

OMRON

使用說明書  
**INSTRUCTION MANUAL**

自動手腕式電子血壓計  
**Automatic Wrist  
Blood Pressure Monitor**

型號 **R7**  
Model



Thank you very much for purchasing the OMRON product.  
Be sure to read this Instruction Manual thoroughly before use.  
Keep this Instruction Manual at hand for your future reference.  
非常感謝您購買歐姆龍產品。在使用前請詳細閱讀本說明書。  
請保存本說明書以備後用之需。

**A Good Sense of Health**

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# Before Measuring Your Blood Pressure

## Safety Information

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*Please read this section carefully before using this unit*

### **Caution**

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

- Self-diagnosis may worsen the disease.
- When the arterial sclerosis proceeds is due to diabetics, hyperlipaemia, or hypertension, it may cause peripheral circulatory disturbance.

For these cases, blood pressure may differ greatly between measurement at the wrist and the brachial.

Do not use this monitor for the infant or the person who cannot express one's intention.

Do not use this monitor for purposes other than measuring blood pressure.

Do not use portable phones near this monitor, may cause operational error.

Do not disassemble or modify the main unit or the wrist cuff of the blood pressure monitor. Correct measurement will be impossible.

Keep the batteries out of the reach of children.

In case a child swallows a battery, immediately consult with a doctor.

Replace both worn batteries with new ones as soon as possible.

If you are not going to use this monitor for a long period of time (3 months or more), remove the batteries.

The batteries may leak, generate heat, or explode and destroy the main unit.

Do not use new and worn or different types of batteries together.

### **General Advice**

Do not force to stretch or bend the wrist cuff.

Do not inflate the monitor without wrapping the wrist cuff over your wrist.

Do not apply strong shock to or drop the monitor.

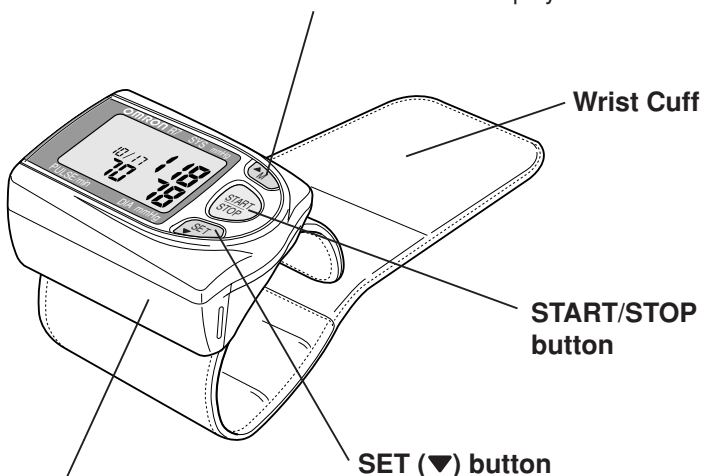
## Names and functions of Parts

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### Main Unit

#### MEMORY (▲) button

- Push this button to see the measured values stored in the memory.
- In the Setting Mode, use this button to turn on/off each setting or advance the time on Date/Time Display.



Wrist Cuff

START/STOP  
button

#### SET (▼) button

- Push this button to select the setting.
- During the memory display, each time you push this button, the previously measured value will be displayed.

Battery Cover

### 4 Before Measuring Your Blood Pressure

## Names and functions of Parts

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While using the Position Sensor function, the marks indicate the following (from left to right.)

### Position Sensor Mark

(For the setting, refer to Page 21.)

### Position Sensor Alarm Mark

(For the setting, refer to Page 22.)

### Measurement on Right Wrist Mark

(For the setting, refer to Page 23.)

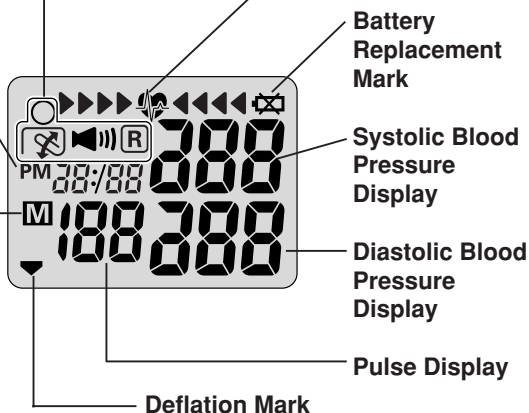
### Position Sensor

Let you know the proper measuring position on the wrist.

