

Evie Ring

User Guide

Introduction

1. Product overview

The Evie Ring and its companion app (available for free in the Apple App Store) is a self-monitoring solution for certain physiological wellness data in adults. Wellness data tracked by the ring includes heart rate (both heart rate at rest and heart rate variability), blood oxygenation (SpO_2), respiration rate, steps, active minutes, skin temperature variation average, calories burned, sleep duration, and sleep stages. In the app, users can track mood, menstrual symptoms, and menstrual cycle.

In addition to the metrics above, the Evie app enables users to:

- Set personalized goals and monitor progress
- See wellness trends over time
- Receive educational insights correlating different data types (e.g., menstrual cycle and sleep)

The ring is intended to be dedicated to a single user who can recharge as needed. With normal use, the ring battery will last five or more days and the portable charging case will hold ten ring charges. The Evie Ring connects to an iPhone® 8 or later running iOS® 16 or later via Bluetooth Low Energy (BLE). For the Evie Ring and app to work properly, the phone must be connected to Wi-Fi or cellular service.

- **Contents**
 - Evie Ring Quick Start Guide (1)
 - Evie Ring (1)
 - Portable charger (1)
 - USB-C Cable (1)
- **Required, not supplied:**
 - iPhone with iOS v 16 or later
 - Network or cellular connection
 - AC Adaptor (USB wall supply)
- **Also sold separately:**
 - Extra portable charger with USB-C Cable

2. Set up

- **Unpacking the Evie Ring**
 - Carefully read this manual for all safety information prior to use.
 - Remove the charger from the box. The Evie Ring is located inside the charger. Remove the tabs between the ring and the charger. Visually inspect the ring prior to use.
 - Place the ring on your finger. Ensure the ring fits comfortably based on the size you entered when you received sizer kit.
 - For best results, wearing the ring on your index finger is preferred, though middle and ring fingers are also acceptable.

Commented [KK1]: The User Guide variously uses Ring and ring.

I suggest leading caps on the Ring and Charger so that they are easy to distinguish within text.

- Before proceeding with setting up your Evie Ring, ensure it is fully charged by plugging in the charger (with the ring inside) to an outlet for two hours. A USB-C cord is provided, but you will need an AC adapter (also called a wall charger or power brick) to plug the charger into a wall. The light on the charger will turn solid green when fully charged and will gently pulse green when charging.
- Note: Do not dispose of the charger or USB-C cable. You will need them to recharge your ring about every five days with normal use.
- Downloading the Evie mobile app
 - Ensure that your iPhone is an iPhone 8 or above and has iOS v16 or above.
 - Using your iPhone, search for Evie Ring in the App Store and install.
- Setting up your account and connecting your ring
 - Open the Evie Ring mobile app and follow the onscreen instructions to create an account. You will be prompted to do the following:
 - Create an account using an email and password
 - Accept Terms of Service and our Privacy Policy
 - Input personal information that will help personalize the mobile app experience. Height, weight, and age are required to ensure accurate readings.
 - Once you've created an account, you will be prompted to connect your ring. Ensure that you have Bluetooth enabled on your phone and provide the necessary permission to allow the app to pair with your Evie Ring.
 - If during set up your ring disconnects from the app for any reason, you will be prompted to go through the pairing process to reconnect. You can also go to Settings and under "My device" click "Pair your ring."
 - Your ring must be connected for you to be able to see your updated data.

Using the Evie Ring

1. Wearing the Evie Ring

- Ring Fit: The open part of the ring should sit on the top of your finger so that the sensors are in the optimal place to read your biometrics. Wearing the ring upside down with the open design on the palm-side of your hand may result in inaccurate or no data.
- Sensors: There are three sensor bumps that protrude slightly on the inside of the ring that you may feel. A snug but comfortable fit ensures the most accurate readings.

2. Biometrics measured

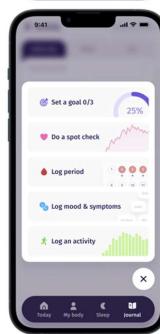
- Wellness monitoring
 - Heart rate: measures pulse rate in beats per minute (BPM), graphical displays reflect averages over time
 - SpO₂: measures blood oxygenation level (oxygen as a percentage of blood), graphical displays reflect averages over time
 - Heart rate variability (HRV): measures the variation in time between each heartbeat
 - Respiration rate average (RR): measures breaths per minute
 - Skin temperature variation
 - Activity tracking
 - Active minutes
 - Steps
 - Distance traveled
 - Calories burned (using both active and metabolic rates)
 - Sleep
 - Sleep duration
 - Sleep zones (including Deep, Light, REM, Awake)
- Women's health monitoring
 - Menstrual cycle logging and tracking
 - Menstrual symptom logging and tracking
 - Ovulation estimation
- Mood and Energy logging and tracking

3. Navigating the mobile app

- **Daily Summary & Goals**
 - When you open the app, the main screen will display your “Daily Summary” which gives you a single view of your day, encompassing both activity and recovery. You can fill the top portion of the circle with a combination of steps, active minutes, and calories burned, and the bottom recovery portion with a good night’s sleep or by taking a moment to log in the Journal tab. At any time, you can navigate to your Daily Summary by clicking the Today tab in the navigation bar.



