Manufacturer		OMRON HEALTHCARE CO., LTD. 24, Yamanouchi Yamanoshita-cho, Ukyo-ku, Kyoto, 615-0084 Japan
EU-representative EC REP		OMRON HEALTHCARE EUROPE B.V. Kruisweg 577, 2132 NA Hoofddorp, The Netherlands www.omron-healthcare.com
Production facility Site de production Produktionsstätte Stabilimento di produzione	Oficina de producción Productiefaciliteit Производственное подразделение مصنع الإنتاح	OMRON DALIAN Co, Ltd. Economic & Technical Development Zone Dalian 116600, China
Subsidiary Empresa filial Succursale Dochteronderneming Niederlassung Дочерняя компания Consociata الشركات التابعة	Dochteronderneming	OMRON HEALTHCARE UK LTD. Opal Drive Fox Milne, Milton Keynes MK15 0DG, United Kingdom
	الشركات التابعة	OMRON Medizintechnik Handelsgesellschaft mbH John-Deere-Str. 81a, 68163 Mannheim, Germany www.omron-medizintechnik.de
		OMRON SANTÉ FRANCE SAS 14, rue de Lisbonne, 93561 Rosny-sous-Bois Cedex, France

I.

Made in China Fabricado en China Fabriqué en Chine Geproduceerd in China Hergestellt in China Сделано в Китае Prodotto in Cina صُنع في الصبين



A Good Sense o<u>f Health</u>

# OMRON

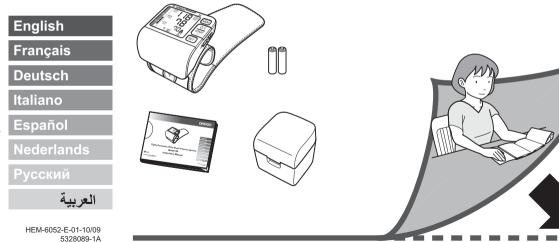
# Check following components!

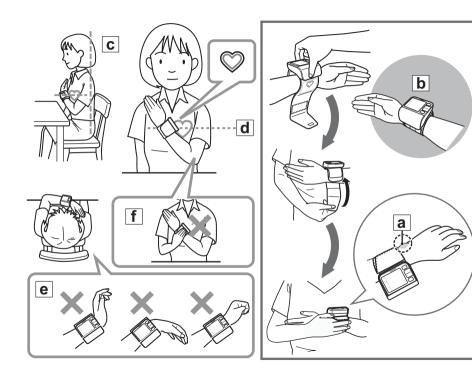
Vérifier les composants suivants ! Prüfen Sie folgende Teile des Lieferumfangs! Проверьте следующие компоненты! Controllare i componenti indicati di seguito! تحقق من المكونات التالية! ¡Compruebe los siguientes componentes!

Controleer de volgende onderdelen!



**Digital Automatic Wrist Blood Pressure Monitor** Model R6 Instruction Manual





# Contents

LÜ

Thank you for purchasing the OMRON R6 Digital Automatic Wrist Blood Pressure Monitor.

The OMRON R6 is a compact and easy to use blood pressure monitor, operating on the oscillometric principle. This well designed wrist monitor comes with memory for two users and a easy to read Blood pressure level indicator allowing you to easily see if your readings are with in the Guidelines set by the World Health Organization. It measures your blood pressure and pulse rate simply and quickly. For comfortable controlled inflation without the need of pressure pre-setting or re-inflation the device uses its advanced "IntelliSense" technology.

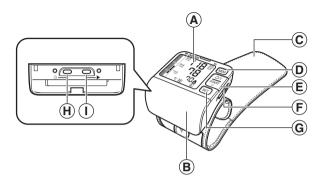
Imp	ortant	Safety Information	1
1.	Overv	/iew	3
2.	Prepa	ration	4
	2.1	Installing/Replacing the Batteries	4
	2.2	Setting the Date and Time	6
	2.3	Setting the Advanced Positioning	
		Sensor	7
3.	Using	the Unit	11
	3.1	Applying the Wrist Cuff	11
	3.2	How to Sit Correctly	12

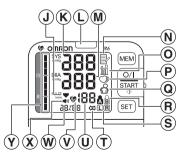
4.	3.4	Taking a Reading Using the Memory Function Deshooting and Maintenance	17
		The Icons and Error Messages	
	4.2	Troubleshooting	21
	4.3	Maintenance	23
5.	Techr	nical Data	25
6.		e Useful Information about Blood sure	28

Please read this instruction manual thoroughly before using the unit.

