

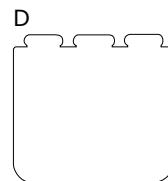
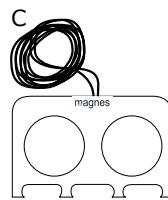
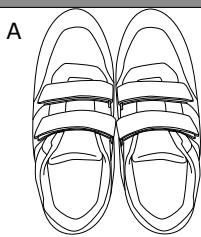
NUSHU

EN: User Manual

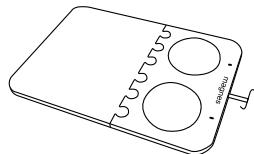
Version 5: 2025-10-17

Digital version available for download:





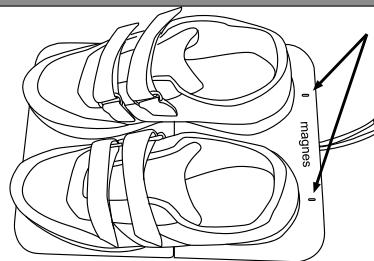
2A



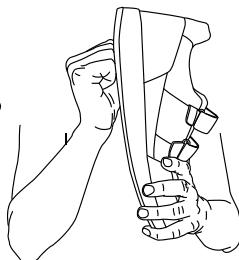
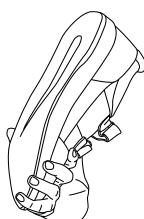
2B



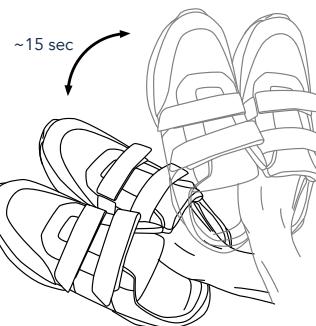
2C



3A



3B



4

5

6

7

Diagram illustrating the layout and interaction points for the NUSHU app screens:

Screen 4 Labels:

- M: Top left corner icon (User)
- 10:17: Top left time
- Karen | 39: Top center profile
- 4G: Top right signal
- B: Top right corner icon (User)
- E: Top right corner icon (User)
- F: Left side of walking model (Blue)
- 91%: Inside F
- G: Right side of walking model (Blue)
- 89%: Inside G
- H: Downward arrow icon between F and G
- I: Bottom right corner icon (Blue)
- J: Left side of walking model (Grey)
- K: Top right corner icon (User)
- C: Center of walking model (Grey)
- Generic: Text above C
- Swing Vibration: Text below Generic
- Mark (0): Blue button below C
- Fall: Blue button below Mark (0)
- Fog: Blue button below Fall
- STOP ACTIVITY: Orange button below Fog
- Progress: Bottom left icon
- Shoes: Bottom center icon
- Settings: Bottom right icon
- A: Bottom center
- L: Bottom right
- D: Bottom right
- A: Bottom center

Screen 5 Labels:

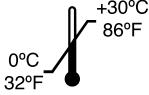
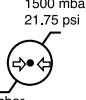
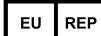
- 10:16: Top left time
- 4G: Top right signal
- A: Top right corner icon (User)
- B: Top right corner icon (User)
- No Logging: Top left card
- Generic: Top right card
- AUTO: Second row left card
- Autologging: Second row left card
- TIMED: Second row right card
- Timed: Second row right card
- Heel Raises: Third row left card
- Toe Tapping: Third row right card
- SH !: Fourth row left card
- Set Activity: Bottom right button
- C: Bottom right

Screen 6 Labels:

- 10:23: Top left time
- 4G: Top right signal
- PROGRESS: Section header
- Overall Activity Summary: Section header
- Total Steps: Top left summary
- 1783: Top left summary value
- Duration: Top right summary
- 00:21:06: Top right summary value
- Distance: Bottom left summary
- 967.1 m: Bottom left summary value
- Activities: Bottom right summary
- 23: Bottom right summary value
- Recorded Activities: Section header
- C: Top right Recorded Activities
- B: Bottom right Recorded Activities
- A: Bottom center

Screen 7 Labels:

