

MEDENTUM DIAGNOSTICK

Better diagnostics for all

USER MANUAL

Diagnostic connects patients to
primary care physicians and
specialty providers across the
country with one affordable, user-
friendly device.

<https://medentum.com/> 



Contents

Important Notice	3
User Safety	3
Device orientation	4
About your device, its sensors and their location	
Charging your device	
Cleaning	
Storage	
App orientation	6
Downloading your app and logging in	
Creating a one-time medical profile	
Connecting the app to your device	
Completing a medical consultation	9
Symptom entry	
Collecting vitals using your device	
AI analysis	
Sharing information with your provider	

Important Notice

This Diagnostick General User Guide is subject to updates and revision. Please ensure that you are following the most recent user guides for the operation of this device. Find user guides at at www.medentum.com/resources/userguide.

The user of the Diagnostick has sole responsibility for device malfunction and any consequent damage to the device, property, or individuals resulting from improper use or failure to follow the guidelines outlined in this and all associated Diagnostick user guides.

The safety, reliability, and performance of the Diagnostick can only be assured under the following conditions:

- The user has followed the Diagnostick General User Guide and associated user manuals and video tutorials.
- All changes or repairs have been carried out by a Medentum Innovations authorized representative.

This product is protected by the following US patent: 18/951,545

Diagnostick Support Services may be contacted at:

+1 276-299-1732

info@medentum.com

User Safety

It is pertinent that you read this and all associated user manuals before operation of the Diagnostick. Failure to follow the user guides may result in device malfunction, property damage, or injury.

Please familiarize yourself with the following user guides before using the Diagnostik device:

- Diagnostick General User Guide (this document)
- Diagnostick Quick Start Guide (insert document number)
- Diagnostick Temperature Sensor Guide (insert document number)
- Diagnostick Pulse Oximeter Guide (insert document number)
- Diagnostick Stethoscope Guide (insert document number)
- Diagnostick Camera Guide (insert document number)

If the device packaging or the Diagnostick device arrive damaged or with missing parts, do not attempt to use the device.

Do not attempt to service, alter, or disassemble this device under any circumstance. Changes and repairs may only be made by Medentum Innovations authorized representatives.

If the Diagnostick becomes damaged or shows signs of malfunction, do not attempt to use the device.

Do not attempt to use any accessories with the Diagnostick that are not certified for use with the device by Medentum Innovations.

Only use the Diagnostick for the purposes described in this and associated manuals.

This device requires sanitation before each use. Follow the cleaning instructions outlined in this manual.

Do not use this device during defibrillator use.

In the case of disposal, follow local regulations concerning electronic devices and lithium-ion batteries. Medentum Innovations is not responsible for improper disposal of this device or its accessories.

Do not use this device in an environment with an ambient temperature exceeding insert temperature.

This device charges with an input of insert voltage range at insert Amps. Failure to charge the Diagnostick within these limits may result in device damage, damage to property, or injury. Medentum Innovations is not responsible for damages caused by non-approved charging solutions.

Do not attempt to use this device while it is charging.

Device orientation

About your device, its sensors and their location

The Diagnostick by Medentum Innovations is a revolutionary medical diagnostic device intended to be used as a home healthcare and virtual healthcare assistant. The device includes a number of biometric sensors that, when combined with the Diagnostick app, make basic at-home health monitoring a breeze. Save time and money by communicating accurate health measurements to healthcare professionals from the comfort of your home.

The Diagnostick includes several sensors to record vital information for medical examinations. These are:

- 1 Temperature Sensor
- 1 Pulse Oximeter
- 1 Camera
- 1 Stethoscope



Charging your device:

The kit includes a charging cable. The USB Type C charger plugs into the bottom of the device handle.



Cleaning

Please clean this device as often as needed. Ensure the device is powered off throughout the cleaning process.

Materials:

- 70% Isopropyl Alcohol
- 1-2 Cotton Swabs
- 1 Cotton Pad, Alcohol Wipe, or an Equivalent Cleaning Solution
- A soft cloth for cleaning the camera lens

- 1) Lightly soak a cotton pad (or equivalent) with alcohol and gently scrub the entire surface of the device
- 2) Lightly soak the tip of a soft cloth with alcohol and use to gently clean the pulse oximeter cradle and the camera lens

Ensure that the device is completely dry before operation.

