Instruction Manual

OMRON Automatic Blood Pressure Monitor With Intellisense

Model *T8*

- Thank you very much for purchasing the OMRON T8 Automatic Blood Pressure Monitor.
- Please read this Instruction Manual thoroughly before using the unit.
- Please retain this Instruction Manual for future reference.

Table of Contents

Notes on Safety

- The warning signs and sample icons shown here are listed for your safe and correct use of the unit, so as to prevent injuries and/or damages to properties.
- The icons and meanings are as follow.

Examples of signs

The ⃠ icon indicates prohibitions (what you should not do).
Matters involving actual prohibitions are indicated by text or pictures in or near ⃠. The left icon refers to “general prohibition”.

The ❗ icon indicates something that is compulsory (what must always be observed).
Matters involving actual compulsory actions are indicated by text or pictures in or near ❗.
The left icon refers to “general compulsion”.

⚠ Caution

Self-diagnosis of measured results and treatment are dangerous. Please follow the instructions of your doctor. Self-diagnosis may worsen the disease.	
Do not use the unit for infants or person who cannot express one’s intention. May cause accident or trouble.	
Do not use the unit for purpose other than measuring blood pressure. May cause accident or trouble.	
Do not use cellular phone near the unit. The main unit may operate erroneously.	
Do not disassemble, repair, or remodel the main unit or the arm cuff of the blood pressure monitor. Will cause the unit to function erroneously.	

Requests from OMRON

Used batteries may leak and damage the main unit. Please observe the following points.

- If you are not going to use the unit for a long period of time (approximately three months or more), remove the batteries.
- Replace worn batteries with new ones immediately.
- Do not use worn and new batteries together.
- Do not insert the batteries with their polarities in the wrong direction.

Do not use force to bend the arm cuff or the air tube.

When removing the air tube, do not use force to pull it.

Do not apply strong shock to or drop the main unit.

Do not inflate the arm cuff when it is not wrapped on the arm.

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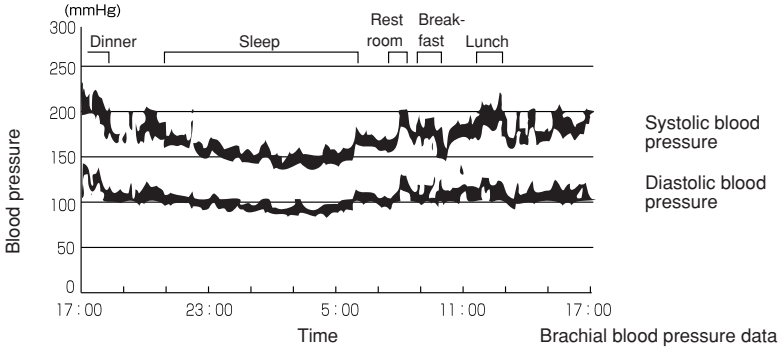
Correct Measurement of Blood Pressure

Blood pressure values measured at home have a tendency to be lower than those measured at the hospital/clinic.

Blood pressure values measured at home are sometimes 20 to 30 mmHg lower than those measured at the hospital/clinic. This is caused by the fact that you are nervous when you have your blood pressure measured at the hospital/clinic, but you feel relaxed at your home. It is important to know your normal blood pressure measured at home in stable state. Blood pressure may fluctuate by 30 to 50 mmHg without being noticed depending on whether you are nervous or relaxed.

Blood pressure fluctuates even if it is measured every ten seconds in the same day. (Direct measuring method)



Provided by Dr. Osamu Tochikubo of the Second Internal Medicine, the Faculty of Medicine at Yokohama Municipal University.

Factors that may cause the blood pressure to fluctuate

• Breathing • Exercise • Mental stress • Worries • Environmental and/or temperature change • Eating • Urination and bowel movement • Talking • Taking a bath • Drinking alcohol • Smoking, etc.

Let's Measure Blood Pressure Correctly.

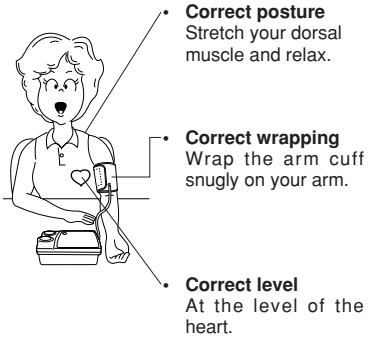
It is important to observe the correct method for accurate blood pressure measurement.