- 10:17: Top left time
- 4G: Top right signal
- SETTINGS: Section header
- Account & App: Sub-section header
- B: Profile: Sub-item
- C: Accesses: Sub-item
- D: App Settings: Sub-item
- Shoes: Sub-section header
- E: Update Shoes: Sub-item
- F: Vibration Preferences: Sub-item
- Support: Sub-section header
- G: Report An Issue: Sub-item
- H: Instructions for Use: Sub-item
- Progress: Bottom left icon
- Shoes: Bottom center icon
- Settings: Bottom right icon
- A: Bottom center

| | | | | | |
|---|---|---|--|--|--|
| 8 | | | | | |
| A |  |  |  |  | |
| E |  |  | IP22 |  | |
| I | Max 120 kg / 264 lb  |  0°C 32°F +30°C 86°F |  0% 70% |  600 mbar 8.7 psi 1500 mbar 21.75 psi | |
| M |  |  3.6 V 750 mAh Li-ion |  |  | |
| Q |  |  |  |  | |
| U |  | | | | |

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1 Support



For the best experience, carefully read and understand this user manual prior to using Magnes NUSHU.



The device conforms with the European health, safety, and environmental protection standards. CE conformity to Medical Device Regulation 2017/745.



Legal Manufacturer: Effectum Medical, Kirchgasse 11, CH-4600 Olten.



EU-Rep: EMERGO EUROPE, Westervoortsedijk 60, NL-6827 AT Arnhem.

For any inquiries, please reach out to Magnes.

Email: support@magnes.ch

For Europe and rest of the world

Magnes AG, Hardturmstrasse 253, 8005 Zurich, Switzerland.

2 Label Description



- (01) Device identification
- (11) Manufacturing date
- (21) Serial number

3 Warnings / Important Notes

-  Users shall report any serious incident to Magnes AG and the authority having jurisdiction in their locale.
-  The product is NOT intended to come into contact with bare skin or wounds. Users must wear socks when using Magnes NUSHU.
-  Make sure Magnes NUSHU are charged.
-  Do not use Magnes NUSHU while they are charging.
-  Magnes NUSHU shall not be exposed to loads exceeding 120 kg (264 lb).
-  Transport and store Magnes NUSHU between 0°C (32°F) and 30°C (86°F).
-  Maximum humidity should not exceed 85%.
-  Do not leave your Magnes NUSHU exposed to direct sunlight during storage.
-  No modification of Magnes NUSHU is allowed.
-  Use with caution on slippery and wet floors.
-  Keep out of the reach of children.
-  WARNING: Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of Magnes NUSHU, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.
-  Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.
-  WARNING: Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.
-  It is possible that high levels of interference due to close proximity or due to the power of a source, disrupts the operation of this device. Medical electrical devices require special precautions regarding electromagnetic compatibility and all devices must be installed and put into service in accordance with the information specified in this user manual.
-  Please keep the shoe box with the label for future reference.

4 Product Description and Intended Use

Magnes NUSHU is a medical device that enables patients to collect data on their gait and share this data with healthcare professionals (HCPs). Magnes NUSHU can help patients with gait deficits by providing them with notifications via vibrations on how they walk to assist normal walking. Magnes NUSHU allows to perform standard gait assessments and exercises.

Magnes NUSHU Web Application¹ is intended to be used by HCPs to visualize and track the walking parameters collected by patients using Magnes NUSHU. The data collected by Magnes NUSHU can be used to infer changes in the condition of patients.

-  Magnes NUSHU may NOT perform as expected if used outside of its intended use.
-  Magnes NUSHU is NOT intended to be used for making diagnostic or therapeutic decisions.
-  Please stop using the shoes and talk to your healthcare (HCP), if using them causes any discomfort.

5 Intended User Profiles and Use Environment

Intended User Profiles

Magnes NUSHU will be used by patients who have problems or symptoms related to their gait. It can be used by anyone equal to or above 6 years of age.

Gait data is collected during daily activities or at a clinic. The patients may use Magnes NUSHU on their own or with the guidance of a doctor, physiotherapist, nurse, other caretaker or a family member.

Indended Use Environment

Clinic and home use. The usage can be indoors and outdoors.