Please keep for future reference.

For specific information about your own blood pressure, CONSULT YOUR DOCTOR.





# **Important Safety Information**

Consult your doctor prior to using in pregnancy or if diagnosed with arrhythmia or arteriosclerosis. Please read this section carefully before using the unit.

## ▲ Warning:

 Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

### (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 unit, as cuff inflation can cause internal bleeding.

#### (Battery Usage)

• If battery fluid should get in your eyes, immediately rinse with plenty of clean water. Consult a doctor immediately.

### ▲ Caution:

• Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury to the user or patient or damage to the equipment or other property.

#### (General Usage)

- Do not leave the unit unattended with infants or persons who cannot express their consent.
- Do not use the unit for any purpose other than measuring blood pressure.
- Do not disassemble the unit or wrist cuff.
- Do not inflate the wrist cuff over 299 mmHg.

- Do not use a mobile phone or other devices that emit electromagnetic fields, near the unit. This may result in incorrect operation of the unit.
- Do not operate unit in a moving vehicle (car, airplane).

### (Battery Usage)

- If battery fluid should get on your skin or clothing, immediately rinse with plenty of clean water.
- Use only two "AAA" alkaline (LR03) batteries with this unit. Do not use other types of batteries.
- Do not insert the batteries with their polarities incorrectly aligned.
- Replace old batteries with new ones immediately. Replace both batteries at the same time.
- Remove the batteries if the unit will not be used for three months or more.
- Do not use new and used batteries together.

#### **General Precautions**

- Do not apply strong shocks and vibrations to or drop the unit.
- Do not take measurements after bathing, drinking alcohol, smoking, exercising or eating.
- Do not inflate the wrist cuff when it is not wrapped around your wrist.
- Do not wash the wrist cuff or immerse it in water.
- Read and follow the "Important information regarding Electro Magnetic Compatibility (EMC)" in the Technical Data Section.
- Read and follow the "Correct Disposal of This Product" in the Technical Data Section when disposing of the device and any used accessories or optional parts.

EN

# **1.** Overview



Open the rear cover page to read following:

The alphabet in the rear cover page correspond to those in the body page.

# Main unit

- A Display
- B Battery compartment cover
- **C**)Wrist cuff
- DMEM (Memory) button
- $(\mathbf{E})$ O/I START (  $\oplus$  ) button
- **F**User ID selection switch
- **G**SET button
- H Date/Time setting (  $\bigcirc$  ) button
- UDate/Time setting (►) button

# Display

J Deflation symbol K Systolic blood pressure -)Positioning indicator

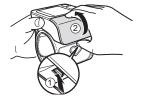
M Diastolic blood pressure Nemory symbol O Average value symbol P Irregular heartbeat symbol Q Movement error symbol **R** User ID symbol (A or B) S Wrist (left/right) symbol **D**Battery low symbol **U**Pulse display  $\mathfrak{V}$ Heartbeat symbol WDate/Time display X Buzzer symbol YBlood pressure level indicator

# 2. Preparation

# **2.1** Installing/Replacing the Batteries

# **1.** Remove the battery cover.

- 1) Push the hook on the bottom of the battery cover.
- 2) Pull the cover off the main unit.



2. Insert two 1.5V "AAA" alkaline (LR03) batteries as indicated in the battery compartment and set the date and time (refer to section 2.2).



# **3.** Replace the battery cover.

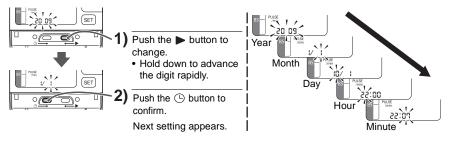
#### Notes:

- If the battery low symbol ( X) appears on the display, turn the unit off then replace both batteries at the same time.
- The measurement values continue to be stored in memory even after the batteries are replaced.

Disposal of used batteries should be carried out in accordance with the national regulations for the disposal of batteries.

# 2.2 Setting the Date and Time

 Set the monitor to the correct date and time before taking a measurement for the first time.
 Press the () button.