Storage

Please store device in a cool and dry location.

App orientation

Downloading the app:



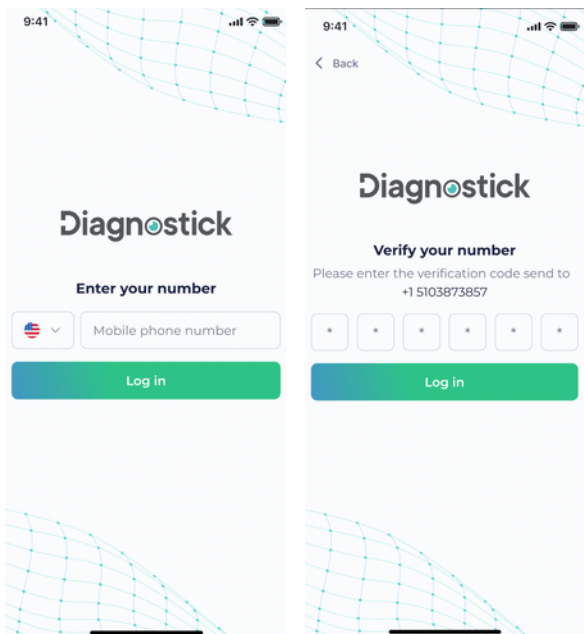
Download the Diagnostick mobile app by searching “Diagnostick” in the App Store or Google Play Store.

The mobile app is crucial for device operation. It allows for control of the device’s sensors, secure medical data transfer to trusted physicians, and other useful features of the Diagnostick software package.

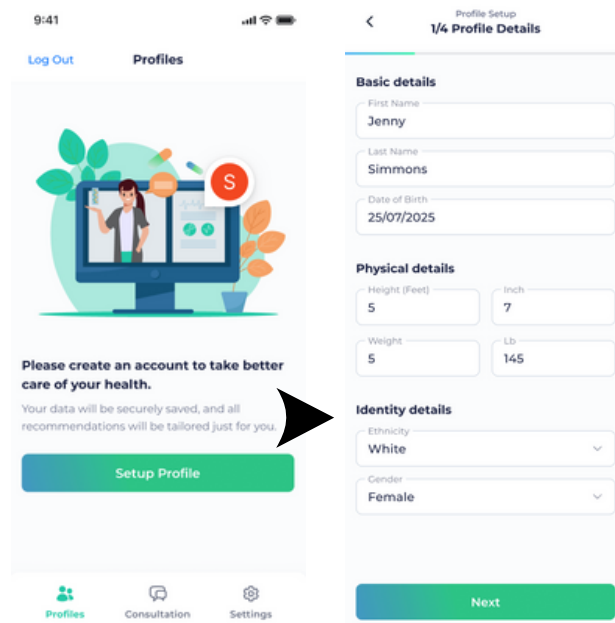
Creating your one-time medical profile:

Upon downloading the app:

1 Enter your phone number to create a secure profile, then verify it with a six-digit code sent via text.



2 Tap “set up profile” to create a profile and input your name, date of birth, height, weight, ethnicity, and gender.



- 3 Upload or photograph your insurance card—or manually enter the details. You may also choose to skip this.

9:41

Profile Setup

2/4 Insurance Details

Please add your insurance information

This helps us verify your coverage and speed up medical processes. Your data is encrypted and securely stored.

Upload Photo

Manual

Next

Skip

- 4 Optionally, upload medical history as a PDF or image.

9:41

Profile Setup

3/4 Medical History

Please add your medical history to get better, more personalized care.

Your data stays private and are securely stored.

Upload PDF file

Manual

Next

Skip

- 5 Optionally, add your primary care physician's name.

9:41

Profile Setup

4/4 Your Doctor's Name

Please provide your primary care provider (PCP)'s name.

This will help us communicate with you more conveniently.

Enter your doctor's name

Skip

- 6 Answer a few background questions: indicate drug, food, or environmental allergies (or state you have none), note their severity and confirm if you've received a flu shot.