### Date/Time Display

### M Mark

Displayed when the stored measurement values are called out.



In the illustration of the LCD display, all marks and characters are illustrated for explanation.

## How to Use This Blood Pressure Monitor

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Use model R7 according to the following procedure.

### How to Prepare

#### Insert the batteries

Use this monitor after inserting the batteries in the main unit. (Refer to Page 8.)



#### Adjust the Date and Time

After inserting the batteries, be sure to adjust the date and time. (Refer to Page 8.)



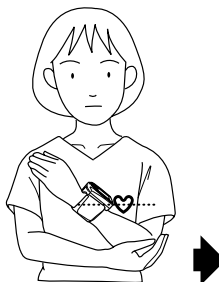
### How to Measure Blood Pressure

#### Wrap the Wrist Cuff snugly

Wrap the wrist cuff correctly. (Refer to Page 11.)

#### Push the Button and measure

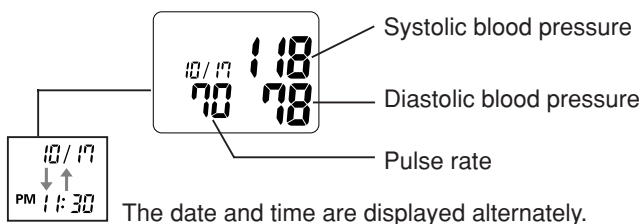
Adjust the height of your wrist to the level of your heart (nipple). This monitor has a Position Sensor function to let you know the proper measuring position. (Refer to Page 14.)



## 6 Before Measuring Your Blood Pressure

## How to Use This Blood Pressure Monitor

### How to Read the Measurement Results



The measurement results are automatically stored in the memory

### See the stored measurement results (Memory Function)

As this unit can automatically store the results of up to 90 measurements, it is convenient for continuous measurements.

### What is the Position Sensor function?

The function let you know whether to position your wrist up or down by using your elbow as the fulcrum so that the position of the wrist can be adjusted to the level of your heart in the correct posture.

- How to use the Position Sensor (Refer to Pages 15.)



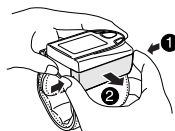
When the wrist comes to the proper position, the main unit beeps and automatically starts inflation and measurement.

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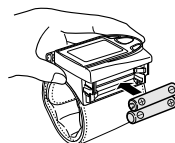
## How to Insert the Batteries

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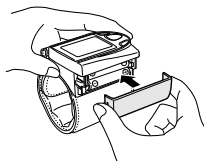
1. Remove the battery cover by holding the battery cover with your thumb and index finger. Pull the battery cover apart from the unit as shown in the Figure on the right.




2. Insert two AAA batteries with their polarities (+ and -) in the correct direction.



3. Close the battery cover.



## Battery life and replacement

- With the use of alkaline batteries (two AAA batteries), you can measure approximately 300 times, at 23°C inflating to 170 mmHg three times a day.
- The unit can measure less number of times when the room temperature is low or the unit inflates to more than 170 mmHg.
- If the  mark blinks, the batteries are worn out. Replace both batteries with new ones of the same type.
- Replace the batteries after the power of the main unit is turned off.
- If the batteries have been replaced or removed, resetting of the date and time is required.

### 8 Before Measuring Your Blood Pressure

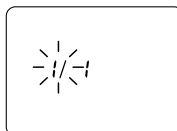
## How to Set the Date and Time

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1. Push the START/STOP button.  
After the initial LCD displayed, the time screen appears and the year blinks.
2. Press the MEMORY (▲) button to display the current Year.  
Push the button to advance Year by one Year.  
<The setting range of Year is from 2003 to 2030.>
3. After adjusting the Year, push the SET (▼) button.  
The Year is locked and Month blinks.
4. Press the MEMORY (▲) button to display the current Month.  
Push the button to advance Month by one Month.
5. After adjusting the Month, push the SET (▼) button.  
Month is locked and Day blinks.
6. Press the MEMORY (▲) button to display the current Day.  
Push the button to advance Day by one Day.