Please read the explanation from Pages 5 to 8 and measure your blood pressure according to the correct procedures.

(1) Relax.

(2) Wrap the arm cuff snugly at the correct position on your left arm.
(You can also use the right arm to measure.)

(3) If necessary raise your arm where the arm cuff is wrapped to the level of the heart, and relax your body.



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Correct Measurement of Blood Pressure / Features of the Product

Learn the tendency of your blood pressure

In order to know the tendency of your blood pressure, you must understand that the blood pressure fluctuates easily and it is important to measure at the same time everyday.
Do not worry about your blood pressure each time you measure.
Ask your doctor to evaluate your blood pressure data and use it for your health management.

Blood pressure fluctuates because of various factors.

In the following cases, normal values may differ depending on the fluctuation of blood pressure.

- After drinking alcohol, coffee, or black tea.
- After smoking.
- After taking a bath
- Within one hour after taking a meal
- Measurement with the wrong posture (with pressure at the abdomen)

When should you measure.

- After urination or bowel movement
- At rest or when relaxed after taking a deep breath
- Measure at the same time everyday with the correct posture.

Please note the following.

- You may measure blood pressure while lying down, but the blood pressure value may vary.
- Do not measure repeatedly for a long period of time.

Features of the Product .....

World's fastest measuring* home-use brachial (upper-arm) blood pressure monitor

* As of September 1999 by OMRON

Memory can store 14 measurements.

Large and clear display

Easy to use large switches and buttons

Fan-shaped arm cuff that is easy to wrap correctly

INTELLISENSE blood pressure monitor is a global brand name of blood pressure monitor equipped with bio-information sensing and high performance fuzzy logic technology, which are the key technologies of OMRON. With this excellent sensing technology, the monitor can achieve accurate measurement.

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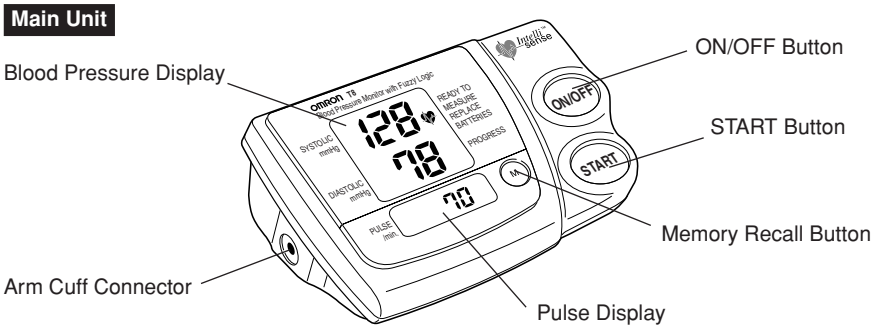
Names of the Parts / How to Insert Batteries

Names of the Parts

Main Unit

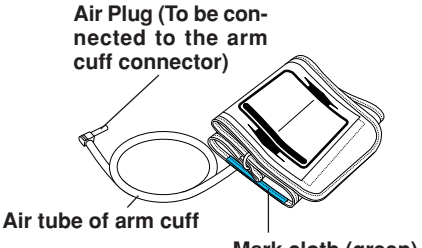


Acessories

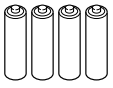
Standard Arm Cuff for Adult

For arm circumferences of 22 to 32 cm (at the center of brachium)

* The arm cuff is a consumable.
  If air starts to leak, please replace with a new arm cuff. (purchase as option)
* The optional arm cuff does not have an air plug. Therefore, do not discard the air plug. Retain for use with the new arm cuff.

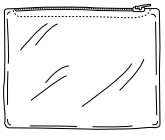


Batteries



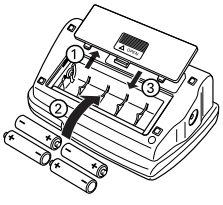
Four R6 (AA) manganese batteries

Storage bag



How to Insert Batteries .....

① Remove battery cover in the direction of the arrow.
② Insert four AA batteries with the polarities in the correct direction.
③ Slide the battery cover to close.