# 2. Press the O/I START button to turn the monitor off.

#### Notes:

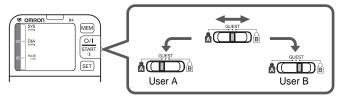
- To reset the date and time, hold down the 🕒 button while the power is off.
- If the batteries have been removed for 30 seconds or more, the date and time setting will need to be reset.

# **2.3** Setting the Advanced Positioning Sensor

The Advanced Positioning Sensor will assure you the unit is in the correct position level with the user's heart before the monitor starts to take the measurement.

### Selecting the User ID

Before setting the Advanced Positioning Sensor, select your User ID.

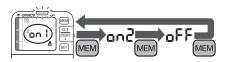


EN

## 2. Preparation

### Setting the Positioning Indicator

- **1.** Push the **set** button.
- 2. Push the mode button to choose which mode of Positoning indicator you wish to have.



While setting the Positioning indicator the blue light flashes.

- on1: After the Positioning indicator lights in blue for more than 2 seconds, or in orange for more than 5 seconds, measurement starts automatically, even though the monitor is not in proper position.
- **on2:** The Positioning indicator lights in blue for more than 2 seconds, measurement starts automatically. Measurement will not start if it lights in orange.

oFF: Measurement starts without the Positioning indicator.

**3.** Push the set button to confirm your choice and move onto the next step.

#### Note:

If you choose "oFF" for the Positioning indicator, the monitor will skip the process of choosing which wrist.

## Setting the Wrist for Measurement

1. Push the is button to toggle between "[]" (Left) and "R" (Right).

L: Taking a reading on the left wrist.

**R**: Taking a reading on the right wrist.



**2.** Push the set button to confirm your choice and move onto the next step.

## Setting the Buzzer

1. Push the me button to choose which mode of the buzzer you wish to have.

If the Positioning indicator is "on1" or "on2":

on1: The buzzer sounds only when the monitor is in proper position.

- **on2:** The buzzer sounds a series of two short blips if your wrist is too far away from the measuring position, and sounds slowly when your wrist is in proper position.
- oFF: The buzzer will not sound.

If the Positioning indicator is "oFF":

on: The buzzer sounds when pressing any buttons.

oFF: The buzzer will not sound.

EN

**2.** Push the **st** button to confirm.

Blue light will flash.



**3.** Press the O/I START button to save settings and turn the monitor off.

## Resetting to the Default Setting

The positioning indicator is set "on1", the wrist for measurement is set "L", and the buzzer is set "on1" as default.

To reset to the default setting, press and hold down the SET button while in the setting mode,

then press the O/I START button simultaneously for more than 2 seconds.

## 11

EN

# **3.** Using the Unit

## Open both the front and rear covers to read following:

The alphabet and number in the cover page correspond to those in the body page.

# 3.1 Applying the Wrist Cuff

Do not apply over clothing.

**1.** Place the wrist cuff over your wrist.

# 2. Wrap the wrist cuff around your wrist.

Make sure that the wrist cuff does not cover the protruding part of the wrist bone (ulna) on the outside of the wrist. --- **a** Your thumb should face upward.

#### Notes:

- You can take a measurement on either your left or **b** <u>right wrist</u>. Refer to 2.3 about how to modify the settings.
- Wrap the wrist cuff securely around the wrist for taking accurate measurements.
- The blood pressure can differ between the right arm and the left arm, and therefore also the measured blood pressure values can be different. Omron recommends to always use the same arm for measurement. If the values between the two arms differ substantially, please check with your physician which arm to use for your measurement.

# 3.2 How to Sit Correctly

To take a measurement, you need to be relaxed and comfortably seated, under comfortable room temperature. No eating, smoking or exercising 30 minutes before taking a measurement.

- Sit on a chair with your feet flat on the floor.
- Sit upright with your back straight. --- C
- The cuff should be at the same level as your heart. --- d
- Relax your wrist and hand. Do not bend your wrist back, clench your fist, or bend your wrist forward. --- 🕑
- Do not use your other hand to support the wrist cuff. This can result in inaccurate measurement results. --- f

# 3.3 Taking a Reading

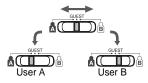
#### Notes:

- This section is the example for the measurement with the default setting. To change the setting refer to section 2.3.
- To cancel a measurement, press the O/I START button at any time during measurement.
- Remain still while taking a measurement.