Blinking Screen  
of Year



Blinking Screen  
of Month

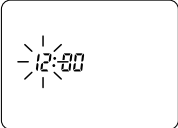


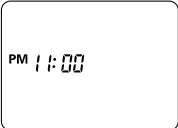
Blinking Screen  
of Day

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## How to Set the Date and Time

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7. After adjusting the Day, push the SET (▼) button.  
Day is locked and Hour blinks.  
A rectangular screen showing the time 12:00. The hour '12' is larger and has a vertical line through it, indicating it is the active field being set. The minutes '00' are smaller.

Blinking Screen of Hour
8. Press the MEMORY (▲) button to display the current hour.  
Push the button to advance by the hour.  
<The setting range of hour is 12 to 11, that is, from 12:00 p.m. to 11:00 p.m. PM indicates time in the afternoon.>  
A rectangular screen showing the time PM 11:00. The hour '11' is larger and has a vertical line through it, indicating it is the active field being set. The minutes '00' are smaller.

Blinking Screen of Minute
9. After adjusting the hour, push the SET (▼) button.  
Hour is locked and Minute blinks.
10. Press the MEMORY (▲) button to display the current Minute.  
Push the button to advance by one minute.
11. After adjusting the Minute, push the SET (▼) button. As the minute is locked, the power is automatically turned off.
  - If you want to change the setting, keep pressing the SET (▼) button in the power-off state until you see the screen which you want to restart the setting. You can start setting from the beginning.
  - If you want to change the setting other than the date and time, refer to the Section on “How to Change the Setting” (Refer to Pages 20 to 23.)

## 10 Before Measuring Your Blood Pressure

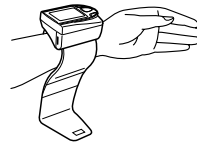
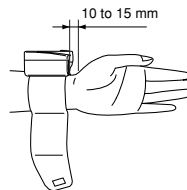
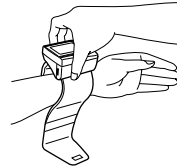
# How to Measure Blood Pressure

## How to Wrap the Wrist Cuff

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### 1. How to wrap the wrist cuff correctly (on left wrist)

- Turn your left thumb upward and place the wrist cuff over your left wrist with the display of the unit facing upward.
- Cover the wrist cuff by leaving an allowance of 10 to 15 mm (almost equal to the width of an index finger) between the edge of the wrist cuff and the bottom of the palm as shown in the figure on the right.
- Check if the wrist cuff completely covers your wrist as shown in the figure.



### 2. Pull the wrist cuff upward by holding the edge so that it can be wrapped snugly.

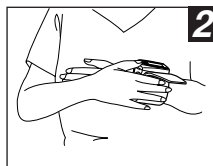
- If the wrist cuff is not wrapped snugly, this may cause incorrect measurement.
- Lightly press the velcro tape with your finger so that it is fastened tightly.



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## How to Wrap the Wrist Cuff

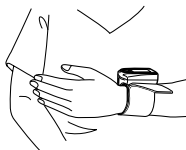
- If you have a slender wrist (wrist circumference of 145 mm or less), you may feel the wrist wrap is too loose. In this case, do not wrap it too tight, it will not affect the measurement.



- Fold and fasten the extra portion of wrist wrap to avoid any disturbance.



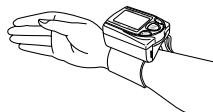
- Even if the extra portion of wrist cuff is not fastened, it will not affect the measurement.



## For measurement on your right wrist

Wrap the wrist cuff as shown in the figure on the right.

- When the Position Sensor is on, set the “Measurement on Right Wrist” to on in the Setting Mode.
- When the Position Sensor is off, you can measure on your right wrist. (Refer to Page 23.)