For example:

9:41

Consultation

Select allergy

NSAIDs/Aspirin ACE-inhibitors

Anti-Seizure Drugs: Mild Sildenafil

Iodine Penicillins (amoxicillin, penicillin...)

Cephalosporins (cefdinir, ceftriaxone, cefpodoxime...) Tetracyclines (tetracycline, doxycycline)

Macrolide Antibiotics (erythromycin, azithromycin...)

How severe is your allergic reaction?

Mild Moderate Severe

Confirm

9:41

Consultation

Do you have any drugs allergies?

Yes

Select allergy and its severity

Lodine with Moderate severity

Do you have any food or environmental allergies?

Yes

Select allergy and its severity

Shellfish with moderate severity

Undo

9:41

Consultation

Do you have any drugs allergies?

Yes

Select allergy

Eggs Nuts

Bees Sildenafil

Shellfish Other

I don't have food allergies

Done

9:41

Consultation

Do you have any drugs allergies?

Yes

Select allergy and its severity

Lodine with Moderate severity

Do you have any food or environmental allergies?

Yes

Select allergy and its severity

Shellfish with moderate severity

Undo

Profiles Consultation Settings

7 Please indicate if you have been diagnosed with one or more chronic conditions

The first screenshot shows the 'Consultation' screen with the question 'Are you diagnosed with a chronic disease? Diabetes, Obesity, Heart conditions etc.?' and 'Yes' and 'No' buttons. The second screenshot shows the same screen after selecting 'Diabetes' as the chronic condition, with a 'Send and connect to device' button at the bottom.

You have successfully completed your one-time medical profile setup. If you want to modify or edit your profile, you may do so by clicking on the profiles icon at the bottom of the page and selecting your profile



Connecting the app to the device:

After you've completed your medical profile setup, you will be asked to connect your app to your Diagnostick device. Turn on the device and follow the prompts below.

The app will present the following connect screen

The 'Connect to Device' screen displays a large Wi-Fi symbol and an illustration of a person holding a magnifying glass. Below the illustration is a green 'Connect' button. The bottom navigation bar is visible at the bottom.

When prompted, enter wifi credentials to connect the app to the device

This screen shows the input fields for connecting to a Wi-Fi network. It includes a 'Wi-Fi Network Name' field with 'Janny' entered, a 'Password' field with masked characters, and a green 'Submit' button at the bottom.

Once connected, you may be prompted to start your consultation.

The 'Device Connected' screen shows a network diagram with two people interacting with it. Below the diagram is a green 'Start' button. The bottom navigation bar is visible at the bottom.

Note: When you turn on the device for the first time, the indicator light should flash blue. A blue flashing light indicates that you are ready to connect to the app. Once you have completed the process above and connected the app to your device, the light should turn a solid cyan blue. This means your connection was successful.

The next time you turn on your device, the light should flash green. A green flashing light indicates that you have already connected to a wifi network and ready to record your vitals.

Resetting your connection

If you want to change the wifi network and reconnect your device, please follow the following steps:

1. Turn on the device. Wait for about 10 seconds.
2. Hit the power button 3 times in quick succession. The light should flash purple.
3. Hit the power button 2 times in quick succession. The light should say solid purple.
4. Turn off the device. This procedure does a connection reset.
5. When you turn on the device, the light should flash dark blue and you can repeat the connection steps discussed at the start of the page.

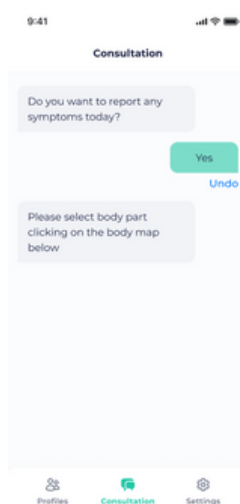
Completing a medical consultation

Symptom entry:

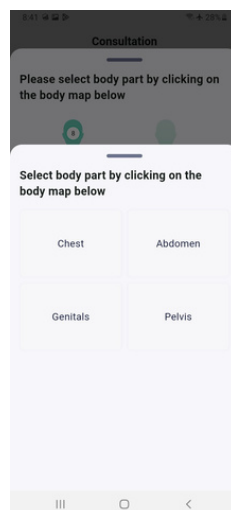
The first step when using the device to address a particular complaint is to capture your symptoms using the app.