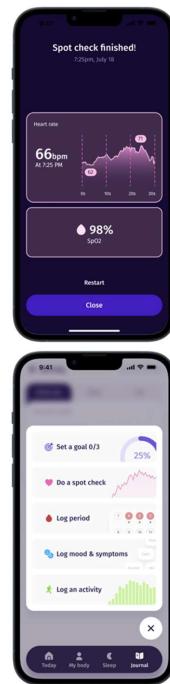
- **Setting Goals**
 - Goals can be set using the “+” button. Goals can be set for weekly steps or active minutes, workout sessions, journal logs, and sleep.



- **Insights**
 - The Evie Ring’s algorithms can help you identify patterns in your health and wellness data. Insights are intended to help you connect the dots between what you’re feeling and your health metrics from the ring. Insights will populate in your Notifications center, as shown by a bell in the upper right corner, accessible from the Today tab.



- **Spot Check**
 - Get a real time measurement of your Heart Rate and SpO₂ using the Spot Check feature.
 - Ensure your ring is close to your phone and worn correctly. For best results your hand should remain still and by your side.
 - Alternatively, you may hold the ring between your index finger and thumb, with the sensors touching the inside pad of your index finger is an alternative option to perform a spot check, particularly if your hand is cold or swollen.
- **Logging Data**
 - Clicking the “+” sign on the bottom right of the app allows you to log an activity, period, or menstrual symptom.



4. Visual indicators

- Indicators on the Evie Ring
 - When worn, you may see LED lights turn on when data is being collected.
 - When on the charger, a blinking green LED inside the Ring will indicate that the ring is charging. Once fully charged, the green LED will remain on for ten minutes and then will turn off to avoid battery drain.
- Indicators on the mobile app
 - When the ring is connected to the app, the battery icon in the top left of the app will display a ring's battery charge. The fill level of the battery icon gives an approximation of battery status, with a full green battery indicating the ring is fully charged to last five days.
 - As your ring becomes low on battery, you will receive a notification. In Low Power Mode, only steps are counted and will be transferred to the app once the ring has been recharged.
- Indicators on the portable charger
 - The charger provides cordless charging capabilities for the Ring allowing you to take it on the go and recharge your ring without plugging the Charger into a wall.
 - The LED light on the outside of the charger in the front will indicate the battery status of the charger when it is connected to a USB supply. A white light indicates the portable Charger battery charge is low, blinking green light indicates the

portable Charger is charging, and it is fully charged when the light turns solid green.

Safety & Product Specs

1. Precautions

- Hardware and Data Services
 - The device is not intended for the diagnosis, treatment, or prevention of specific diseases or medical conditions. This device is not suitable for acute care, emergency services, or long-term continuous monitoring. Consult with your healthcare team if you have any questions about any medical conditions.
 - The ring is designed for a single user and should not be shared with others as this may lead to data loss.
 - Use in accordance with recommended environmental conditions. Use may be adversely affected in the presence of high ambient light.
 - Ensure that you have the most recent firmware and software. And for best performance, enter correct details into user profile.
- Ring fit
 - Use the ring sizer provided to measure the size of your finger. If the ring is too loose, too tight, or not worn with the arrow in the up position, the device may be uncomfortable and/or data loss may occur.
- Designed for users 18 and older with adequate motor skills and non-impaired vision.
- Not for use by those unable to use it in accordance with these instructions.