Battery life and replacement:

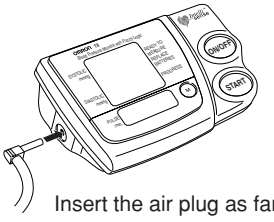
With the use of four R6 (AA) batteries, you can measure approximately 300 times at room temperature of 22°C and inflating to 170 mmHg twice a day.
The attached batteries are for monitoring use only and may not last for 300 measurements.
If only the battery replacement mark ⌧ flashes, replace all four batteries with new ones of the same type. If worn batteries are left in the unit, the battery may leak and damage the unit.

How to Apply the Arm Cuff

How to Apply the Arm Cuff

As a rule, the arm cuff must be wrapped around the arm directly touching the skin, but blood pressure can still be measured practically over light underwear. If you are wearing a thick sweater, do not roll up the sleeve. Instead take off the sweater, then apply the arm cuff.

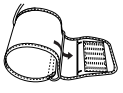
1 Insert the air plug of the arm cuff to the arm cuff connector of the main unit.



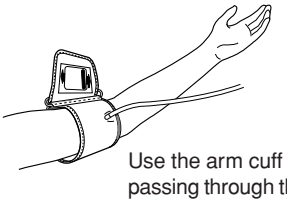
Insert the air plug as far as it goes.

2 Unroll the arm cuff to make a cylindrical shape.

If the arm cuff comes off from the metal ring, pass the arm cuff through the metal ring as shown in the Figure below.



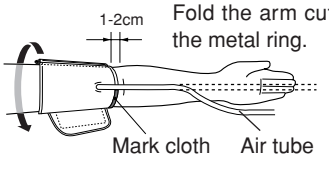
3 Put the left arm through the arm cuff.
Put the arm cuff by placing the air tube on the same side of the palm of the hand.



Use the arm cuff with one end passing through the metal ring.

* Place the air tube in line with your middle finger.

4 Determine the position of the arm cuff.



Fold the arm cuff at the metal ring.

1. Turn the palm of your left hand upward.
2. Adjust the edge of the arm cuff 1 to 2 cm above the inside of the elbow joint of your left arm.

* Be careful not to cover the elbow joint with the arm cuff.

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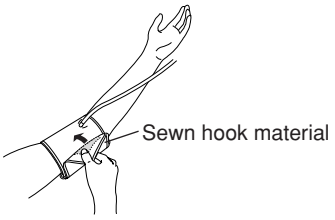
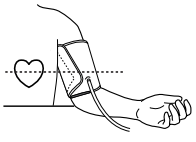
How to Wrap the Arm Cuff

5 Wrap the arm cuff.



Hold the portion of the arm cuff extending from the metal ring and pull to wrap the arm cuff.

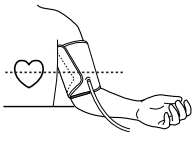
6 Snugly wrap the arm cuff without leaving any space between the arm cuff and the arm.



* If the arm cuff is not wrapped snugly, extra pressure is applied to the arm cuff, which will shorten the life of the arm cuff. In addition, you may feel numbness on your arm or your blood pressure may not be measured correctly.

* Even if the arm cuff is placed diagonally along the shape of the arm, it does not affect the measured value.

7 Lightly open the palm of your hand facing upward and place your elbow on the table or the stand so that the center of the arm cuff is at the level of the heart (nipple level).

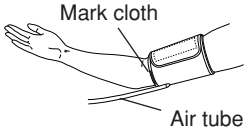


You can also measure blood pressure on your right arm.

Wrap the arm cuff as shown in the Figure.

① Place the air tube below the elbow.

② Place the mark cloth inside the elbow joint of your right arm.

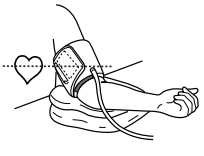


Correct measuring posture

Sit on a chair comfortably and relax. It is a good idea to take deep breath of five to six times before starting to measure. When measuring blood pressure, lightly bend your elbow without floating the elbow above the table or the stand.

How to adjust the height

Watch out for the height of the table or the chair. If the arm cuff is below the level of the heart (nipple level), adjust the height by using a pillow or a cushion.