Affected body parts:

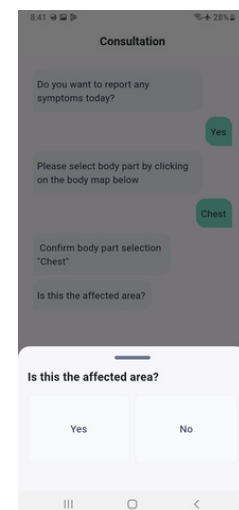
- 1** *If you have any symptoms to report, select "yes" when prompted*



- 2** *The app will prompt you to select the body part ailing you*



- 3** *Confirm body part selection*



Symptom trees: Primary and Additional Symptoms

- 1 When prompted, indicate your **ONE** main symptom:
- 2 Indicate severity of the symptom
- 3 Indicate symptom duration
- 4 Indicate changes to the severity of the symptom

The sequence of screens for symptom selection is as follows:

- Screen 1:** 'Select symptom' with a grid of options. 'Wheezing' is selected.
- Screen 2:** 'Select allergy' with the same grid. 'Wheezing' is selected. Below, 'How severe is your symptom?' with options: Mild, Moderate (selected), Severe.
- Screen 3:** 'Consultation' screen. It asks 'Confirm body part selection "Chest?"' (Yes), 'Is this the affected area?' (Yes), 'Please select your primary symptom' (Wheezing with severe severity), and 'How long have you had these symptoms?' (1-3 days, < 1 week (selected), > 1 week).
- Screen 4:** 'Consultation' screen. It asks 'Is this the affected area?' (Yes), 'Please select your primary symptom' (Wheezing with severe severity), 'How long have you had these symptoms?' (< 1 week (selected)), and 'Is your symptom getting' (Better, The same (selected), Worse).

Note: Please only select **ONE** primary symptom. This is the primary reason for your medical consultation. If you have additional symptoms, you will have the option to add more of these below

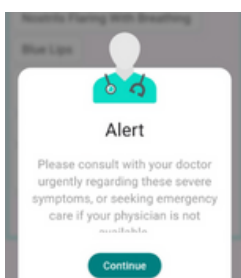
Additional symptoms

- 1 You will be asked to select any additional symptoms.
- 2 Indicate if you are experiencing any general symptoms.

The sequence of screens for additional symptoms is as follows:

- Screen 1:** 'Please select any additional symptoms or choose "none."' with a grid of options. 'Shortness of breath' is selected.
- Screen 2:** 'Consultation' screen. It asks 'Please select your primary symptom' (Wheezing with severe severity), 'How long have you had these symptoms?' (< 1 week), 'Is your symptom getting' (The same), and 'Please select your additional symptoms or choose "none."' (Shortness of breath).
- Screen 3:** 'Consultation' screen. It asks 'Please select your primary symptom' (Wheezing with severe severity), 'How long have you had these symptoms?' (< 1 week), 'Is your symptom getting' (Staying the same), and 'Please select any additional symptoms or choose "none."' (Shortness of breath).
- Screen 4:** 'Please select any associated general symptoms' with a grid of options. 'Fatigue' and 'Lethargy' are selected.

Scroll between pages to view all symptoms. You may indicate NONE



If your symptom is deemed serious, you will get a medical alert. Please review the alert and respond accordingly.

If the symptom is deemed life threatening, your consultation will stop and you will be asked to call 911 or seek immediate medical attention

Disease Assessment Test or Routine Status Check

3 Depending on your chronic medical condition (e.g. asthma), you may be prompted to complete a medical questionnaire

9:41

Consultation

The same

Please select your additional symptoms or choose "none"

Shortness of breath

Please select any associated general symptoms

Fatigue

Undo

Have you/your child had prior lung function (spirometry) testing?

Yes No

4 The questionnaire will be specifically tailored to your condition - below is a sample response for asthma

8:33

Diagnostik

Have you/your child had prior lung function (spirometry) testing?

Yes

Total number of asthma hospitalizations in the past

2+

Number of asthma hospitalizations in the past year

2+

Any asthma hospitalizations in the past month?

