

## FAQ - lung examination

### What do I need to be able to use StethoMe<sup>®</sup>?

In order for StethoMe<sup>®</sup> to work correctly, you need an application (which can be downloaded from Google Play or App Store), Bluetooth enabled, and online access on the device where the application is installed.

### Which phones and tablets are compatible with StethoMe<sup>®</sup>?

You can find the list of supported devices here: [StethoMe.com/devices](https://stethome.com/devices).

### What kind of examinations can I carry out using StethoMe<sup>®</sup>?

StethoMe<sup>®</sup> allows auscultating the lungs of minors (i.e. below the age of 18) and obtaining automatic notification of presence of any abnormal auscultation sounds appearing in the course of various respiratory system diseases, such as bronchitis, pneumonia, or obstruction in the lower respiratory tract.

StethoMe<sup>®</sup> can also be used like a traditional stethoscope (without the analytical module) after connecting earphones to the mini jack socket.

### Who can see the results of my examinations? Is data security ensured?

if the user account was added by a doctor, then the doctor you are registered with can see the results of your examinations.

If you shared your visit, the people to whom you send the link can see its content.

### What kind of conditions should be ensured in order to perform a lung examination correctly?

StethoMe<sup>®</sup> records sounds originating from the respiratory system and therefore it is important to maintain silence in the room during examination. Any additional sounds may make recording impossible or significantly worsen the quality thereof. And in extreme conditions they may even influence the examination result. That is why it is necessary to turn off the television and other sources of sound and not to talk during recording. During the examination one must not knock on the stethoscope or move it on the skin. The patient should remain stationary. The device should be applied gently to the skin and it should be kept in a stable position during recording. During the examination, the person examined should not be eating and if they are a little child they should not use a pacifier. During the examination it is necessary to take deep breath in a natural way, best through mouth.

### How to prepare to a lung examination?

Prior to performing the examination the patient should blow their nose and expectorate the respiratory tract mucus, if possible. During the examination the children should not use a pacifier, eat,

or chew gum. The stethoscope should be applied directly to the skin – the patient should not be wearing upper body clothing.

### **What position should be patient be in during lung auscultation?**

The most important aspect is to maintain a stable, possibly stationary position during the examination, so that it is possible to apply the stethoscope in a stable manner to the points indicated. The positions preferred during the examination depend on the patient's age:

- infants may be in supine position or in parent's arms,
- for children able to sit on their own the sitting position is preferred,
- for older children and for adults the standing position is preferred.

### **How to breathe during lung examination?**

During the examination it is best to take deep breaths through the mouth in a calm and natural way. It is very important for a child to breathe in a natural way without any forced (e.g. quicker) breathing and not to hold their breath.

### **Is the device a medical device and does it have CE and FDA certificates?**

The StethoMe<sup>®</sup> stethoscope and AI algorithms feature a category 2a medical certificate (CE 2274) conferred to medical devices. It is the first such certification in the world.

StethoMe<sup>®</sup> is now in the course of preparations to obtain the FDA certificate, but does not feature it at this moment.

### **What should I do if the examination result is red lungs?**

This result means that the algorithms detected some abnormal additional auscultation sounds. The changes that are detected may appear in the course of various respiratory system diseases, such as bronchitis, pneumonia, or obstruction in the lower respiratory tract.

This result may also appear sporadically if proper examination conditions are not provided: the respiratory tract secretions are not expectorated, the nose is not blown, stethoscope is placed in the wrong place or additional sounds are made (e.g. crying, speech) during the examination.

**We recommend repeating the examination after cleaning the airways and in conditions of complete silence.**

**Please pay attention to the location of points on the picture and try to put the stethoscope at exactly the same points (the lower spots on the back are above the waist line).**

If the same result is obtained repeatedly, please consult a physician.

## What should I do if the examination result is orange lungs?

This result means that the algorithms detected a small number of abnormal additional auscultation sounds.

This result may also appear sporadically if proper examination conditions are not provided: the respiratory tract secretions are not expectorated, the nose is not blown, stethoscope is placed in the wrong place or additional sounds are made (e.g. crying, speech) during the examination.

**We recommend repeating the examination after cleaning the airways and in conditions of complete silence.**

**Please pay attention to the location of points on the picture and try to put the stethoscope at exactly the same points (the lower spots on the back are above the waist line).**

## Turning the device on and off

The stethoscope is turned on for the first time by inserting the jack plug into the socket and then removing it. If the stethoscope is not used, it will enter the sleep mode (you do not have to turn it off). You will be able to wake it up by shaking it vigorously upwards or downwards.

## What is the meaning of the message stating that the lung sounds are of insufficient quality?

It means that too much interference was present during the examination or that the patient was taking too shallow breaths and the algorithms have not detected the sufficient number of inhalations and exhalations required in order to perform analysis.

Such a message may also mean that the stethoscope was applied at a wrong place (e.g. too low on the back) and did not record any lung sounds (inhalation and exhalation). It is very important to apply the stethoscope precisely at the points indicated on the photo

## During the examination the colour of the icon and the point turns red - what does it mean?

StethoMe<sup>®</sup> automatically detects any excess ambient noise stethoscope movement that causes interference. If the conditions are too loud, the stethoscope will stop the examination for a moment and display a red icon.

## How often should the stethoscope be charged and how long does the battery last?

The stethoscope should be charged once the red discharged battery symbol appears on the stethoscope screen. After the battery is discharged completely, the device should be charged for at least 15 minutes before it is turned on again. The time required to charge the battery full is about 4 hours. The stethoscope can work continuously for approximately 8 hours on a fully charged battery.

## Important information regarding chronic diseases

In case of certain diseases the auscultatory changes may be present permanently or exhibit certain characteristic variability.

In case of persons suffering from cystic fibrosis the auscultatory changes may be present permanently.

In case of people suffering from asthma certain variability may occur. The auscultatory changes appear during the periods of disease aggravation. What is characteristic for it is the significant daily variability within several months.

Permanent auscultatory changes may also occur in case of bronchitis in patients who are chronically ill, remain in reclined position, suffer from cerebral palsy, experience hypersecretion in the respiratory tract, or suffer from central nervous system damage.

## Technical problems

### Messages when launching the application - request for authorisation

When the application is launched for the first time, it is necessary to grant it permission to use the location service, establish connections and access the photos and multimedia. The settings are saved, and this step is a one-time action. During every subsequent launch of the application the screens below will not be shown again. In order for the application to work correctly in all the 3 cases (location, establishing connections, and photos and multimedia) it is necessary to click the ALLOW button. If you refuse to grant permission in case of any of these requests, the application will not be functioning correctly.

### Information on no stethoscopes having been found

This message will appear in case when the mobile phone or other mobile device has been unable to find any stethoscope via the wireless connection.

Possible reasons:

- the stethoscope is switched off (the display of the stethoscope is not lit).

Turn on the stethoscope. The stethoscope is turned on for the first time by inserting the jack plug into the socket and then removing it. Later on you will be able to wake it up by shaking it vigorously upwards or downwards.

- the stethoscope's battery has been discharged

Charge the stethoscope using the cable and charger included in the set.

- the wireless signal between the phone and the stethoscope may be disrupted or suppressed

It is necessary to check whether the transmission between the phone and the stethoscope is not disrupted in some manner. The stethoscope should be located near the device with the StethoMe<sup>®</sup> application.

- other causes have occurred

After checking and removing the problems it is necessary to start the examination again, which will result in an attempt to establish connection with the stethoscope. It is necessary to remember to activate the Bluetooth module and the device location service in the settings of the device with the StethoMe<sup>®</sup> application.