2. Warnings

- If damage to the device ring or charger occurs, discontinue use and contact customer service.
- In an emergency, the ring can be removed quickly by grasping either side of the ring opening and pulling it apart. After this type of removal, the ring can no longer be used.
- Environment
 - Do not use in a flammable atmosphere or in an MRI or CT environment.
 - Swallow hazard; keep out of reach of small children.
 - Do not expose the device to radiation, heat, mechanical forces, and/or electromagnetic disturbances as damage to the device could occur.
 - Exposure of the device to heat (52°C) or above may cause the device to overheat. If the ring becomes hot at any time, please remove the ring from your finger and contact customer service.
 - Dispose of ring and charger in accordance with national, regional, and local laws for a product with a lithium-ion battery.
- Guidance for Use
 - Do not attempt to service the ring or the charger accessory – there are no user-serviceable parts.
 - Do not use the ring or charger accessory if cracked or broken.
 - Avoid wearing over skin that is not intact – scratches, cuts, etc.
 - If you see no data in the graphs for SpO₂ and HR measurements, it means your ring was not able to acquire an adequate signal. Try adjusting your ring position slightly or warming your hands to achieve a better signal.
- Performance

- Neither the ring nor the charger has any visual or audible alarms. There are no SpO₂ or HR alarms.
- The following conditions may cause incorrect or inaccurate readings:
 - High-frequency electrosurgical equipment
 - Placement of the ring on an extremity with a blood pressure cuff, arterial catheter, or intravascular line
 - Hypotension, cardiac arrest, severe vasoconstriction, severe anemia, or hypothermia
 - Placement of the ring over a tattoo, scar, or other skin anomaly

3. Product safety information

- Skin irritation could occur if the ring is damaged or not cleaned. If you experience any skin irritation, please remove it immediately.
- This device is not intended for use in people under 18, on pets, or in individuals who are incapable of staying safe with the ring and other components.
- Do not use if you have an allergy to metals including gold, aluminum or aluminum alloys, zirconium, titanium, copper, nickel, and beryllium, or acrylic polymers.
- If the ring is left in a cold or hot environment, allow the ring to come to ambient temperature before using. If the ring is left in an extremely cold environment or an extremely hot environment and is not brought to normal room temperature before use, the ring may not function as expected.
- The ring has not been tested during pregnancy.

4. Specifications

Portable charger specifications

- Charger Battery Expiration Date: must be recharged within one year of manufacture date
- Charger Input: 5 Volts / 250mA max (1.25W) from USB-C connector
- Charger Output: 5.1 Volts / 20mA max (0.102W)
- Charger battery capacity: 385mAh Nominal
- Charger battery charging time: 60 minutes max depending on starting charge level
- Operating conditions for charger: Ambient
- Storage/Transit conditions for charger:
 - Temperature: -20° to 35° C (-4° to 95° F)
 - Humidity: 15% up to 90% RH
- Degree of protection against ingress of Water: IP22

Evie Ring specifications

- Ring Battery Expiration Date: must be recharged within one year of manufacture date
- Wireless communication: BLE (Bluetooth Low Energy)
- LED Wavelengths: 526nm – 940nm. Max 50mA (90mW peak) - 9mW average
- Ring battery capacity: 15 to 25mAh (depending on ring size)
- Ring charging Input: 5.1 Volts / 20mA max (0.102W)
- Ring charging time: 0 to 100% in ≤ 60 minutes depending on the ring size and starting battery level

- Operating conditions for Evie Ring: Ambient
- Storage/Transit Conditions for Evie Ring:
 - Temperature: -20° to 35° C (-4° to 95° F)
 - Humidity: 15% up to 90% RH
- Degree of protection against ingress of water: IP57 (water resistant up to 1m)

Evie Ring Mobile App Specifications

- App compatibility: iOS 16 and above
- iPhone 8 and above

SpO₂ Accuracy

- SpO₂ accuracy and data analysis has been determined by calculating the accuracy root mean square error (Arms) between the Evie Ring and arterial blood gas data.
- *Clinical Study Summary*
An IRB-approved clinical study was performed at UCSF (San Francisco, CA) using two Movano oximeters. There were 11 subjects enrolled and tested that met the inclusion/exclusion criteria, 6 men and 5 women, with 4/11 meeting Fitzpatrick Scale types V and VI. Test articles were placed on an index finger and index fingertip. Using an arterial radial cannula, control samples were taken while breathing room air and then hypoxia was induced to different and stable levels of oxyhemoglobin saturation over the claims of the study, taking samples at each plateau about 30 seconds apart. No adverse events were reported. All data were recorded for analysis consisting of at least 200 data points. Data for one subject was used to calibrate the test samples, with data for 11 subjects analyzed per ISO 80601-2-61 and plotted on modified Bland Altman graphs. (See Figures 1 and 2.) Motion and low perfusion were not tested. The A_{rms} was 3% over the entire tested range.