# 1. Select your User ID.

Always use the same user ID when taking a measurement.

The unit stores the measurement values in the selected user ID memory.



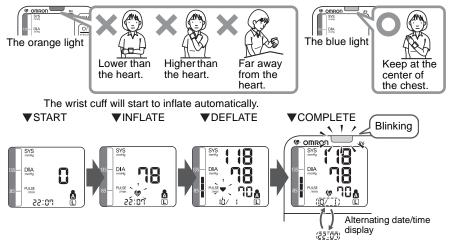
#### Notes:

- If "GUEST" is selected, A or B will not be displayed.
- If "GUEST" is selected, the measurement results are not stored in the memory.

14

# **2.** Press the O/I START button.

While your position is improper, the Positioning indicator lights in orange, when you are in proper position the buzzer beeps "beep beep" and the Positioning indicator turns to blue.



3. Undo the wrist cuff and remove the unit.

# 4. Press the O/I START button to turn the monitor off.

The monitor automatically stores the measurement in its memory. It will automatically turn off after 2 minutes.

#### Important:

 Recent research suggests that the following values can be used as a guide to high blood pressure for measurements taken at home.

Systolic Blood Pressure	Above 135 mmHg
Diastolic Blood Pressure	Above 85 mmHg

This criteria is for home blood pressure measurement. For professional office blood pressure measurement criteria, please refer to Chapter 6.



## 3. Using the Unit

Your blood pressure monitor includes an irregular heartbeat feature. Irregular heartbeats can influence the results of the measurement. The irregular heartbeat algorithm automatically determines if the measurement is usable or needs to be repeated. If the measurement results are affected by irregular heartbeats but the result is valid, the result is shown together with the irregular heartbeat symbol ( ◯) ). If the irregular heartbeats cause the measurement to be invalid, no result is shown. If the irregular heartbeat symbol ( ◯) is shown after you have taken a measurement, repeat the measurement. If the irregular heartbeat exumption ( ◯) is a heave frequent.



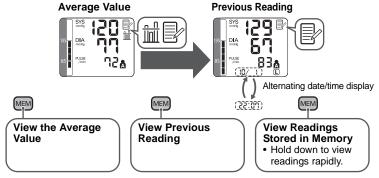
symbol (  $\bigcirc$  ) is shown frequently, please make your doctor aware of it.

# 3.4 Using the Memory Function

The monitor automatically stores the result up to 90 sets each for both user A and B. It can also calculate an average reading based on the measurements from the last three readings taken within 10 minutes. If there are only two readings in memory for that period, the average will be based on two readings. If there is one reading in memory for that period, the average will be based on one reading.

#### Notes:

• If the memory is full, the monitor will delete the oldest readings.



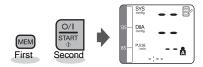
## 3. Using the Unit

### To delete all the values stored in memory

The values stored in the memory are deleted by user ID.

You cannot partially delete values stored in the memory. All values for the user you select will be deleted.

When the memory symbol (P) appears, first press the MEM button. Then while holding it down, press the O/I START button simultaneously for about 2-3 seconds.



Note: You cannot partially delete the stored readings.

# 4. Troubleshooting and Maintenance

# **4.1** The Icons and Error Messages

Error Display	Cause	Remedy
٦	Irregular or weak pulses are detected.	Remove the wrist cuff. Wait 2-3 minutes and then take another measurement. Repeat the steps in section 3.3. If this error continues to appear, contact your doctor.
ß	Movement during measurement.	Carefully read and repeat the steps in section 3.3.
Blink	The batteries are low.	You should replace them with new ones ahead of time. Refer to section 2.1.
💢 Lit	The batteries are exhausted.	You should replace them with new ones at once. Refer to section 2.1.

## 4. Troubleshooting and Maintenance

Error Display	Cause	Remedy
	The posture has changed during measurement.	Carefully read and repeat the steps listed under section 3.3.
E	Cuff is over inflated.	Carefully read and repeat the steps listed under section 3.3.
۶	The wrist cuff is not wrapped securely.	Carefully read and repeat the steps listed under section 3.1.
	The user ID has changed during measurement.	Do not change the user ID during measurement.
Er	An Er mark with a code/number indicates the device has a hardware failure.	Consult your OMRON retail outlet or distributor.