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## Correct Posture

### Correct posture is important to achieve correct measurement



Support your left elbow gently with your right hand.

1. Sit up straight and do not slouch.
2. Breathe deeply for five to six times before measurement, and then return to normal breathing. Relax your shoulders and arms.
3. When measuring, adjust the height of the wrist cuff to the level of your heart (nipple) as shown in the figure on the left.
  - The Position Sensor lets you know the optimal height.



wrist cuff

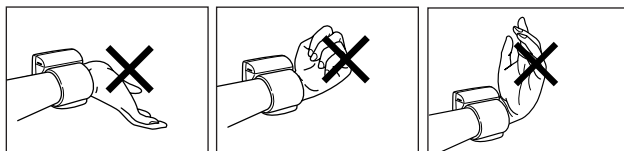
### Correct posture of wrist

Your hand is naturally stretched without giving stress on your fingers.

### Measuring posture and wrist posture to be avoided



Do not hold the wrist cuff with another hand. It may cause erroneous measurement results.



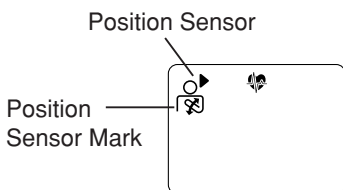
May result in higher than actual blood pressure values indicated when the wrist is in the postures shown above.

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## How to Measure Blood Pressure


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1. Push the START/STOP button.  
Ready to Measure Screen appears.



Support your elbow and do not move your body.



2. Adjust the height of your wrist using your elbow as the fulcrum such that the ► mark on the display matches the  mark.


The Position Sensor Mark () blinks and the wrist movement is indicated by the ► mark with the change of alarm tone.

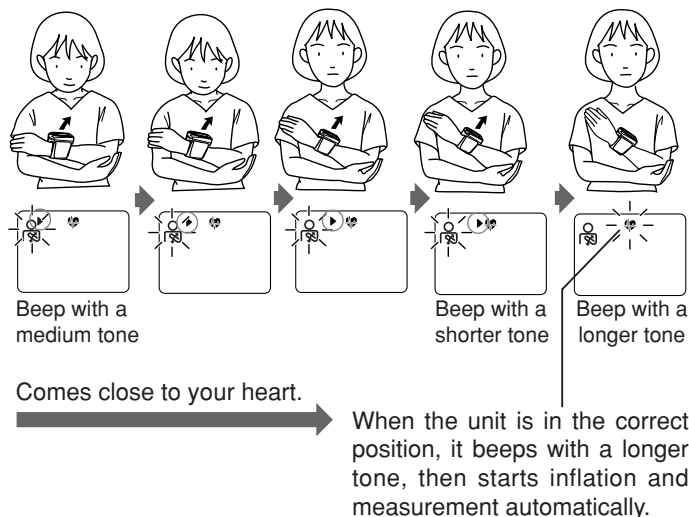


### 14 How to Measure Blood Pressure

## How to Measure Blood Pressure

### How to use the Position Sensor

- Slowly raise your wrist so that it comes to the level of your heart (nipple).
- When your wrist comes to the level of your heart, a  mark blinks and the alarm beeps with a longer tone and measurement starts. Stop the wrist at that position and do not move it until the measurement results are displayed.
- If the wrist position does not match, correct measurement may not be possible or a measurement error may be indicated.



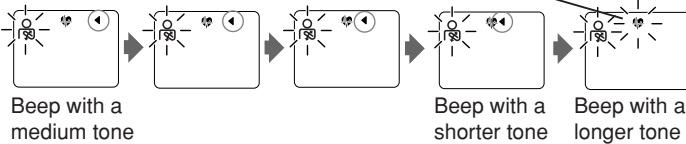
## How to Measure Blood Pressure

### If you have raised your wrist too high.

Slowly lower your wrist so that the ◀ mark is at the level of your heart by using your elbow as the fulcrum.



When the unit comes to the proper position, it beeps with a longer tone, and starts inflation and measurement automatically.

