not sit or lie down on your bed while completing the calibration instructions. During calibration, you may hear a bit of noise, but don't worry—it's normal.

After installation, the Sleep Analyzer will automatically recalibrate itself every day when you're not on your bed to help deliver a precise analysis every morning.

Wi-Fi synchronization

Be sure to choose your own Wi-Fi network when you install your Sleep Analyzer.

After the Sleep Analyzer is installed, data will sync with your Health Mate app whenever you leave your bed. Data will not sync with Health Mate while you sleep, but will sync automatically when you get out of bed.

You are now ready to use Withings Sleep Analyzer—have a good night!



3. Understanding your results

We hope you slept well. In the morning, it's time to dive into your data!

Based on your movements, breathing rate, and heart rate, Sleep Analyzer studies your sleep phases: light sleep, deep sleep, and REM sleep.

- **Light sleep :** This phase is physiologically important, but not as restorative as the deep sleep phases. During this stage breathing slows down, the heart beat becomes more regular, and blood pressure decreases.
- **Deep sleep :** During this phase, which is the most restorative, your brain waves slow down, and you sleep through most potential sleep disturbances without showing any reaction.
- **REM sleep :** Also known as "paradoxical sleep" because the brain waves emitted during this stage seem contradictory to sleep, during this stage you dream. This stage is also characterized by an increase of heart and respiration rates. This sleep phase is also restorative.



Understand your sleep quality

How long you sleep is important, but it's not the only factor in assessing sleep quality. Sleep Analyzer calculates a score based on many factors to assess the quality of your sleep.

Metrics tracked include :

Duration : Total time spent sleeping

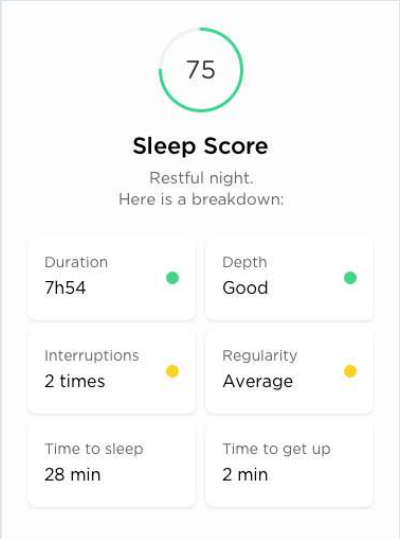
Depth : The amount of time spent in restorative phases, deep sleep, and REM sleep

Regularity : Consistency between your bed and rise times

Interruptions : Wake ups in the night

Time to sleep : Time it took to fall asleep

Time to get up : Time it took to get out of bed



The Sleep Score is a simple, intuitive way to see and understand your sleep quality.

Click on the detail tabs below the score to better understand each component and learn more about how to improve your sleep.

Detect snoring

You can see the number of snoring episodes and their duration in the Health Mate app. Snoring itself is generally safe and common at a certain age. But snoring can have a negative impact on the quality of your partner's sleep.

If you don't want to track your snoring, you can disable this feature any time in the Devices tab of the Health Mate app.



Did you know?

Globally, 1 billion adults aged 30-69 years old are estimated to have obstructive sleep apnea (OSA) and it is known to be "considerably" underdiagnosed with approximately 75-80% of OSA sufferers remaining undiagnosed.

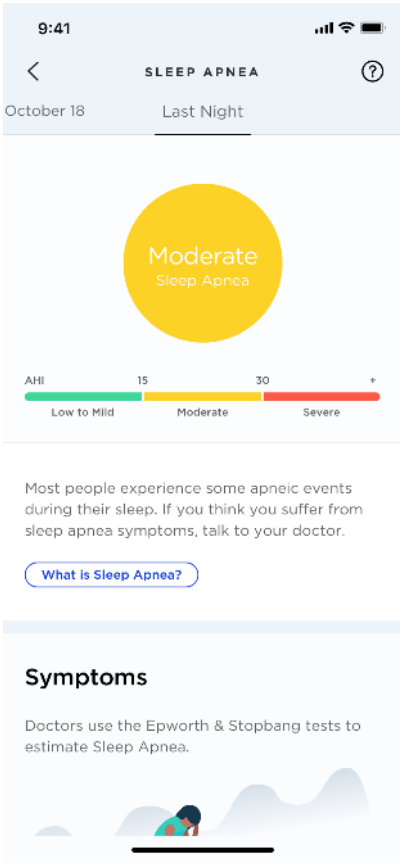
Making sleep apnea easier to diagnose

Sleep apnea is an underdiagnosed and highly prevalent condition that's often silent. The results provided by your Sleep Analyzer can be shared with your doctor and are powerful insights to help lead them towards a diagnostic.

Based on the number of events per hour, the severity of sleep apnea risk is classified as follows :

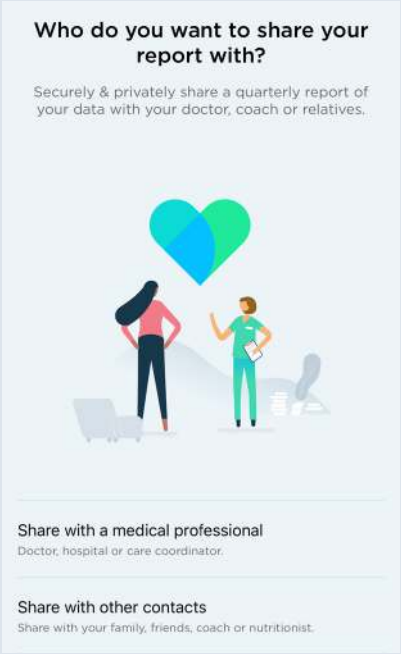
- **Low/Mild**
- **Moderate**
- **Severe**

Like the results you see on the screen, the results in the app are color-coded to make them easier to understand.