-  Magnes NUSHU is NOT designed for high-impact activities like running or jogging.
-  Magnes NUSHU is NOT designed for water sports. Avoid using Magnes NUSHU in heavy rain or snow.

Indications

Magnes NUSHU will be used by patients who have problems or symptoms related to their gait. This includes the following patients: Parkinson's disease patients, Alzheimer's disease patients, multiple sclerosis patients, dementia patients, stroke patients, people with brain or spine injury, elderly people, people with brain disorders, people with walking (gait) disorders, patients of sarcopenia, patients of cachexia, muscular atrophy patients, pediatric patients, orthopedic patients.

Contraindications: None

6 Setup of Magnes NUSHU

Before using Magnes NUSHU footwear for the first time, make sure you have completed the setup and your shoes are fully charged.

¹See the Magnes NUSHU Web Application user manual for more information.

6.1 What's in the Box

Your Magnes NUSHU box includes: (1A) Magnes NUSHU footwear, (1B) charging adapter, (1C) wireless charging unit, (1D) pad for wireless charging unit, (1E) this user manual.

6.2 Required Items

The Magnes NUSHU mobile app is compatible with iPhones or iPads with iOS 16.0 or later.

6.3 Install the Magnes NUSHU Mobile App

Scan the QR code or go to the Apple Store to download Magnes NUSHU.



The most recent version of this user manual is also available in the Magnes NUSHU mobile app.



Mobile costs may occur when using the Magnes NUSHU app.

6.4 Log In

Open the Magnes NUSHU app.

Select Log In.

If you already have an account, please enter your email address and your password to log in.



Make sure to activate your cellular network with internet access or Wi-Fi.



If you do not have an account, see Section 6.5.

6.5 Create an Account

Select Create an account.

Fill in all required fields. Click on **Create** at the bottom of the screen.

Select Go to Sign in and continue with Section 6.4 Log In.

You need access to your email account to reset your password if needed.



Make sure to activate your cellular network with internet access or Wi-Fi.



The email address is shared with Magnes to create your account.

6.6 Charge the Shoes

Assemble the two pieces of the charging unit like a jigsaw puzzle (2A).

Connect the two charging cables to the power adapter (2B).

Place the shoes on the charging station. Each heel should completely cover a round disc on the charging station (2C).

Fully charging the shoes can take up to 6 hours.

| LED Light | Status |
|----------------|---------------|
| SLOW flashing | Charging |
| QUICK flashing | NOT Charging |
| OFF | Fully Charged |



Do not charge the shoes while wearing them.



If the LED is blinking very fast, the shoes are not positioned correctly onto the charging station.



For the best experience and to preserve the battery life of the shoes, we recommend that you fully charge the shoes at least once a month.

6.7 Turn ON Your Shoes

Wake Up the Shoes for the First Time When They Come Out of the Box

The shoes are switched OFF during shipping. To wake them up for the first time follow these steps:

1. Once the shoes are fully charged, hold one shoe upright with the heel on top. Strongly hit your fist against the sole of the shoe to turn it ON (3A). If this is too difficult or the shoe does not turn ON, you can also hold the shoe at the front and hit the heel of the shoe on the floor. One tap at a time is enough, wait for 10-15 seconds.
2. The shoe vibrates twice as soon as it turns ON. If the shoe does not vibrate, tap again. Repeat with the second shoe.



If the shoes do NOT vibrate, the battery may be low. Charge the shoes for at least 15 minutes and try again.



The shoes go back to deep sleep if no connection is established within 2 minutes from wakeup.

Wake Up the Shoes (Regular Use)

Magnes NUSHU shoes can be turned ON by gently shaking them from side to side for at least 15 seconds (3B). The shoes vibrate twice when they power ON.



If the shoes do NOT vibrate, the battery may be low. Charge the shoes for at least 15 minutes and try again.



If the shoes do not turn ON, they may be in deep sleep. Follow the instructions on page 10 to wake them up from deep sleep.

6.8 Connect Your Shoes to the Mobile App

In the app, select the + symbol (4B) in the upper right corner of the screen.

Select the correct shoe size. You automatically return to the main menu.

The shoes will appear as connected on the home screen (4G).



Make sure to activate Bluetooth on your mobile device.



