Withings

The Smart Blood Pressure Monitor

Instruction manual

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The Smart Blood Pressure Monitor

Read this manual before use. Keep it for future reference.

Thank you for purchasing the Withings Blood Pressure Monitor.
The Withings Blood Pressure Monitor is a fully automatic blood pressure monitor, operating on the oscillometric principle. It measures your blood pressure and pulse rate simply and quickly.

The monitor stores measurements results within your iPhone, iPad or iPod Touch and transmit it to the Withings website for an easy access from your internet browser.

Contents

Requirements

In order to use your Withings Blood Pressure monitor, you need to plug it to an iPhone, iPad or iPod Touch (updated to iOS 3 or higher).

Package Contents

- Withings Blood Pressure Monitor
- Four AAA alkaline (LR3) cells (already inserted)

Important Safety Information

Consult your doctor during pregnancy, arrhythmia and arteriosclerosis. Please read this section carefully before using the blood pressure monitor.

Warning

General usage

- Always consult your doctor. Self-diagnosis of measurement results and self treatment are dangerous
- People with severe blood flow problems, or blood disorders, should consult a doctor before using the blood pressure monitor. Cuff inflation can cause internal bleeding.
- Operational factors such as common arrhythmias, ventricular premature beats, atrial fibrillation, arterial sclerosis, poor perfusion, diabetes, age, pregnancy, pre-eclampsia or renal disease can affect the performance of the automated sphygmomanometer and/or its blood pressure reading.

AAA Alkaline cells usage

- If AAA alkaline cells fluid should get in your eyes, immediately rinse with plenty of clean water. Consult a doctor immediately.

Intended use

The device is a digital monitor intended for use in measuring blood pressure and pulse rate in adult patient population with arm circumference ranging from 9 inches to 17 inches (22cm-42cm).
This device is not intended to be a diagnostic device. Contact your physician if hypertensive values are indicated.

Caution

General usage

- Do not leave the blood pressure monitor unattended with infants or persons who cannot express their consent.
- Do not use the blood pressure monitor for any purpose other than measuring blood pressure.
- Do not disassemble the blood pressure monitor.
- Do not operate the blood pressure monitor in a moving vehicle (car, airplane).

AAA alkaline cells usage

- If AAA alkaline cells fluid should get on your skin or clothing, immediately rinse with plenty of clean water.
- Use only four AAA alkaline cells with this blood pressure monitor. Do not use any other types of AAA alkaline cells.
- Do not insert AAA alkaline cells with their polarities incorrectly aligned.
- Replace old AAA alkaline cells with new ones immediately. Replace all four AAA alkaline cells at the same time.
- Do not use new and used AAA alkaline cells together

General safety and precautions

- Do not forcibly bend the arm cuff
- Do not inflate the arm cuff when it is not wrapped around your arm
- Do not apply strong shocks and vibrations to the blood pressure monitor or drop it
- Do not take measurement after bathing, drinking alcohol, smoking, exercising or eating.
- Do not immerse the arm cuff in water

Replacing the AAA alkaline cells

If the low battery symbol appears in the Withings application, replace all four AAA alkaline cells at the same time.

1. Remove the AAA alkaline cells cover at the lower end of the aluminum tube.
2. Install or replace four AAA alkaline cells so that the + (positive) and – (negative) polarities match the polarities indicated on the AAA alkaline cells compartment.
3. Put the AAA alkaline cells cover back in place.

If the device will not be used for a long period of time, it is advised to remove the alkaline cells.

Name / Funtion of the components

Fig. 2

About Blood Pressure

Blood pressure (BP) is the pressure exerted by circulating blood upon the walls of blood vessels, and is one of the principal vital signs. During each heartbeat, BP varies between a maximum (systolic) and a minimum (diastolic) pressure. The mean BP, due to pumping by the heart and resistance to flow in blood vessels, decreases as the circulating blood moves away from the heart through arteries.

What constitutes high blood pressure?

The world Health Organization (WHO) developed the following blood pressure classification :

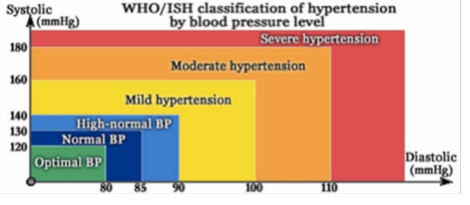

Fig. 1

This classification is based on the blood pressure values measured on people in a sitting position in outpatient department of hospitals.

Note : There is no universally accepted definition of hypotension. However, those having the systolic pressure below 100 mmHg are assumed hypotensive.

Recent studies suggest to use the following values as indicators of high blood pressure when measurement are taken at home :

Systolic blood pressure	> 135 mmHg
Diastolic blood pressure	> 85 mmHg

How can I tell how high my blood pressure is ?