Sleep Analyzer is compliant with European medical device standards, meaning that your doctor can use and interpret the measurements provided by the device to help diagnose whether or not you suffer from sleep apnea.

You can easily share results with your doctor by tapping on “Preview and share report” to generate a PDF that can then be sent to your healthcare provider.



Monitor Sleep Heart Rate

Once you’ve set up the device, Sleep Analyzer will automatically track your heart rate at night.

Sleep Analyzer continuously tracks heart rate, and then uses this measure to make averages on the minute level, and thus delivers highly-accurate heart rate measures (the gold standard for HR sleep tracking).

You’ll see your Sleep Heart Rate, which is your average heart rate during sleep. It is correlated with your resting heart rate, which is, on average, 10% higher than your Sleep Heart Rate.

- Sleep HR is lower during deep sleep, which occurs during the first half of the night.



- Sleep HR is higher and more variable during REM sleep, which usually occurs during the second half of the night. Why? REM stands for Rapid Eye Movement, and is due to intense brain activity related to dreams, which happen during this sleep stage.

Retrieve your heart rate data

You can retrieve your overnight heart rate measurements through your sleep data in the Timeline or in the Dashboard view of the Health Mate app.

Your average overnight heart rate is displayed at the bottom of your sleep graph.

Did someone else nap in your bed?

Never fear—if the data needs a tune-up, you also have the option to edit your sleep data manually by accessing the menu in the top right corner of your sleep summary view.

4. If you want to go further

Activate IFTTT integration

IFTTT is a platform that can allow you to connect to more than 500 smart products and services. To reinvent your morning and evening routines, Sleep Analyzer can act as a trigger to create home automation scenarios when you connect to IFTTT recipes. All you need to do is get into and out of bed. See how Sleep Analyzer can act as a switch to control lights, temperature, and more.

Discover a few of the home automation scenarios that are available:



IFTTT is also compatible with Gmail or Google Drive so that you can integrate tasks such as logging your bedtime or sending automatic emails.

How to associate IFTTT with Sleep Analyzer

After creating an IFTTT account, you will be able to connect your device to a variety of services. Get started at https://ifttt.com/.

You can then navigate to the Devices tab of your Health Mate app to access Sleep Analyzer and configure IFTTT.

For more information, see Sleep Analyzer—Creating automated scenarios at http://bit.ly/Sleep-IFTTT

5. Cheat sheet

Sleep Analyzer
Under-mattress sleep tracker

With Sleep Analyzer, get sleep-lab worthy results at home.

An easy one-time setup under the mattress makes Sleep Analyzer fit effortlessly into your life. Plus, with automatic sync via Wi-Fi, there's nothing you need to do but sleep, and you'll wake to find all data in the app.

NOTHING TO WEAR

Easy one-time setup under the mattress, compatible with all mattresses.*

*Compatible with spring, foam, latex and memory foam layer mattresses. Tested on mattresses 4 to 15 inches (10 to 40 cm) thick.

LAB-LEVEL ACCURACY

Developed with sleep physicians and extensively tested against data obtained by the gold standard of sleep diagnostics.

ADVANCED SLEEP TRACKING

Get an in-depth analysis of your night with sleep cycles, continuous heart rate & snoring detection. Know how restorative your sleep was with Sleep Score.

SLEEP APNEA DETECTION

Detect sleep apnea, a highly prevalent and underdiagnosed condition.

WAKE TO IMMEDIATE IN-APP RESULTS

Find your results automatically in the free Health Mate app (iOS & Android™) via the automatic Wi-Fi sync.

SHAREABLE HEALTH REPORT

In the app, easily share a PDF of your data with your physician.

6. Why is it important to know your sleep apnea risk ?

What is sleep apnea?

During the night, breathing may be interrupted and you may not remember it in the morning. Breathing cessation during sleep is not uncommon and it is often perfectly normal to have more than one during the same night, with no noticeable effect on sleep, health and daily life. But when respiratory abnormalities are repeated too often, they can be a symptom of a chronic condition called sleep apnea.

Sleep apnea can have a negative impact on your overall health. It is estimated that more than 5% of adults suffer from it, and many do not even know it.

Sleep apnea is characterized by certain symptoms during the night including but not limited to snoring, night sweats, palpitations, a feeling of choking/gasping for breath, and frequent wake ups.

Sleep apnea impacts the restorativeness of sleep and can cause:

- Headaches
- Short-term memory or learning problems
- Irritability
- Poor concentration
- Changes in mood, including depression

In the long term, the consequences can be even more serious: cardiovascular diseases, increased diabetes risk, and accidents caused by falling asleep.

Why is our device useful?

Sleep Analyzer is the world's first at-home sensor that can detect sleep apnea and requires nothing to wear. By monitoring thoracic and cardiac activity, it identifies the type of breathing cessations that are characteristic of this disease.

Sleep Analyzer has been developed in collaboration with sleep physicians from Hôpital Béclère and extensively tested against data obtained by polysomnography (PSG) analysis, the gold standard of sleep diagnostics.

"Being able to detect sleep apnea with a non-invasive device, at home. is a game changer and could drastically help to better diagnose it." —Dr. Pierre Escourrou, Sleep Physician, Béclère Hospital, Paris

Still have questions?

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