Yes

Prior number of steroid courses and/or albuterol use for >24 hours in the context of acute wheezing episodes/

This completes your symptom entry. You will now be asked to turn on your device, connect to your WiFi and start recording your vitals using your device.

If you've already connected your device, your indicator light will flash green and you are ready to commence vitals collection discussed in the pages below. If not, please refer to the connection page above and connect your device before starting vitals collection.

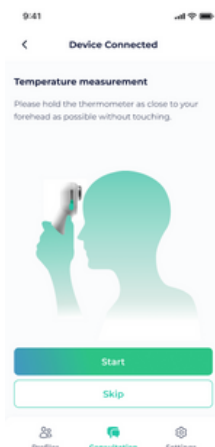
If your child has asthma, they may be asked to complete a routine asthma check-in each month. During this check-in, you will complete an Asthma Control Test Survey on the app screen, and complete your child's vital signs. You can skip the symptom collection if your child does not have any symptoms at that time.

Vitals collection

Disease Assessment Test or Routine Status Check

To record temperature, the app will prompt you to hold the device close to you/your child's forehead. Please remember to hold the temperature sensor at the center of the forehead, as close as possible without touching

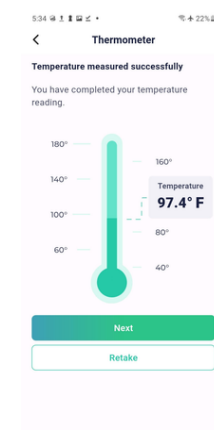
App interface:



Record temperature as shown:



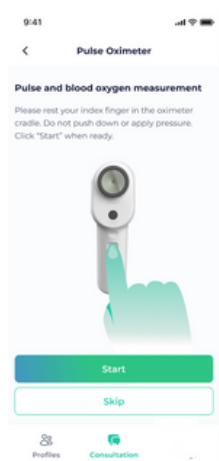
Results should be displayed as follows:



Oxygen Saturation and Heart Rate reporting

As prompted by the app, hit START then immediately place you/your child's index finger in the pulse oximeter cradle on the Diagnostick. Please do not push down or apply too much pressure. This reading takes between 20-30 seconds so please remain patient.

App interface:



Take pulse oximeter reading as shown:



The reading which should be displayed as shown. If you get a timeout error, please redo

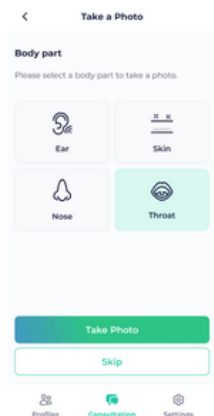


Note: we recommend using the ring or index finger to perform your oximetry workflow. However, in some instances you may also use your thumb.

Taking Images with the Diagnostick Device

The camera can be used to take images of you/your child's ear, throat, or skin. Determine which body part you want to image.

App interface will display instructions:



Hold device as shown:

throat:



ear:



Steps for taking the image:

1. Ensure the otoscope is clean and sanitized with an alcohol swab.
2. When you are ready, select the body part you wish to take an image of and push the START Button.

For the adult ear:

Position the otoscope/camera in the affected ear (left or right). Use the screen on your smartphone to visualize the ear canal and ear landmarks. Gently re-position the camera by twisting the camera slightly until you are able to view the eardrum. A normal eardrum is pictured below and should be centered.



When you have the best visualization of the eardrum (and centered as much as possible), hit the TAKE PHOTO button on the app. This will capture your photo.

For children's ears:

Have your child sit on your lap or in a chair, with their head resting against your chest or the back of the chair. It helps to gently hold your child's head still against your chest. Another adult should use the Diagnostick otoscope.

Hold the Diagnostick with your dominant hand. With your other hand, gently pull the top of your child's ear up and back (for older kids) or straight back (for babies and toddlers). Place the tip of the otoscope just inside the opening of the ear. Move slowly and gently. Look at the phone screen to guide you to the eardrum. Tap 'Take Photo' to capture a picture. Remove the otoscope slowly, and wipe the tip clean with a soft cloth dipped in alcohol or an alcohol wipe.