The Withings application displays measurement results (including systolic blood pressure, diastolic blood pressure, and pulse) based on World Health Organization (WHO) classification of blood pressure levels. The color-coded displays provide a convenient way of gauging the condition of your blood pressure.

Changes in Blood Pressure

A person's blood pressure is constantly changing. Blood pressure can fluctuate considerably through the course of a single day. One or two readings are not sufficient to get an accurate picture of your blood pressure. Ideally, you should get into the habit of checking your blood pressure at fixed time several times a day, every day, and keep a detailed record of these readings. A normal, healthy person's blood pressure fluctuates within a range of approximately ±10 mmHg.

How to measure your blood pressure correctly

Before taking a reading, you should sit still for around 10 minutes, and you should wait 1 minute between each reading. While taking a measurement, remain sitted and stay calm and relaxed. You should also try not to talk. This should improve the accuracy of readings.

Correct posture

Rest your left arm on a table and relax your arm

Correct cuff placement

Put the cuff around your arm with the tube positioned on the inner side of your arm, around 2cm above the elbow. Wrap the arm cuff snugly.

Correct level

Make sure the cuff is at the same level than your heart. If you can not place your arm at the same level than your heart, use a cushion. Your arm should lightly bend while taking the measurement.

Getting ready

In order to measure your blood pressure, follow these steps :
1. Unlock your iOS device. (fig. 3)
2. Plug the Withings Blood Pressure Monitor connector to your iOS device. (fig. 3)
3. The Withings application will automatically launch and display quickstart instructions (fig. 4) .
(note: if you are using iOS 3, you will have to launch the application manually).
4. Navigate through the quickstart instructions by touching « next » until you reach the measurement screen (fig. 4)

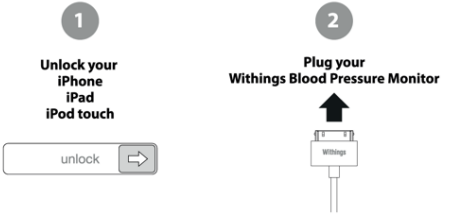

Fig. 3

Fig. 4

Begin to measure, taking and storing a reading

1. On the measurement screen (fig. 5), touch the «start» button to launch the measurement.

Fig. 5

The blood pressure monitor is designed to take measurements and store the measurement values in the memory of the device (iPhone, iPad or iPod Touch).

Using the single mode

• On the measurement screen (fig 5.) press the «Start» button. The cuff starts to inflate automatically. As the cuff inflates, the blood pressure monitor automatically determines your ideal inflation level. This blood pressure monitor detects the pulse during inflation. Do not move your arm and remain still until the entire measurement process is completed.

Note : To stop the inflation or measurement, touch «Stop» button. The blood pressure monitor will stop inflating and start deflating.

• Inflation stops and the measurement is stopped. As the cuff deflates, the heartbeat symbol flashes at every heartbeat.
• When the measurement is complete, the arm cuff completely deflates. Your blood pressure and pulse rate are displayed.
• Press «OK » to see your results in advanced mode. Rotate your device to display your graphs.

Note : Self-diagnosis of measured results and treatment are dangerous. Please follow the instructions of your doctor.

Using the auto mode

The auto mode will take three measurements separated by an interval of time in order to calculate a precise average of your blood pressure.
• On the measurement screen (fig. 5), touch the preferences icon . Make certain the auto mode is enabled. Select the interval,between each measurement.
• Press the « Start » button. The cuff starts to inflate automatically. As the cuff inflates (fig. 6), the blood pressure monitor automatically determines your ideal inflation level. This blood pressure monitor detects the pulse during inflation. Do not move your arm and remain still until the entire measurement process is completed.

Note : To stop the inflation or measurement, press and release the « Stop » button. The blood pressure monitor will stop inflating and start deflating.

• Inflation stops and the measurement is started. As the cuff deflates, the heartbeat symbol flashes at every heartbeat.
• When the measurement is complete, the arm cuff completely deflates.
• After the selected interval, a second and a third measurement will start.
• Your average blood pressure is displayed.
• Press « OK » at the end of a measurement to see your results in advanced mode. Rotate your device to display your graphs.

Notes
• The three individual measurement results are not displayed while auto mode is taking the measurements.
• Self-diagnosis of measured results and treatment are dangerous. Please follow the in- structions of your doctor.
• You will have to activate the auto mode each time you want to use it.

Fig. 6

Looking at previous readings

In order to access your historical data and graphs (fig. 7), open the Withings application without plugging your Withings Blood Pressure Monitor to your iOS device. The advanced results will show-up in portrait mode and your historical graphs will show-up in landscape mode.

You can also access your historical data by touching the « OK » button at the end of a measurement.