Note: The irregular heartbeat symbol (2) may also be displayed with error messages.

# 4.2 Troubleshooting

Problem	Cause	Remedy	]
	The wrist cuff is not at heart level.	Measure while in the correct posture. Refer to section 3.2.	
	The cuff is not wrapped snugly around the wrist.	Wrap the cuff correctly. Refer to section 3.1.	EN
The reading is extremely low (or high).	Your arms and shoulders are tense.	Relax and try taking the measurement again. Refer to section 3.3.	
	Movement or talking during measurement.	Remain still and do not talk during measurement. Refer to section 3.3.	
Wrist cuff pressure does not rise.	Air is leaking from the wrist cuff.	Consult your OMRON retail outlet or distributor.	
Wrist cuff deflates too soon.	The wrist cuff is loose.	Apply the cuff correctly so that it is securely wrapped around the wrist. Refer to section 3.1.	

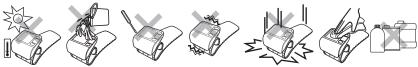
## 4. Troubleshooting and Maintenance

Problem	Cause	Remedy
The blood pressure is different each time. The reading extremely low (or high).		Blood pressure readings constantly vary with time of day and how relaxed you are. Take several deep breaths and try to remain relaxed before taking a measurement.
The unit loses power during measurement.	The batteries are exhausted.	Replace the batteries with new ones.
Nothing happens when you	The batteries are exhausted.	Replace the batteries with new ones.
press the buttons.	The batteries have been inserted incorrectly.	Insert the batteries with the correct (+/-) polarity.
Other problems.	<ul> <li>Press the O/I START button and repeat measurement.</li> <li>If the problem continues, try replacing the batteries with new ones.</li> <li>If this still does not solve the problem, contact your OMRON retail outlet or distributor.</li> </ul>	

# 4.3 Maintenance

To protect your unit from damage, please avoid the following:

- Subjecting your unit to extreme temperatures, humidity, or direct sunlight.
- Washing the cuff or exposing the cuff or unit to water.
- Disassembling the unit.
- · Subjecting the unit to strong shocks or vibrations. Dropping the Unit.
- Cleaning the unit with volatile liquids. THE UNIT SHOULD BE CLEANED WITH A SOFT, DRY CLOTH.



Use a soft, moistened cloth and soap to clean the cuff.

Keep the unit in its storage case when not in use.

Do not store the unit in the following situations:

- If the unit is wet.
- Locations exposed to extreme temperatures, humidity, direct sunlight, dust or corrosive vapours.
- Locations exposed to vibrations, shocks or where it will be at risk of falling.

### 4. Troubleshooting and Maintenance

### Calibration and Service

- The accuracy of this blood pressure monitor has been carefully tested and is designed for a long service life.
- It is generally recommended to have the unit inspected every two years to ensure correct functioning and accuracy. Please consult your authorised OMRON dealer or the OMRON Customer Service at the address given on the packaging or attached literature.

## 25

EN

# 5. Technical Data

Product Description	Digital Automatic Wrist Blood Pressure Monitor
Model	OMRON R6 (HEM-6052-E)
Display	LCD Digital Display
Measurement Method	Oscillometric method
Measurement Range	Pressure: 0 mmHg to 299 mmHg Pulse: 40 to 180 beats/min.
Accuracy	Pressure: ±3 mmHg
	Pulse: $\pm$ 5% of reading
Inflation	Automatic inflation by pump
Deflation	Automatic rapid deflation
Pressure Detection	Capacitive pressure sensor
Memory	90 Measurements with date and time for each user (A and B)
Power Source	2 "AAA" alkaline (LR03) batteries 1.5V
Battery Life	Approx. 300 measurements with new alkaline batteries at a room temperature of 23°C $$
Applied Part	🗙 = Type B
Protection Against Electric Shock	Internally powered ME equipment
Operating temperature/ Humidity	+10°C to +40°C / Maximum: 30 to 85% RH
Of a main and the second a methods at 1	

-20°C to +60°C / Maximum: 10 to 95% RH / 700-1060 hPa

Storage temperature/ Humidity/ Air pressure

## 5. Technical Data

Console Weight Outer Dimensions	Approximately 114g without batteries Approximately 70 (w) mm $\times$ 70 (h) mm $\times$ 21 (d) mm without the wrist cuff
Measurable circumference of wrist	Approximately 13.5 to 21.5 cm
Cuff Material	Nylon and polyester
Package Content	Main unit, storage case, battery set, instruction manual, guarantee card, blood pressure pass

#### Note:

Subject to technical modification without prior notice.