Note: Never force the otoscope into the ear. Stop if your child is in pain. Only go as far as you can see clearly on the screen. If you notice swelling, drainage, or your child is in a lot of pain, call your healthcare provider.

For the throat:

To image the throat, hold the camera so that the edge of the device abuts you/your child's mouth. Slightly reposition the device as needed by viewing the video on your smartphone screen. When you are satisfied with the image, click the 'Power' button to take the photo. A picture of a normal throat is shown below.

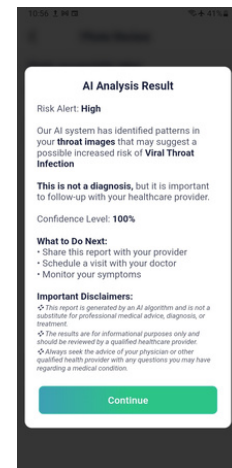


AI Analysis for Images

When you hit submit, our AI analysis tool assesses the quality of your image. If low quality, you may be asked to retake the image. If it passes the quality check, the recording will upload automatically.

You may also see an “AI Analysis Result” screen that includes a prediction of low, medium, or high risk of a possible exam finding like pharyngitis and next steps to connect with your provider

*Example of throat image
AI analysis:*

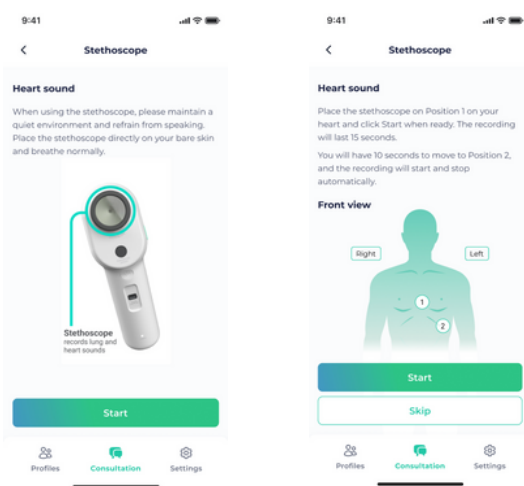


AI ANALYSIS DISCLAIMER: Please note that this analysis report is generated by an AI algorithm and is not a substitute for professional medical advice, diagnosis, or treatment. The results are for informational purposes only and should be reviewed by a qualified healthcare provider. Always seek the advice of your physician or other qualified health providers with any questions you may have regarding a medical condition

Heart Sound Collection using the Stethoscope

When prompted by the app, hold the Diagnostick stethoscope on you/your child's bare chest and record your heart sounds as shown below. Please breathe normally and refrain from talking during audio collection

App interface will display instructions:



Hold device as shown: Please place device on bare skin, images are for demonstrating location only



Steps for collecting heart sound:

To capture the highest quality audio, please refrain from talking and collect heart sounds in a quiet environment to reduce background noise. Please place the stethoscope directly on bare skin and not on clothing. You will record sounds at two locations: one directly above the heart and the second under the left ribcage.

To capture the highest quality audio, please refrain from talking and collect heart sounds in a quiet environment to reduce background noise. Please place the stethoscope directly on bare skin and not on clothing. You will record sounds at two locations: one directly above the heart and the second under the left ribcage.

A 10-second countdown will give you time to move and position the stethoscope at each recording location. Once positioned, you will commence your heart sound recording for 15 seconds as indicated on your app-screen timer.

1. Place the stethoscope on the left side of you/your child's bare chest and above the heart in position # 1.
2. Hit the START button.
3. Please breathe normally and leave the device in the location for 15 seconds by following the countdown.
4. You will then move the stethoscope to position # 2 under the left ribcage and repeat steps 1-3.

Once finished, the app presents the user an option to retake their heart sound collection, review the sound, delete the sound or submit the file for physician review.