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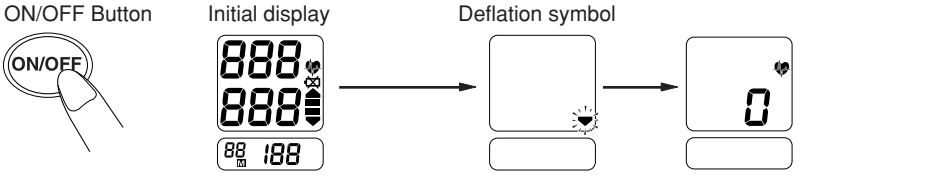
How to Measure Blood Pressure

How to Measure Blood Pressure

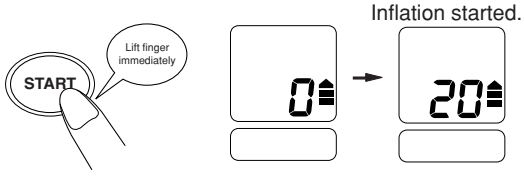
1 Wrap the arm cuff on the arm and turn on the power. (Refer to Pages 5 and 6.)



All displays are turned on to confirm the display, including the ⌧ mark. Battery replacement is not necessary.

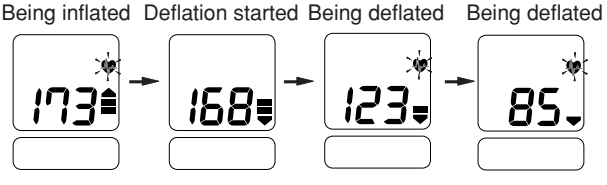
Display of ♥ mark means preparation is complete.

2 Push the Start Button. Lift finger immediately (within 3 seconds).



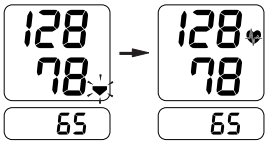
Display of measurement process.
A ▮ mark indicates the measurement process.
When the Start Button is pushed, a ▮ mark flashes.

3 Start the measurement.



Display of measurement process.
A ▮ mark indicates the measurement process. During inflation, a ▮ mark turns on. During deflation, a ▮ mark turns on and each mark turns off with the progress of approximately every 1/3 of the process.

4 Measurement finishes and the measured results are displayed.



Display of measurement process.
When the measurement finishes, the ♥ mark turns off and a ▼ mark flashes. The air in the arm cuff is deflated and the measured values and pulse rate are displayed simultaneously.
When a ♥ mark is displayed, the next measurement can be started.

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How to Measure Blood Pressure/ How to Use the Memory Function

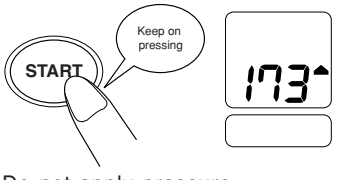
5 Turn off the power.

* Even if you forget to press the ON/OFF Button, power will turn off automatically in approximately 5 minutes.
* This monitor can be stored with the air plug. Do not apply force on the air tube when storing the unit.

For measurement with manual inflation

When the systolic value is expected to exceed 220 mmHg or when an arm cuff for slender arm (option) is used, proper inflation may not be obtained by automatic inflation.

Measure with manual inflation by continuously pressing the Start Button until the value reaches approximately 30 to 40 mmHg higher than your expected systolic pressure.



* Do not apply pressure more than necessary.

Display of measurement process
A ⇕ mark indicates the measurement process.
If you keep on pressing the Start Button, a ▲ mark flashes.

<For automatic re-inflation>

If the monitor determines insufficient inflation at the start of the measurement, the arm cuff may automatically re-inflate by approximately 30 mmHg.

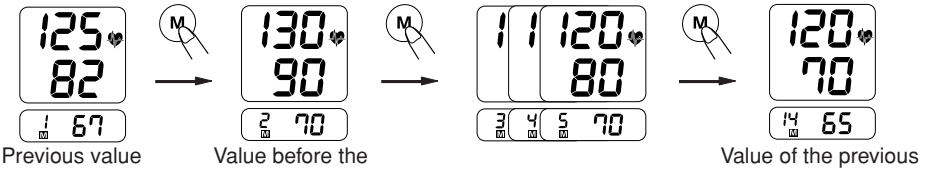
* Automatic re-inflation is conducted once only.

<If you want to stop the measurement>

Push the ON/OFF Button. Inflation will stop, followed by fast deflation, then the power will turn off.

How to Use the Memory Function

This monitor can store fourteen measurement values.
Push the Ⓜ Button while a ♥ mark is displayed.