If the shoes do NOT appear, they are either switched off or low in battery. Either wake them up and press **Scan For Shoes** or recharge and try again.

6.9 Turn OFF Your Shoes

If connected to the app, turn off your shoes by closing the Magnes NUSHU app. The shoes will automatically power OFF after 5 minutes of inactivity.

See page 19 for ways to turn OFF your shoes manually.



Always close the Magnes NUSHU app to avoid draining your phone's battery.

7 Using Magnes NUSHU

The home screen indicates the battery level (4G) and if the shoes are charging (flash symbol, 4F).

Select the activity tile (4J), scroll and select the desired activity (5B) and confirm with **Set Activity** (5C). For more information click on (i) (5A).

Scroll, select the desired vibration mode and confirm with **Set Vibration** (4J). Slide to start the activity and/or vibration (4D).

7.1 App Modes

The app offers two different modes:

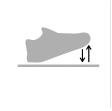
Standard Mode Streamlines the app experience by hiding less frequently used functionalities, making it more user-friendly.

Advanced Mode Unlocks the full range of app features, providing access to all available settings. This primarily impacts the selection of activity types and vibration modes.

To select Advanced Mode, go to **Settings** (7A) and select **App Settings** (7D). Under **App Mode**, select **Advanced**.

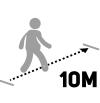
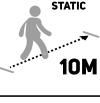
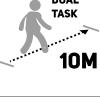
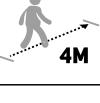
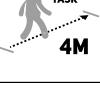
7.2 Activities

The following activities are available in Standard Mode.

| | | |
|---|----------------------|---|
|  | No logging | No data will be collected. Select this mode to activate vibration only. |
|  | Generic | Record Generic Activity. Slide to start this mode to collect any walking period. This mode collects walking and non-walking periods continuously. |
|  | Autologging | Record your walk automatically. Slide to start this mode to automatically collect longer walking periods. This mode only collects walking periods and discards non-walking periods. |
|  | Timed Walk | Record custom Timed Walk. Set the duration in minutes. Slide to start the activity and begin walking. The activity will stop automatically once the set time is over as long as the app is kept in the foreground. |
|  | Heel Raises | Record Heel Raises. Stand comfortably and slide to start the activity. You may hold on to a table or similar for support. Begin lifting your heels (either left, right, both simultaneously, or alternating). Perform only one variant per set. Rest for at least 10 seconds between each set. Repeat the process for additional sets or stop the activity. |
|  | Toe Tapping | Record Toe Tapping. Sit comfortably with your feet on the floor. Slide to start the activity and press Start Session. Tap either your left or right toes as many times as possible until the countdown is over. Only tap the toes of the same foot during the countdown. Ensure that the heel of the active foot and the opposite resting foot remain on the ground. Record another set or stop the activity. |
|  | Simple Reaction Time | Record Simple Reaction Time. Stand or sit comfortably. Slide to start the activity. Randomly press Left or Right to make the left or right shoe vibrate for a couple of seconds. Lift the corresponding foot as soon as the vibration ends. |

The following activities are only available in Advanced Mode.

| | | |
|---|-----------------|---|
|  | Timed Up and Go | Record Timed Up and Go. Begin by sitting on a chair. Slide to start the activity. Stand up and walk to the 3-meter mark at your normal pace, turn, walk back, and sit down, then stop the activity. |
|---|-----------------|---|