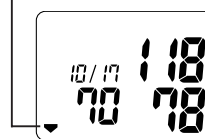


### 3. Check the measured values.

When measurement finishes, the deflation mark ▼ blinks and the wrist cuff deflates.

The measurement results (blood pressure values, pulse rate, date, and time) are displayed.

#### Deflation Mark



Deflation LCD Display

## 16 How to Measure Blood Pressure

## How to Measure Blood Pressure

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- The measurement results are automatically stored in the memory and can be retrieved using the memory function.  
(Refer to Page 18.)




Measurement Results  
LCD Display

- If the velcro tape comes off during measurement, wrap the wrist cuff snugly again, and start measurement again.  
(Refer to Page 11.)
  - If you want to stop measurement, push the START/STOP button. After the monitor stops inflation and deflates, the power is turned off.
4. Push the START/STOP button to turn off the power.
- Even if you forget to push the START/STOP button, the unit has an auto power-off function that turns off the power automatically in approximately two minutes.

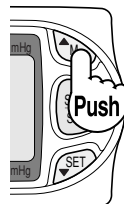
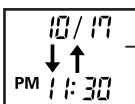
## Memory Function

The unit can automatically store the results of 90 measurements in the memory.

- After the 91st measurements, the earliest stored measurements will be deleted automatically starting from the first measurement.
- The measured values are retained in memory even after the batteries are removed for replacement.

1. Push the MEMORY (▲) button. The latest measured values that are stored in memory are displayed with the  mark.

The date and time of measurement are alternately displayed at every 3 seconds.



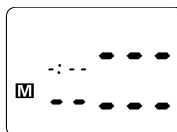
2. Recall the memory by pushing the MEMORY (▲) button.
  - Each time you push the MEMORY (▲) button, the last measured value is displayed.
  - If you keep pressing the button, the measurement results are continuously displayed at every 1 second until the first measured value appears.
  - If you push the SET (▼) button, the display moves to the previous one.

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## Memory Function

If you keep pressing the button, the measurement results are continuously displayed at every 1 second until the last measured value appears.

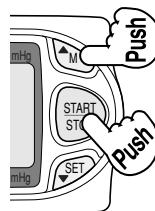
- If there is no stored data, the display appears as follows.



No Data screen

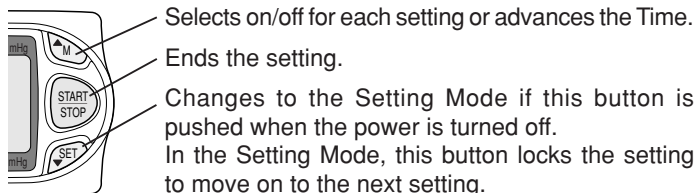
### To delete all the stored data

1. Push the MEMORY (▲) button, and then the memory display appears.
2. While pressing the MEMORY (▲) button, press the START/STOP button simultaneously and hold for more than 2 seconds.
3. When the **M** Mark blinks, release your finger from the buttons.  
As the stored data is deleted, No Data screen is displayed.  
All the stored data is deleted. You cannot delete only specific data.



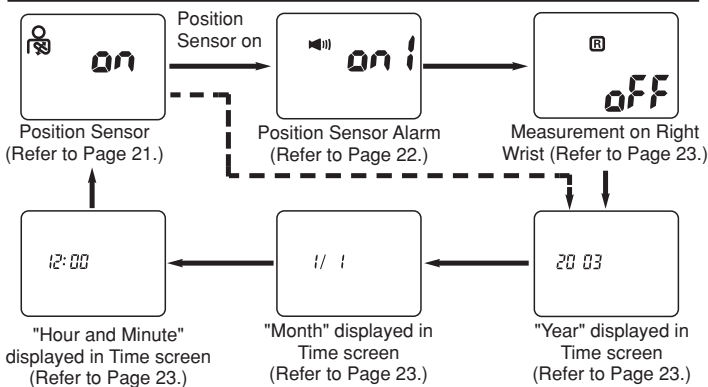
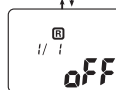
# How to Set the Mode

## How to Change the Setting



### How to initialize the setting

Press the SET (▼) button and keep pressing the START/STOP button at the same time for more than 2 seconds. All the settings will return to default settings as shown in the figure at right.