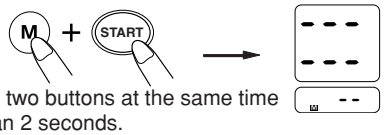


Previous value — Value before the previous measurement — Value of the previous fourteenth measurement

- Maximum of fourteen stored measurement values can be recalled.
- To store the fifteenth measurements and thereafter, the values from the earliest measurement will be deleted.

* **<If you want to delete all the stored data>**
You can delete all the stored data while the ♥ mark is displayed.

Display of memory deletion



Press these two buttons at the same time for more than 2 seconds.

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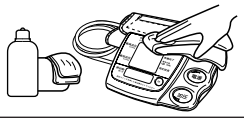
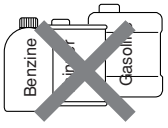
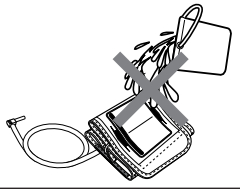
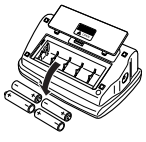
How to Maintain and Store the Unit

How to Maintain

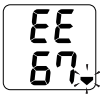
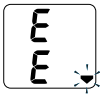
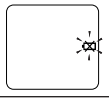
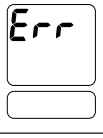
Wipe the unit well with a piece of cloth moistened with water or detergent, then wipe dry. 	Do not use benzine, thinner, or gasoline. 	Do not wash or wet the arm cuff. 

How to Store the Unit

Do not store the unit under direct sunshine, high temperature or moisture, or in places with dust and/or corrosive gas. 	If you are not going to use the unit for a long period of time, remove the batteries before storing. 

Error Indicators

If the measurement is not done correctly, the following error will be displayed.
Measure your blood pressure again with the correct method.

Error mark	Cause	Measures
	Insufficient inflation	After confirming the ♥ mark, measure again by pressing the Start Button without moving your arm or body. If an "EE" mark is displayed again, keep pressing the Start Button to inflate to a value approximately 30 to 40 mmHg higher than the expected systolic value.
	You moved your arm or body, or talked during the measurement.	After confirming the ♥ mark, push the Start Button and measure again without moving your arm or body.
	You kept on pressing the Start Button and the arm cuff was inflated to more than 300 mmHg.	
	The batteries are worn out.	Replace all four batteries with new ones. (Refer to Page 4.)
	Trouble caused by abnormal memory function.	Please contact the store where you have purchased this unit or the nearest OMRON dealer.

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Troubleshooting

If you have trouble while using the unit, please check the following points first.

When the following occurs	What to inspect	How to correct
Nothing is displayed when you push the ON/OFF Button.	Are the batteries worn out?	Replace batteries with new ones. (Refer to Page 4.)
	Are the polarities of batteries placed wrongly?	Insert batteries in the correct direction. (Refer to Page 4.)
The arm cuff cannot be inflated.	Is the air plug connected to the main unit correctly.	Connect the air plug to the main unit correctly. (Refer to Page 5.)
	Is the arm cuff leaking air?	Please replace with new arm cuff (sold as an option). The new arm cuff is not equipped with an air plug. Retain the old air plug for use with the new arm cuff.
When I lift my finger from the Start Button, the arm cuff stops to inflate.	Are you pressing the Start Button for more than 3 seconds?	When you measure by the automatic inflation, lift your finger away from the Start Button within 3 seconds. (Refer to Page 7.)
An "EE" is displayed and measurement is impossible.	Is the air plug disconnected?	Insert the air plug to as far as it goes. (Refer to Page 5.)
	Did you moved your arm during inflation?	Do not move or talk after pressing the Start Button. (Refer to Page 7.)
An "E" is displayed and measurement is impossible. Or the measured blood pressure values are abnormally low (or high).	Is the arm cuff wrapped correctly?	Wrap the arm cuff correctly. (Refer to Pages 5 and 6.)
	Did you talked or moved your arm during measurement?	Do not move or talk. (Refer to Page 9.)
	Are you pressing your arm with a rolled up jacket?	Take off the jacket or thick clothing that is pressing on you and measure again. (Refer to Page 5.)
The arm cuff leaks in a short time.	Have you wrapped the arm cuff too loosely?	Wrap the arm cuff snugly. Unless you wrap the arm cuff snugly, an excess pressure is applied to the arm cuff and the life of arm cuff is shortened.
Other trouble	Press the ON/OFF Button again and start from the begining. Replace the batteries.	
Even if the monitor operates normally and the measurement is made correctly. • The values are indicated lower (or higher) than those measured at the hospital/clinic. • Blood pressure values vary each time you measure.	Refer to the Questions and Answers About Blood Pressure. (Refer to Page 13)	

* If correct measurement is impossible even after checking the above points, there may be some trouble.
* Consult at the store where you have purchased the unit or the nearest OMRON dealer.
* In some very rare cases, there may be error due to the physical condition of the person. In such cases, please consult your doctor.