| | | |
|---|-------------------------|---|
|  | 6-Minute Walk | Record 6-Minute Walk. Slide to start the activity and begin walking. The activity will stop automatically after 6 minutes, when the countdown is over. |
|  | 3-Minute Walk | Record 3-Minute Walk. Slide to start the activity and begin walking. The activity will stop automatically after 3 minutes, when the countdown is over. |
|  | 25-Foot Walk | Record 25-Foot Walk. Slide to start the activity and begin walking. Press START at the first mark of the 25 ft course. Press STOP at the second mark. Rest and return, pressing START at the beginning and STOP at the end of the 25 ft course. |
|  | 10-Meter Walk | Record 10-Meter Walk. Slide to start the activity. Walk at least 12 meters, then stop the activity. The first 1.5 meters of walking are discarded in the analysis. |
|  | Static 10-Meter Walk | Record Static 10-Meter Walk. Start the activity, walk 10 meters, then stop the activity. The analysis includes the acceleration at the beginning of the 10-meter course. |
|  | Dual-Task 10-Meter Walk | Record Dual-Task 10-Meter Walk. Slide to start the activity. Walk at least 12 meters while counting backwards in steps of 7 starting from 100, then stop the activity. The first 1.5 meters of walking are discarded in the analysis. |
|  | 4-Meter Walk | Record 4-Meter Walk. Slide to start the activity. Walk at least 6 meters, then stop the activity. The first 1.5 meters of walking are discarded in the analysis. |
|  | Static 4-Meter Walk | Record Static 4-Meter Walk. Slide to start the activity. Walk 4 meters, then stop the activity. The analysis includes the acceleration at the beginning of the 4-meter course. |
|  | Dual-Task 4-Meter Walk | Record Dual-Task 4-Meter Walk. Slide to start the activity. Walk at least 6 meters while counting backwards in steps of 7 starting from 100, then stop the activity. The first 1.5 meters of walking are discarded in the analysis. |
|  | Posturography | Record Posturography. For your own safety, only perform this activity with the supervision of a healthcare professional. Stand still with your feet closed and slide to start the activity. Remain standing still for 60 seconds with eyes open until the countdown is over. After a 10 seconds break, repeat with eyes closed. |



Choice Reaction Time

Record Choice Reaction Time. Have the person wearing the shoes stand or sit comfortably. Slide to start the activity. Randomly press **Left** or **Right** to make the left or right shoe vibrate briefly. The person wearing the shoes should lift the corresponding foot as soon as they feel the vibration. Ensure they cannot see which shoe will vibrate next.

The activities in the advanced mode are typically done under the supervision of an HCP. Detailed instructions in English only can be retrieved from <https://www.magnes.ch/documents> for the following activities:

- Timed Up and Go
- 25-Foot Walk
- 10-Meter Walk (and its variants)
- Haptic Reaction Time Activities
- Posturography



For your own safety, only perform posturography under the supervision of an HCP.

7.3 Vibration Modes

The following vibration modes are available in Standard Mode.



No Vibration

Use the shoes without vibration



Metronome Vibration

Vibrate at regular intervals. The frequency and the preferred side (left, right, both) can be adjusted.



Swing Vibration

Vibrate when the foot is in the air, from toe off to heel strike (swing phase).



Swing Plus Vibration

Vibrate when the foot is in the air, from heel off to heel strike (swing phase). Similar to 'Swing Vibration' with an earlier onset.



Heel Off (HO) Vibration

Vibrate when the foot leaves the ground (heel off).



Ground Vibration

Vibrate when the shoes are in contact with the ground.

The following vibration modes are only available in Advanced Mode.



Heel Strike (HS) Vibration

Vibrate when the foot hits the ground (heel strike).



HS-HO Vibration

Vibrate when the foot hits the ground (heel strike) and when it leaves the ground (heel off).



Load Vibration

Vibrate when the load on the heel is higher than a set threshold.



Unload Vibration

Vibrate when the load on the heel is lower than a set threshold.



Length Vibration

Vibrate when the detected step length is either longer or shorter than a set threshold, depending on the selected mode.



Pink Metronome Vibration

Vibrate at semi-regular intervals, where each interval is slightly different. The frequency and the preferred side (left, right, both) can be adjusted.



Modulation Vibration

Vibrate continuously in a wave-like pattern where the vibration strength smoothly changes between minimum and maximum intensity. The frequency and the preferred side (left, right, both) can be adjusted.

7.4 Set Vibration Preferences

From the home screen, navigate to Settings/Vibration Preferences.

7.4.1 Vibration Intensity

Set your preferred vibration intensity by moving the slider. Click Start Vibration to test and Stop Vibration to end it. The intensity applies to all vibration modes.

7.4.2 Metronome Variants

Set your preferred vibration frequency (beats per minute) by moving the slider.

Expand the drop-down arrow to set the active side to **Left, Right or Both**. The default is **Both**.

7.4.3 Length Vibration

Set your preferred vibration length in centimeters. Apply to the other side with **Match Values**.