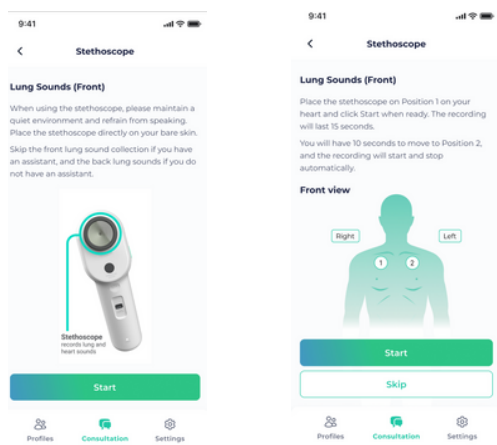
Lung Sound Collection with the Diagnostik Device:

If you have an assistant or are collecting your child's lung sounds, only recording back lung sounds is needed (select skip when prompted to record front). If you don't have an assistant to help you, you may only record front lung sounds (select skip when prompted to record back). Depending on the case hold the stethoscope on your chest or back to record lung sounds as shown below.

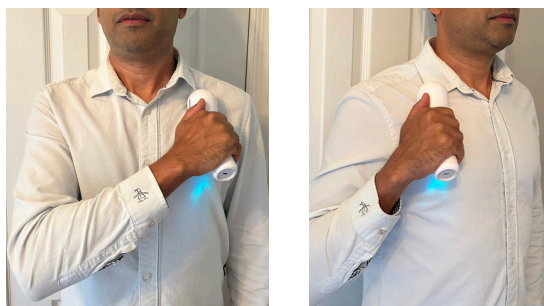
Collecting lung sounds (front):

App interface will display instructions:

For the front:



Hold device as shown: Please place device on bare skin, images are for demonstrating location only



Steps for lung sound (front) collection:

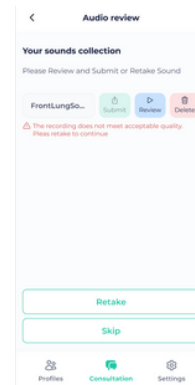
To capture the highest quality audio, please refrain from talking and collect you/your child's lung sounds in a quiet environment to reduce background noise. Please place the stethoscope directly on bare skin and **not on clothing**. You will record lung sounds at two separate locations, under each collarbone (refer to app).

A 10-second countdown will give you time to move and position your stethoscope at each recording location. Once positioned, you will commence your recording for 15 seconds as indicated on your app-screen timer. Please follow the steps below:

1. Place the stethoscope on the left upper bare chest below the collar bone and above the heart in Position # 1.
2. When you are ready, push the START Button.
3. You or your child: Take large full breaths through your mouth. Please inhale and exhale with your mouth open and on your last exhale, please breathe out forcefully like blowing candles on a birthday cake.
4. Move the device to the right upper chest below your collar bone in Position # 2 and repeat steps 1-3.

Once finished, the app presents the user an option to retake their lung sounds, review the sound, delete the sound or submit the file for physician review:

If the recording quality is not up to an acceptable standard, you may be prompted to retake. Please do so as advised.



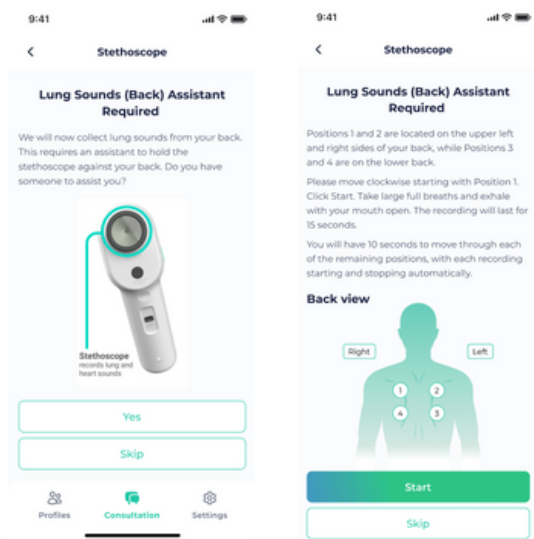
NOTE: When you hit submit, our AI analysis tool assesses the quality of your lung breath sounds. If the audio recording doesn't meet our quality threshold, you may be asked to retake the recording. If it passes the quality check, the recording will upload automatically. An AI analysis window may appear as discussed in the pages below.

Collecting lung sounds (back):

An assistant or parent/caretaker will be needed to collect back lung sounds. Please follow app instructions and hold the stethoscope on bare skin at the four locations highlighted in the image below.