If you turn off the Position Sensor and push the SET (▼) button, the screen displays the Time.

## 20 How to Set the Mode

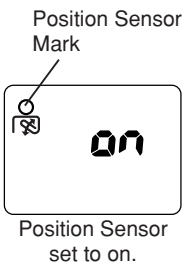
## How to Change the Setting

### Position Sensor

1. While the power is OFF, press the SET (▼) button until the Position Sensor screen is displayed.

2. Push the MEMORY (▲) button to select on or OFF.

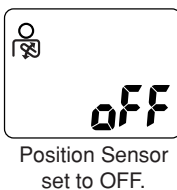
- The Position Sensor is set to ON by default.



3. Push the SET (▼) button.

If the Position Sensor is off, the clock screen is displayed.

- When the Position Sensor is off, the Position Sensor Alarm and “Measurement on Right Wrist” cannot be set.
- If the Position Sensor is on, the Position Sensor Alarm screen is displayed.



## How to Change the Setting

### Position Sensor Alarm

The Position Sensor Alarm can be set only when the Position Sensor is on.

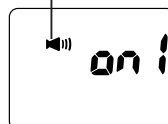
on1 : Alarms when the unit is close to (or far from) the position of your heart with different alarm tones.

on2 : Alarms only when the unit is aligned at the position of your heart.

OFF : No alarm, only indicated by the Position sensor mark.

1. While the power is OFF, press the SET (▼) button until the Position Sensor Alarm screen is displayed.

Position Sensor Alarm Mark



2. Push the MEMORY (▲) button to select on1, on2 or OFF.

- The Position Sensor Alarm is set at on1 when you purchase the product.

Position Sensor Alarm set to on1

Each time you push the MEMORY (▲) button, the display changes as follows.

on1 → on2 → off

A sequence of three text elements: 'on1', 'on2', and 'off'. An arrow points from 'on1' to 'on2', and another arrow points from 'on2' to 'off'. A large bracket underneath all three elements indicates the overall sequence.

Position Sensor Alarm set to on2

3. Push the SET (▼) button, the “Measurement on Right Wrist” screen is displayed.



Position Sensor Alarm set to OFF

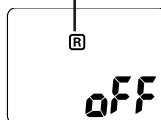
## 22 How to Set the Mode

## How to Change the Setting

### Measurement on Right Wrist

1. While the power is OFF, press the SET (▼) button until “Measurement on Right Wrist” screen is displayed.
2. Push the MEMORY (▲) button, to select on or OFF.
  - When you purchase the product, “Measurement on Right Wrist” is set to OFF.
3. Push the SET (▼) button.  
The “Time” screen is displayed.

Measurement on  
Right Wrist Mark



Measurement on  
Right Wrist set to OFF



Measurement on  
Right Wrist set to on

### Time

If the batteries have been replaced or removed, you have to reset date and time.

1. While the power is OFF, press the SET (▼) button, until the Time screen is displayed.  
The “Year” blinks.
2. Push the MEMORY (▲) button and the SET (▼) button to set the correct date and time.  
For details, refer to “How to Set the Date and Time.” (Refer to Page 9.)
3. Push the SET (▼) button.  
The Position Sensor screen is displayed.



Blinking Screen  
of Year

### Note:

You may stop setting at any moment, by just pushing the START/STOP button. As the setting is locked, the power is turned off.

How to Set the Mode 23

## About Wrist Blood Pressure Monitor

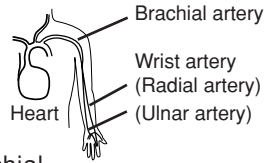
### Wrist blood pressure and brachial blood pressure

Blood pressure is usually measured at brachial artery.

As the wrist arterial vessel is connected to the brachial vessel, wrist blood pressure values are close to brachial ones and reflect the change of brachial

blood pressures. However in cases where there is a circulatory disorder such as arterial infarction, fairly large difference is observed between the brachial and the wrist blood pressure values.