Set the mode via the drop-down arrow to:

Affirmative The shoes vibrate when you reach your preferred step length.

Corrective The shoes vibrate when your step is shorter than your preferred length.

7.4.4 Load/Unload Vibration

Put on your shoes and connect them to the app. Adjust the sliders to manually change the percentage of weight on a given foot to trigger the vibration. Apply to the other side with **Match Values**.

Click on **Calibrate & Personalize** to calibrate your shoes for optimal use with the Load/Unload Vibration.

Confirm with **Start** in the pop-up message.

Follow the instructions and click **End Calibration** on the calibration screen, once you are done.

7.5 Record Your Activity

To record your activity, slide right (4D). The orange button and two discs in the heels of the shoes indicate that the activity is being recorded.

To take a note for that particular activity, click on the **Take Note** button (4J).

Press **STOP ACTIVITY** to stop the recording (4D).

Depending on the activity, the following buttons appear (4L). Click on the (i) (4K) for more information.

Mark Record a generic event

Fall Record a fall event

FOG Record freezing of gait (FOG)

Start Mark the beginning of a course

Stop Mark the end of a course

7.5.1 Heel Raises

Stand comfortably and slide to start the activity. For support, you may hold on to a table or a similar stable surface.

Begin lifting your heels in one of the following ways:

- Both heels simultaneously.
- One heel at a time (left or right).
- Alternating between left and right heels; the movement can be fast (like walking on the spot, without lifting the toes) or slow (one at a time)

Important: Perform only one variation per set.

Take a rest of at least 10 seconds between each set. Repeat the process for additional sets or stop the activity when finished.



For best results, avoid moving the active foot to the left and right during the activity.



If you have trouble with balance, hold on for support.



Keep the tips of your toes always on the ground.

7.5.2 Toe Tapping

Sit comfortably with both feet flat on the ground. Slide to start the activity.

When you are ready, press **Start Session**. A countdown appears.

Tap the toes of either your left or right foot as many times as possible until the countdown ends. Repeat with the other foot.

After completing one set with each foot, you can record another set or finish by pressing **STOP ACTIVITY (4D)**.



For best results:

- Perform at least one set with the left and right side (otherwise analysis fails).
- Only tap the toes of the same foot during the countdown.
- Ensure that the heel of the active foot remains on the floor.
- Ensure that the opposite resting foot also remains flat on the floor.

7.5.3 Simple Reaction Time

Stand or sit comfortably. Slide to start the activity (4D).

Randomly press **Left** or **Right** to make the left or right shoe vibrate for a couple of seconds.

Lift the corresponding foot as soon as the vibration ends. Repeat until you lifted each foot 5 times.

Press **STOP ACTIVITY** to finish (4D).



The analysis discards responses faster than 50 ms and longer than 1800 ms. It also requires 5 valid lifts per foot to be complete.



If you have trouble with balance, perform this activity in a seated position.

7.6 Download Your Data

The download button Arrow Down is located at the center between the two shoes on the home screen (4H).

A counter next to the download button indicates that an activity is available for download. Click the Arrow Down to download the recording.

Connect to the Wi-Fi network — it will appear as NUSHU-xxxx. The download will begin shortly

after.

Click the arrow next to the activity or Download All. A progress bar indicates the download status.

7.7 Analyze and Manage Your Data

Click on **Progress** in the lower left corner (6A). Allow 5–10 minutes after data upload and the analysis before checking the results.

If the data have not been uploaded automatically, the **arrow button** is enabled (6C), indicating the number of pending activities to be uploaded. Click on the **arrow button** (6C) to upload the activity for analysis. Alternatively, you can swipe down at the top of the **Progress** screen (6A).

Select an individual activity (6B) to see detailed information about it after it has been analyzed.

To see more detailed information, swipe the graph to the left.

7.8 Manage Your Account

To view or change your account information, go to **Settings** (7A) and **Profile** (7B).

Tap on the information you would like to change and tap **Update** to save your changes.

To delete your account, press **Delete Account**. Enter your password and press **OK** in the pop-up window to confirm the deletion or press **Cancel** to cancel the process.