Assistant required for collection:

Device to be held as shown: Please place device on bare skin, the image demonstrates positioning of the device only.



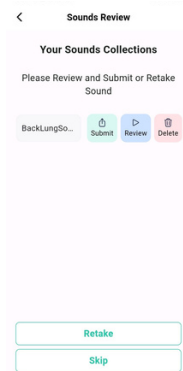
Steps for Lung Sound (Back) Collection:

To capture the highest quality audio, please refrain from talking and collect you/your child's lung sounds in a quiet environment to reduce background noise. Please place the stethoscope directly on bare skin and not on clothing. You will record back lung sounds at four separate locations on the back.

A 10-second countdown will give you time to move and position your stethoscope at each recording location. Once positioned, you will commence your recording for 15 seconds as indicated on your app-screen timer. Please follow the steps below:

1. Place the stethoscope in Position # 1 on the patient/child's upper left back, above the shoulder blade.
2. When you are ready, push the START Button.
3. You or your child: Take large full breaths through your mouth. Please inhale and exhale with your mouth open and on your last exhale, please breathe out forcefully like blowing candles on a birthday cake.
4. Move the device to positions # 2, #3 and #4 and repeat steps 1-3. You will have 10 seconds to move and position your device at each recording location.

Once finished, the app presents the user an option to retake their lung sounds, review the sound, delete the sound or submit the file for physician review.

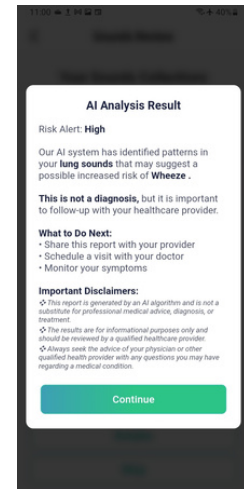


AI Analysis for Lung Sounds

Example of lung sounds AI analysis:

When you hit submit, our AI analysis tool assesses the quality of your lung breath sounds. If the audio recording doesn't meet our quality threshold, you may be asked to retake the recording. If it passes the quality check, the recording will upload automatically.

You may also see an "AI Analysis Result" screen that includes a prediction of low, medium, or high risk of a possible exam finding like wheeze and next steps to connect with your provider

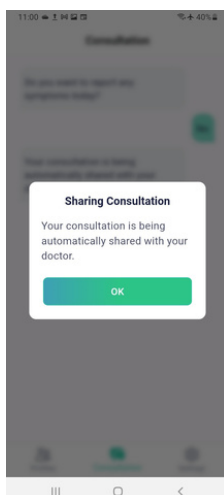


AI ANALYSIS DISCLAIMER:

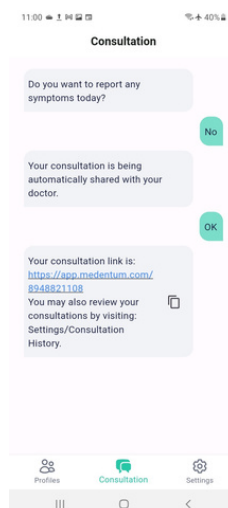
Please note that this report is generated by an AI algorithm and is not a substitute for professional medical advice, diagnosis, or treatment. The results are for informational purposes only and should be reviewed by a qualified healthcare provider. Always seek the advice of your physician or other qualified health providers with any questions you may have regarding a medical condition

Sharing information with provider:

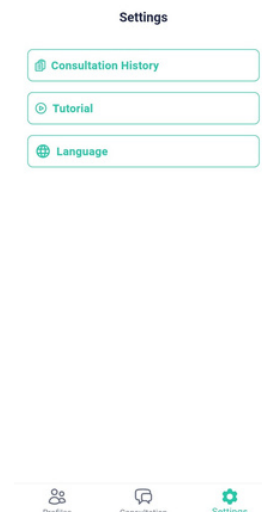
Your consultation will automatically be shared with your provider



You are still presented with a link to copy/paste your consultation if needed



You may review your consultation by clicking the settings icon at the bottom of your app screen



NOTE: If you have added your physician's name during your medical profile setup, that physician will automatically receive an email/text notifying them of your consultation.

THIS ENDS THE DEVICE AND APP ENGAGEMENT SESSION.