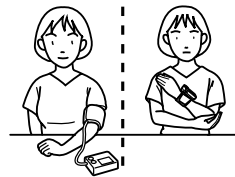
After consulting with your doctor, use the wrist blood pressure together with the brachial pressure for your health management.



### Difference between blood pressure measured at wrist and brachial

For healthy people, the difference between the blood pressure values measured at wrist and those at upper arm at rest is usually  $\pm 10$  mmHg for both systolic and diastolic blood pressures.

However after doing exercise or taking a bath, blood circulation changes greatly and the blood pressure values at wrist and upper arm may differ greatly.



Approximately  $\pm 10$  mmHg in healthy people

#### 24 About Wrist Blood Pressure Monitor

## About Wrist Blood Pressure Monitor

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### **Wrist and brachial blood pressure values of those suffering from disease**

Diabetes, hyperlipaemic, or hypertension accelerates arterial sclerosis, which causes dangerous diseases such as cerebral apoplexy or myocardial infarction or induces arterial stenosis or peripheral circulatory disorder.

In these cases, the wrist and brachial blood pressure values may differ greatly. (Even in healthy people, a difference of 20 mmHg may occur if the measuring conditions are not proper. Therefore do not try to diagnose the measurement values by yourself, but be sure to follow the instructions of your doctor.)

In addition, difference between wrist and brachial blood pressure values may be affected by the physiological conditions at the time of measurement. However, the blood pressure values measured at wrist and upper arm usually fluctuate in the same manner.

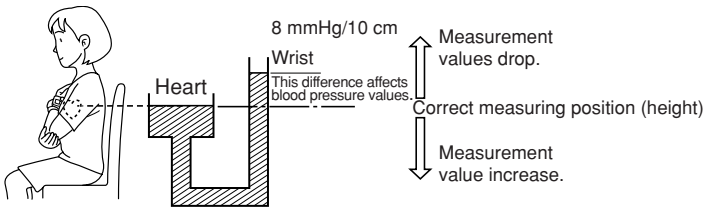
Therefore, you can check the fluctuation tendency of blood pressure by measuring wrist blood pressure.

### **Measure in correct posture**

If the position of your wrist is different from the level of your heart, the blood pressure values change due to the weight of the blood itself. The blood pressure values drop when the wrist is positioned higher than the level of your heart. On the other hand, when the wrist is lowered, the blood pressure values increase. (A variation of approximately 8 mmHg is observed with the height difference of 10 cm.)

## About Wrist Blood Pressure Monitor

However, as the blood pressure values are affected by the measuring posture, they do not necessarily fluctuate as explained above. Please refer to the correct posture. (Refer to Page 13.)



## Everyday life and wrist blood pressure

Brachial and wrist blood pressures usually do not show great difference before and after eating or drinking.

If you take a hot bath, the dermal vessels contract temporarily and blood pressure elevates.

However, if you take a warm bath for relaxing, peripheral vessels expand and blood pressure lowers.

Wrist blood pressure tends to drop more than brachial blood pressure for the latter.

### Luke warm water



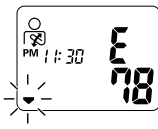

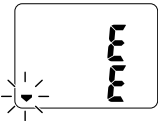
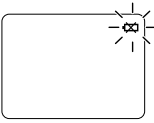
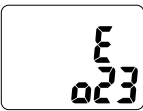
### Hot water



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# Troubleshooting

## When an Error Is Indicated

Error	Cause	How to correct
 <p>When a Position Sensor mark is indicated</p>	<p>You moved your wrist during measurement.</p>	<p>When the Position Sensor is locked, measure again without moving your wrist until measurement is completed.</p>
	<p>You moved your arm or body, or talked during measurement.</p>	<p>Measure your blood pressure again without moving your arm or body.</p>
	<p>You moved your arm or body extensively during measurement.</p>	<p>Measure your blood pressure again without moving your arm or body.</p>
 <p>Battery replacement mark flashes.</p>	<p>Batteries are worn out. Replace with new ones.</p>	<p>Replace both batteries (Refer to Page 8.)</p>
 <p>Only E and numbers are displayed.</p>	<p>Trouble caused by abnormality in function.</p>	<p>Please contact your nearest OMRON dealer.</p>