Deletion of your account is permanent. If you confirm, all your data will be deleted. You will need to create a new account to keep using Magnes NUSHU.

7.9 Manage Access to Your Data

To view, add or delete who has access to your data, go to **Settings** (7A) and **Accesses** (7C).

To add a new access, select **Grant New Access**. Scan the QR code that you received from the HCP.²

To delete an access, select it, select **Delete** and confirm deletion.



The app's own access is shown under **App**. Please note, that this includes access to the email you used for creating your account.



The access **Analyst** is created by default to allow processing of your data and providing the results.

7.10 Update the Shoes

Your shoes are running firmware which is reading the sensors, driving the vibration motors, and handling communication and storage. The firmware can be updated over the air.

²The app requires access to the device's camera to scan the QR code. You are asked to grant access to the camera the first time.

Go to **Settings (7A)** and **Update Shoes (7E)**.

If a new version is available, press **Update**. The update may take several minutes.

At least 20% of battery is needed to update the shoes.



Make sure to activate your cellular network with internet access or Wi-Fi.

7.11 Report an Issue

To report an issue or any other feedback, go to **Settings (7A)** and **Report An Issue (7G)**.

Type in your message and press **Submit** to send your report to Magnes.

7.12 Additional Shoe Controls (Quick Actions)

Tap on name / shoe size at the top of the screen (4E) for the following quick actions:

Sync This setting allows you to manually upload the real-time parameters from the shoes for analysis.

Reboot This setting turns your shoes off and immediately on again.

Sleep This setting puts your shoes into sleep mode. To wake them up, gently shake them from side to side for at least 15 seconds (see page 10).

Deep Sleep This setting puts your shoes into deep sleep mode, making them less likely to wake up while traveling. To wake them up, firmly tap the heels of your shoes (see page 10).

7.13 Cleaning and Maintenance

Clean the Magnes NUSHU shoes regularly. Remove any dirt with a damp cloth (dampen cloth with ambient temperature tap water) and let them air dry. Spray the inside of the shoes with a shoe disinfectant after each use, if multiple users are using the shoe.



Do not use any detergents. Do not machine wash. Do not use sharp utensils. Do not dry shoes in direct sunlight, oven, and/or microwave.

The maintenance of Magnes NUSHU must not be carried out by the user. In case of a malfunction, please contact the distributor or the manufacturer (see page 6).



Device contains a Lithium-Ion battery. Dispose the device in accordance with EC Directive – WEEE (Waste Electrical and Electronic Equipment).

8 Troubleshooting

| Problem | Cause | Action |
|--|---|--|
| Shoes not detected | Bluetooth inactive on mobile device | Turn on Bluetooth on your mobile device. Also ensure that Bluetooth is permitted in the app settings of your phone for the Magnes NUSHU app. |
| Shoes not detected | Battery is empty | Fully charge your shoes. |
| Shoes not detected | Electromagnetic interference | Try using your shoes in a place free of other Bluetooth and wireless devices. |
| Shoes do not connect | Shoes in sleep mode | Shake the shoes side to side for 15 seconds to wake them up (see page 10). |
| Shoes do not wake up | Shoes in deep sleep mode | Strongly tap the heel of the shoe against your hand or fist and wait for 10–15 seconds (see page 10). |
| Activities cannot be collected | No local network connection | Ensure that Local Network is permitted in the app settings of your phone for the Magnes NUSHU app. |
| Data not uploaded to database | No or bad internet connection | If data was downloaded from the shoes, they will be saved under Progress (6A) , under Recorded Activities . Check mobile data or Wi-Fi internet connection. |
| Server cannot be reached | No or bad internet connection | Check mobile data or Wi-Fi internet connection. |
| Data download is not responding | Connection issue, no local network permission | Disconnect from the local network and try to download again (see page 17). If the problem persists, reboot the shoes (see page 19). Ensure that Local Network is permitted in the app settings of your phone for the Magnes NUSHU app. |
| Results are not analyzed | Results were not fetched | Make sure to have internet connection and that at least 5 minutes have passed from uploading the data. Go to Progress (6A) and swipe down to refresh the page. |
| Cannot connect to the NUSHU-xxxx network | Connection issue | Retry to connect. If the problem persists, try one of the following: close the app completely and reopen it, reboot the shoes (see page 19) and/or check if they are up-to-date (see page 18). |
| Profile data are not shown correctly | Connection issue | Logout and close the app completely. Then try again. Ensure internet connection. |