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Specifications

<Specifications>

Name	OMRON Automatic Blood Pressure Monitor
Model	T8 Intellisense
Display	Digital display
Measurement	Oscillometric method
Measurement range	Pressure: 0 to 280 mmHg
	Pulse rate: 40 to 180 beats/min
Accuracy	Pressure: Within ±4 mmHg
	Pulse rate: Within ±5% of reading
Inflation	Automatic inflation method (fuzzy control)
Deflation	Active electronic control method
Air Release	Automatic rapid air release method
Pressure Detection	Electrostatic capacity type pressure sensor
Power supply	Four R6 (AA) batteries or optional AC adaptor
Battery life	Approximately 300 measurements, measured at room temperature of 22°C and inflated to 170 mmHg for twice a day
Operating Temperature/Humidity	+10°C to +40°C, 30% to 85% RH
Storage Temperature/Humidity	-20°C to +60°C, 10% to 95% RH
Weight of Main Unit	Approximately 530 g (excluding batteries)
External Dimensions	177 (W) x 72 (H) x 115 (D) mm
Arm Cuff	140 mm (W) x 480 mm (L) (Weight: Approx. 130 g)
	Length of air tube: 600 mm
Electric shock protection	Internal power supply unit, type B
Accessories	Arm cuff (Standard size), storage bag, four R6 (AA) batteries, Instruction Manual

* Please note that the specifications are subject to change without prior notice.

Options

Standard arm cuff for adult

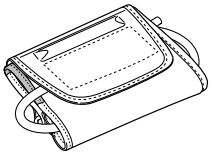
* For arm circumferences of 22 to 32 cm (at the center of brachium)

Arm cuff for slender arm

* For arm circumferences of 17 to 22 cm (at the center of brachium)

Arm cuff for large arm

* For arm circumferences of 32 to 38 cm (at the center of brachium)



The optional arm cuff is not equipped with an air plug. Please do not discard the air plug and retain for use with the new arm cuff.

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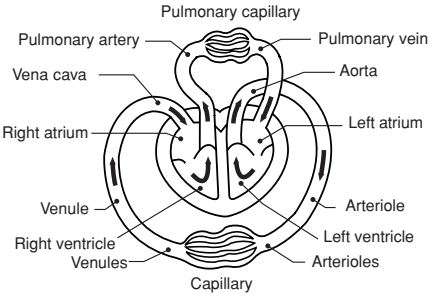
Information About Blood Pressure

What is Blood Pressure

A pump called the heart forces blood through the arteries by contracting and relaxing. The pressure that moves the blood is called blood pressure. Blood pressure fluctuates with the movement of the heart. When the heart contracts, the pressure rises (the systolic blood pressure) and when the heart relaxes, the blood pressure falls (the diastolic blood pressure).