# **C**€0197

- This device fulfils the provisions of EC directive 93/42/EEC (Medical Device Directive).
- This blood pressure monitor is designed according to the European Standard EN1060, Noninvasive sphygmomanometers Part 1: General Requirements and Part 3: Supplementary requirements for electromechanical blood pressure measuring systems.
- This OMRON product is produced under the strict quality system of OMRON Healthcare Co. Ltd., Japan. The Core component for OMRON blood pressure monitors, which is the Pressure Sensor, is produced in Japan.

#### Important information regarding Electro Magnetic Compatibility (EMC)

With the increased number of electronic devices such as PC's and mobile (cellular) telephones, medical devices in use may be susceptible to electromagnetic interference from other devices. Electromagnetic interference may result in incorrect operation of the medical device and create a potentially unsafe situation. Medical devices should also not interfere with other devices.

In order to regulate the requirements for EMC (Electro Magnetic Compatibility) with the aim to prevent unsafe product situations, the EN60601-1-2:2007 standard has been implemented. This standard defines the levels of immunity to electromagnetic interferences as well as maximum levels of electromagnetic emissions for medical devices.

This medical device manufactured by OMRON Healthcare conforms to this EN60601-1-2:2007 standard for both immunity and emissions.

Nevertheless, special precautions need to be observed:

Do not use mobile (cellular) telephones and other devices, which generate strong electrical or electromagnetic fields, near the
medical device. This may result in incorrect operation of the unit and create a potentially unsafe situation. Recommendation is
to keep a minimum distance of 7 m. Verify correct operation of the device in case the distance is shorter.

Further documentation in accordance with EN60601-1-2:2007 is available at OMRON Healthcare Europe at the address mentioned in this instruction manual.

Documentation is also available at www.omron-healthcare.com.

#### Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

This marking shown on the product or its literature, indicates that it should not be disposed of, with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

This product does not contain any hazardous substances.

# 6. Some Useful Information about Blood Pressure

## What is Blood Pressure?

Blood pressure is a measure of the force of blood flowing against the walls of the arteries.

Arterial blood pressure is constantly changing during the course of the heart's cycle.

The highest pressure in the cycle is called the *Systolic Blood Pressure*; the lowest is the *Diastolic Blood Pressure*.

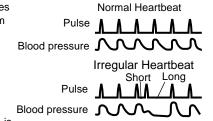
Both pressure readings, the *Systolic* and *Diastolic*, are necessary to enable a doctor to evaluate the status of a patient's blood pressure.

## What is Irregular Heartbeat?

An irregular heartbeat is a heartbeat rhythm that varies by more than 25% from the average heartbeat rhythm detected while the unit is measuring the systolic and diastolic blood pressure.

If the irregular heartbeat symbol (  $\bigcirc$  ) is shown frequently, please make your doctor aware of it.

## What is Arrhythmia?

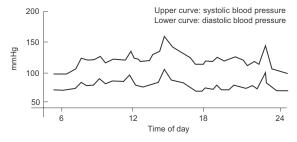


Arrhythmia is a condition where the heartbeat rhythm is

abnormal due to flaws in the bio-electrical system that drives the heartbeat. Typical symptoms are skipped heartbeats, premature contraction, an abnormally rapid (tachycardia) or slow (bradycardia) pulse.

### Why is it a Good Thing to measure Blood Pressure at Home?

Many factors such as physical activity, anxiety, or the time of day, can influence your blood pressure. A single measurement may not be sufficient for an accurate diagnosis. Thus it is best to try and measure your blood pressure at the same time each day, to get an accurate indication of any changes in blood pressure. Blood pressure is typically low in



Example: fluctuation within a day (male, 35 years old)

the morning and increases from afternoon to evening. It is lower in the summer and higher in the winter.

EN

## Classification of Blood Pressure by the World Health Organization

The World Health Organization (WHO) and the International Society of Hypertension (ISH) developed the Blood Pressure Classification shown in this figure.

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

#### Note:

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