| Problem | Cause | Action |
|---------------------------------|---|--|
| Limited functionality available | Firewall blockage | The firewall of your institute can prevent some functionalities of the app. Make sure your IT department allows Magnes NUSHU to access the Wi-Fi without firewall blockage. |
| Cannot scan QR code | Camera access permission not granted to app, QR code settings of phones | Check if QR code reading is activated in your general device settings. Ensure that camera is permitted in the app settings of your device for the Magnes NUSHU app. |
| Firmware update does not start | No local network permission | Ensure that your preferred language is selected in the app settings of your phone for the Magnes NUSHU app. If your preferred language is not available, the default language is selected automatically. |

9 Warranty

Magnes NUSHU has a limited warranty of 2 years from the date of purchase. During the warranty period, should this product prove to be incomplete or defective in functionality in accordance with the provisions given in the user manual, Magnes AG shall carry out a repair or a replacement delivery free of charge. The warranty covers manufacturing defects and DOA (dead on arrival) cases. Defect products shall be returned to the return address specified below for further inspection. In no case shall the user modify the devices in any way (or even just try to do so). Any such action will void the warranty. Instances of force majeure are beyond the scope of this warranty. For disputes, Swiss law shall apply.

Return address: See page 6.

The following are explicitly excluded from this warranty:

- Deterioration due to normal use or consumption of the product.
- Accessories supplied with the product which are worn out or used up through proper use (e.g., shoes, rechargeable batteries).
- Products that are stored, used, or cleaned improperly or contrary to the provisions of the user manual.
- Products modified or repaired by the customer or by a service center not authorized by Magnes AG.
- Products that are damaged during shipping between manufacturer/service center and customer

Subject to change without notice.

10 Technical Specifications

| | | |
|---------------------|---------------------------------------|---|
| Magnes NUSHU | Lifetime | 24 months |
| | Gait events accuracy | Heel Off, Flat Foot: 36 ms Toe Off, Heel Strike: 8 ms |
| | Gait parameters | Gait velocity: 0.06 m/s |
| | Power supply/capacity | Li-ion battery 3.7 V, 750 mAh IEC 62133-2:2017 |
| | Storage capacity | 32 GB (~ 600 h of data recordings) |
| | Wireless communication | BLE IEEE 802.11b/g/n (Wi-Fi) |
| | Wireless connection power | BLE: 3 dBm Wi-Fi: 19.5 dBm |
| | Battery charging rate | Regular: 260 mA Precharge (low voltage): 52 mA |
| | Unit weight | 40 g for each side |
| | Water and dust proof rating | IP22 Protection against objects and particles > 12.5 mm and dripping water when tilted at 15°. |
| CE | | The device conforms with the European health, safety, and environmental protections standards. |
| FCC | | Contains FCC-ID: 2BDTE-NUSHU1V1 |
| Charging Station | Mains voltage | 110 – 240 V at 50 – 60 Hz |
| | Valid inputs | 5 V/3.0 A 9 V/2.0 A 12 V/1.5 A |
| | Output power | 15 W each pad – 30 W total |
| | Compatible wireless charging standard | Qi |

11 Explanation of Symbols Used

| | | | |
|----|--|----|-----------------------------------|
| 8A | Important safety or operating instructions | 8B | Read the user manual |
| 8C | Do not dispose in household waste | 8D | Serial number |
| 8E | European conformity | 8F | Federal communication commission |
| 8G | Dust- and waterproof rating | 8H | Keep away from rain |
| 8I | Maximal applicable load | 8J | Transport and storage temperature |
| 8K | Humidity limitation | 8L | Atmospheric pressure limitation |
| 8M | Manufacturer | 8N | Battery disposal information |
| 8O | Mains electricity is double insulated | 8P | Indoor use only |
| 8Q | Reference number | 8R | Medical device |
| 8S | Unique device identifier | 8T | Authorized representative |
| 8U | Manufacturing date | | |