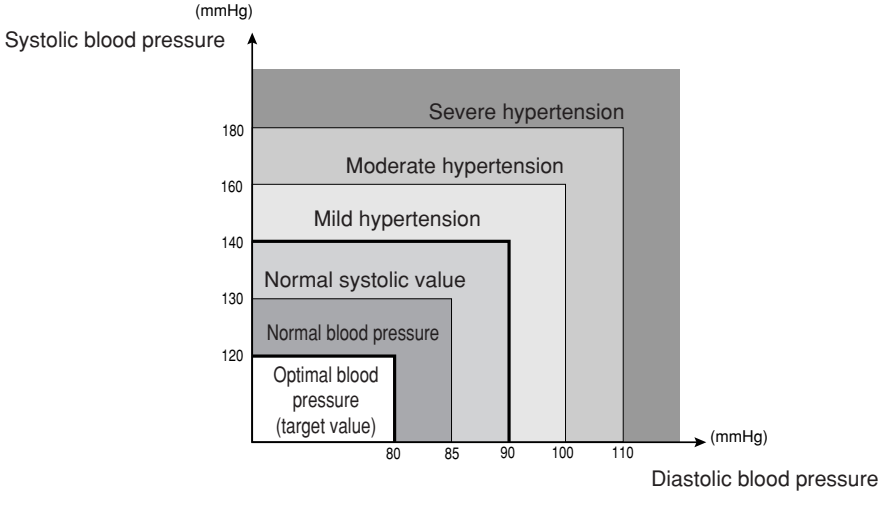
Health and Blood Pressure

Blood pressure increases dramatically from middle age onward. This is accompanied by a continuing aging of the blood vessels. Further due to obesity and lack of exercise, cholesterol (LDL) adheres to the vessels which lose their elasticity. With high blood pressure, hardening of the arteries (arteriosclerosis) accelerate and the body becomes susceptible to cerebral stroke, myocardial infarction, etc. This is why we need to know if our blood pressure is healthy or not. Blood pressure fluctuates constantly throughout the day and is an essential element in daily health control.

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 the Figure below.
(This classification is based on the blood pressure measured in a sitting position, in the outpatient department of hospitals.)

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



* According to the blood pressure classification by the WHO/ISH (revised in 1999)

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Questions and Answers About Blood Pressure

Q.1 I wonder why the blood pressure value I measured at home is lower than that measured at the hospital/ clinic.

A.1 The blood pressure values measured at home are sometimes lower than those measured at the hospital/clinic by 20 to 30 mmHg. This is caused by the fact that you are nervous when you have your blood pressure measured at the hospital/clinic, and relaxed when you measure at home. It is important to know the normal mean value measured at home.

Q.2 I wonder why the value I measured at home is higher than that measured at the hospital/clinic.

A.2 ① When the drug efficacy is lost
Those using the depressor may have higher blood pressure when the drug efficacy is lost.
② When the arm cuff is wrapped loosely. If the arm cuff is wrapped loosely, the pressure cannot be conveyed to arteries, and the blood pressure reading will tend to be higher. Be sure to wrap the arm cuff snugly.
③ When you measure with the wrong posture
Measuring postures such as stoop-shouldered, sitting with crossed-legs, or lowering the arm by resting on a low table cause higher blood pressure values because these postures result in abdominal pressure or the arm is positioned lower than the level of the heart.

Q.3 I feel pain or numbness from the pressure of the arm cuff when measuring blood pressure.

A.3 When measuring blood pressure, it is necessary to tighten the arm cuff until the arterial blood flow is stopped temporarily. Therefore you may feel temporary pain or numbness. However, since this kind of pain or numbness does not cause any trouble to your body, you do not need to worry.

Q.4 I wonder why my blood pressure value differs every time I measure.

A.4 ① Blood pressure fluctuates with the contraction of the heart. For example, the blood pressure of a person with a pulse rate of 70 a minute fluctuates about 100,800 times a day.
② Because blood pressure is always fluctuating, it is difficult to know the accurate blood pressure value from one measurement. Please try to measure two to three times. Usually, the blood pressure value in the first measurement is higher because of the tension or the preparation to start measurement. If you measure for the second time consecutively, you will be relaxed and the blood pressure value will usually be lower by 5 to 10 mmHg. (This tendency is observed more strongly in those with hypertension.)
If you measure consecutively, you should be aware that your hand may be congested with stagnant blood because the arm is pressed during measurement. If you measure before the congestion is cleared, you cannot get an accurate reading.
Raise your arm and hand high with the arm cuff on and repeat opening and closing the palm for fifteen times, then the congestion will be cleared and you can then measure accurately.
③ If the arm cuff is wrapped incorrectly (especially when the arm cuff is positioned on the elbow bone) or loose, you cannot measure blood pressure accurately.

Q.5 When is the best time to measure blood pressure ?

A.5 Please measure at the same time of the day such as after getting up in the morning, after using the rest room, or when you feel physically and mentally stable.
Those who are taking the depressor also need to take measurement two to three hours after taking the drug.

Q.6 Why is it important to manage blood pressure at home?

A.6 By recording the blood pressure values and the measuring conditions such as the measuring time, administration of depressors, or living state every day, you can know the fluctuation trend of your blood pressure, which helps to control your health. Furthermore, recording of daily blood pressure values will be helpful for diagnosis by your doctor.

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