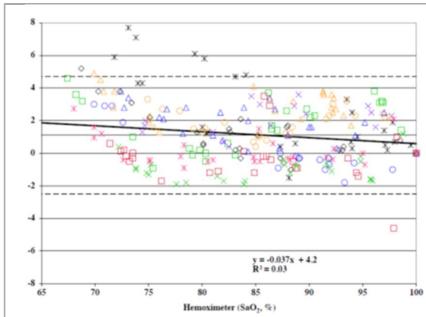


Figure 1 Modified Bland-Altman Plot Evie Ring Finger Placement

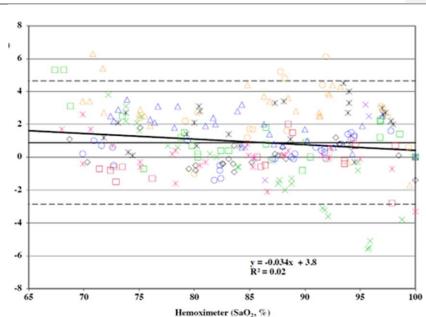


Figure 2 Modified Bland-Altman Plot Evie Ring Fingertip Placement

Heart Rate Accuracy

- Heart rate accuracy and data analysis has been determined by calculating the A_{rms} between the Evie Ring and the forecasted value.

- *Sample devices were bench tested for pulse rate accuracy over the range 40 to 240 bpm using calibrated test equipment and the following tests: stepped variability, greatest variability, random variability, and consistency for 240 samples. All results were recorded and analyzed using the A_{rms} where the square root of each sample forecasted value less the observed value squared was calculated. The accuracy was within +/- 3 bpm over the entire tested range.*

5. Maintenance

- Software upgrades
 - From time to time, the firmware on the ring or the app itself will need to be updated to ensure the best user experience and provide new features. When you open the app, if there is an update ready for either the ring or the mobile app, you will be prompted to upgrade to the latest version.
- Cleaning
 - Rinse the ring with mild soap and water or use a soft cloth to clean all surfaces of the Evie Ring. Dry thoroughly before wearing.
- Recharging
 - The ring battery can be recharged as needed. With normal use (continuous wear and exercising once a day), the battery is expected to last five days.

6. Troubleshooting

ISSUE	CAUSE	RESOLUTION
Incorrect or absence of results	Low perfusion in fingers	Warm hands, rub hands together. Try holding between your index fingertip and thumb.
	Dirty sensor	Clean (see Cleaning section)
	Improper positioning	Verify and adjust
	Temperature extremes	Move to recommended operating temperature range
	Movement	Avoid movement
	Low battery	Recharge
	Damaged device	Contact customer service
Incorrect ring size; ring too small or too tight	Finger swelling when size measurement was taken	Contact customer service
	Finger is swollen	Remove the ring from your finger and try wearing it on a different finger.
Cannot log-in	Forgotten or lost password.	Use "forgot password" to reset password

Ring won't charge	Dirty charger contacts	Clean (see Cleaning section)
	Dirty ring contacts	Clean (see Cleaning section)
Ring won't sync with app	Low battery	Recharge
Data disappears from app		Contact customer service
Firmware won't update	Ring is not on charger, or if on the charger, the battery level is under 50%	Place ring on charger and try again.

7. Electrical and Battery Safety

The Evie Ring has passed the following relevant safety standards:

- Electrical Safety
- Electromagnetic Compatibility and Safety
- Battery Safety

8. Regulatory Statements

Evie Ring FCC ID: 2BD6P-EVIE01

- FCC Statement:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference
- (2) this device must accept any interference received, including interference that may cause undesired operation

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

- Changes or modifications to this product not authorized by Movano could void the electromagnetic compatibility (EMC) and wireless compliance and negate your authority to operate the product.

This product has demonstrated EMC compliance under conditions that included the use of compliant peripheral devices and shielded cables between system components. It is important that you use compliant peripheral devices and shielded cables between system components to reduce the possibility of causing interference to radios, televisions, and other electronic devices.

Responsible party (contact for FCC matters only):

Movano, Inc.
6800 Koll Parkway
Suite 160
Pleasanton, CA 94566
USA
<https://movanohealth.com/contact-us/>

- For Regulatory details, check:
<https://support.eviering.com/hc/en-us/categories/21954169677837-Regulatory>

9. Labeling Symbols

	FCC Logo		Do not dispose in regular garbage.
	Transport and Storage humidity range		Catalog number
	Handle with care		Transport and Storage Temperature range
	YYYY-MM Month of manufacture		IP Rating Charger: IP22 Ring: IP57
			YYYY-MM Expiration date

10. Product Details

- The product is covered by one or more United States of America and international patents.

11. Warranty Information

- The product has a limited 1-year warranty from the date of purchase. Please click [here](#) to view our full warranty policy.

Manufactured for:



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