Fig. 7

After Use

Cleaning

• Do not use an alcoholic-base or solvent agent to clean the device.
• Clean the device with a soft, dry cloth.
• The dirt on the cuff can be cleaned by a moisten cloth and soap .
• Do not flush the device and cuff with much water
• Do not dismantle the device or disconnect the cuff or try to repair by yourself. If any problem happens, refer to the distributor.
• Do not operate the device under severe environment of extreme temperature or humidity, or direct sunshine.
• Do not shake the unit violently.

Storage

• If you are not using the device for an extended period, remove the alkaline cells from the aluminium tube for storage.

Error messages

Error messages	Coutermeasures
Measurement could not be performed. Please try again. If the problem occurs again, please contact customer service.	1- Measurement could not be performed. Please try again. If the problem occurs again, please contact customer service.
Unplug the Blood Pressure Monitor. Quit the application and plug the Blood Pressure Monitor back.	1- Unplug the Blood Pressure Monitor. Quit the application and plug the Blood Pressure Monitor back. 2- If the problem occurs again, please contact customer service.
Please wait until the cuff is totally deflated before starting a new measurement. Stay still during measurement.	1- Please wait until the cuff is totally deflated before starting a new measurement. Stay still during measurement. 2- If the problem occurs again, please contact customer service.
Check that the Blood Pressure Monitor is correctly positioned on your arm and that measurement is performed in good conditions.	1- Check that the Blood Pressure Monitor is correctly positioned on your arm and that measurement is performed in good conditions. 2- Low battery level. Unplug the Blood Pressure Monitor. Replace the alkaline cells. 3- If user has special characteristics, please contact your physician. 4- If the problem occurs again, please contact customer service.

Low battery level. Unplug the Blood Pressure Monitor. Replace the alkaline cells.	1- Low battery level. Unplug the Blood Pressure Monitor. Replace the alkaline cells. 2- If the problem occurs again, please contact customer service.

Troubleshooting

Problem	**Remedy**
Though the batteries are installed, there is nothing happening when connected to iOS device	1. Check that your iOS device is unlocked 2. Check and correct the AAA alkaline cells polarities 3. Remove the AAA alkaline cells and wait for one minute. Then install the AAA alkaline cells or replace them 4. If you are using a device with iOS 3, you will have to launch the application manually
The blood pressure cannot be taken and the application shows an error message or wrong result	1. Re-fasten the cuff 2. Relax yourself and sit down 3. Keep the cuff and heart at the same level during the measurement period 4. Keep silent and still during measurement 5. If the patient has sever heart beat problem, then the blood pressure may not be read correctly

Specifications

Technical data

Product description: Digital automatic Blood Pressure Monitor
Model: BP-800
Measurement method: Cuff oscillometric method
Cuff inflation: Automatic inflation with air pump at 15 mmHg/s
Prssure sensor: Gauge sensor
Measurement range (pressure): 0 to 285 mmHg
Measurement range (pulse): 30 to 200 beats/min
Accuracy (pressure): Within +- 3 mmHg or 2% of reading
Accuracy (pulse): Within +- 5% of reading
Sensor: Semicoductor pressure sensor
Operating conditions: 10 to 40°C. 15 to 90% RH
Storage and transport conditions: -20 to 60°C. 10 to 95 RH
Arm type: circumference 22-42cm (9”-17”)
Dimensions: 150(L) x 140(W) x 100(H)
Power source: AAA alkaline cells (x4)
Weight: Approx. 600g without cells
Accessories: AAA Alkaline cells x4, instruction manual

Reference to Standards

COUNCIL DIRECTIVE 93/42/EEC of 14 June 1993 concerning medical devices.
This device complies with the following normative documents :
• IEC60601-1: 2005 + CORR. 1 (2006) + CORR. 2 (2007)
• EN60601-1: 2006; ANSI/AAMI ES60601-1: 2005:Medical Electrical Equipment - Part 1: General requirement for basic safety and essential performance
• EN1060-1: 1995 with Amendment A2: 2009:Non-invasive sphygmomanometer, Part 1: General requirements
• EN1060-3: 1997 with Amendment A2: 2009:Non-invasive sphygmomanometers, Part 3: Supplementary requirements for electro-mechanical blood pressure measuring systems
• EN55011: 2007 + A2: 2007; EN60601-1-2: 2007; FCC 47 CFR PART 18: Electromagnetic Compatibility
• ANSI/AAMI SP10:2002Manual, electronic, or automated sphygmomanometers; safety and performance requirements.

P/N: BP-800


Type BF Applied part (cuff)

CE 0434

Guarantee

This blood pressure monitor is guaranteed for 1 year from date of purchase. The guarantee does not apply to damage caused by improper handling, damage from leaking batteries, accidents, not following the operating instructions or alterations made to the instrument by third parties.

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