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## When Problem Occurs

Problem	Possible cause	How to correct
Measurement cannot be made. Or the blood pressure values are displayed abnormally high (low).	The wrist cuff is not at the level of the heart.	Use the Position sensor function to place your wrist at the correct position. (Refer to Page 15.)
	The wrist cuff is not wrapped snugly.	Wrap the wrist cuff correctly. (Refer to Page 11.)
	Too much stress is applied on your shoulder or arm.	Relax yourself and make measurement. (Refer to Page 15.)
	You are talking or moving your hands during measurement.	Keep still and measure again.
The blood pressure values differ from the values measured at brachial.	Refer to the section on "Wrist Blood Pressure Monitor." (Refer to Page 24.)	
Blood pressure values are displayed before the monitor inflates to the required value.	Air is leaking from the wrist cuff.	Contact your nearest OMRON dealer.
Blood pressure value fluctuates with each measurement. Or the blood pressure values are displayed high (low).	Blood pressure value tends to fluctuate depending on the mental state during measurement or the measuring time. Breathe deeply to relax yourself and make measurement again.	
when you push the START/STOP button.	Batteries are worn out.	Replace both batteries with new ones. (See to Page 8.)
	The directions of polarities of inserted batteries (+ and -) are wrong.	Insert the batteries correctly. (Refer to Page 8.)

- If you cannot resolve the problem even after taking the above-mentioned measures, please contact the nearest OMRON dealer.

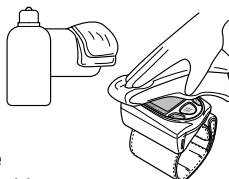
## 28 Troubleshooting

## How to Care and Store This Monitor

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### How to care the monitor

Please clean the monitor frequently. Wipe the stain on the main unit with a dry cloth. If the main unit is heavily stained, moisten a soft cloth with water or detergent, squeeze it dry before wiping the stain. Then wipe dry the unit with a dry cloth.



- Please be careful so that no water should get into the main unit.

### Notes on care and storage

- Do not use benzine, thinner, or gasoline to clean the monitor.
- Do not wash or wet the wrist cuff.
- Do not store the monitor in the following places.
  - i) Where water may splash
  - ii) Under high temperature and humidity, strong ventilation, and direct sunshine, or dusty or saline places
  - iii) On slanted surfaces or place with vibration or shock
  - iv) In chemical storage places or where corrosive gas is generated
- When you are not using the monitor for 3 months or more, remove the batteries before storing.
- Store the monitor in the storage case provided.
- OMRON cannot guarantee the quality if you do not observe the above-mentioned notes or the correct use of monitor.



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## Specifications

Type	OMRON Automatic Wrist Blood Pressure Monitor
Model	R7
Display	Digital display
Measurement	Oscillometric method
Measurement Range	Pressure: 0 to 299 mmHg, Pulse rate: 40 to 180 /min.
Accuracy	Pressure: within +/-4 mmHg, Pulse rate: within +/-5% of reading
Inflation	Automatic inflation with pump
Deflation	Automatic rapid deflation
Pressure Detection	Electrostatic capacity semiconductor pressure sensor
Power supply	Two AAA (LR03) batteries
Battery Life	Approximately 300 times of measurement when using alkaline batteries
Operating Temperature and Humidity	+10° to +40°C, 30 to 85% RH
Storage temperature and Humidity	-20° to +60°C, 10 to 90 % RH
Measurable circumference of wrist	135 to 215 mm
Weight of Main Unit	Approximately 110 g (excluding batteries)
External Dimensions	68 (W) x 54 (H) x 37 (D) mm (excluding the wrist cuff)
Accessories	Two AAA alkaline batteries for trial use, storage case, Instruction Manual

• Specifications are subject to change without prior notice.

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