

ForaCare Suisse AG

Blood Pressure Monitor and 2 in 1 Device FAQs







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Hypertension

Q1. What is Hypertension?

Hypertension is a condition when the blood pressure is higher than normal, which may cause serious health issues, such as cardiovascular diseases. There are two main types of high blood pressure.

Primary hypertension: Occurs naturally in adults, there's no identifiable cause of high blood pressure. This type of hypertension tends to develop gradually over the years.

Secondary hypertension: Some people develop high blood pressure caused by an underlying family condition or an unhealthy lifestyle. This type of hypertension tends to appear suddenly and causes higher blood pressure than primary hypertension.

Q2. What are systolic pressure, diastolic pressure, and pulse rate?

Blood pressure is the force of your blood moving through your blood vessels. There are mainly two types of pressure in blood measurements.

Systolic Pressure: The top number represents the maximum pressure your heart exerts while beating.

Diastolic Pressure: The bottom number represents the amount of pressure in your arteries between beats.

Pulse rate: Your heart rate and the number of times your heart beats per minute.

Q3. Which number is more important, Systolic or diastolic blood pressure?

Both readings are important in accurately diagnosing high blood pressure and providing the right treatment.

However, typically, more attention is given to systolic blood pressure (the top number) as it is a major risk factor for cardiovascular disease in people over 50. Normally, systolic blood pressure rises steadily with age due to the increasing stiffness of large

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arteries, long-term build-up of plaque, and an increased incidence of cardiac and vascular disease.

Q4. What are the recommended values for blood pressure?

Based on 2013 ESH-ESC Practice Guidelines for Management of Arterial Hypertension, hypertension generally is defined by high blood pressure readings:

- (1) Systolic Blood Pressure ≥ 140
- (2) Diastolic Blood Pressure ≥ 90

Below is an overview of blood pressure categorization.

Category	SBP		DBP
Optimal	<120	and	<80
Normal	120-129	and/or	80-84
High normal	130-139	and/or	85-89
Grade 1 hypertension	140-159	and/or	90-99
Grade 2 hypertension	160-179	and/or	100-109
Grade 3 hypertension	≥180	and/or	≥110
Isolated systolic hypertension	≥140	and	<90

The blood pressure (BP) category is defined by the highest BP level, whether systolic blood pressure (SBP) or diastolic blood pressure (DBP). Isolated systolic hypertension should be graded 1, 2 or 3 according to SBP values in the ranges indicated.

Source: The European Society of Hypertension and European Society of Cardiology Task Force Members. 2013 ESH-ESC Practice Guidelines for the Management of Arterial Hypertension. Journal of Hypertension 2013, 31:1925–1938.

The term 'white-coat' hypertension refers to a condition in which blood pressure is elevated in the clinical office than when in other settings. This may result in an inaccurate diagnosis of hypertension.

Therefore, it is important to regularly self-measure and manage blood pressure at home, and present readings to your healthcare provider for accurate diagnosis and treatment.



Q5. Is it normal for my blood pressure to vary?

Yes, it is normal for people's blood pressure to vary throughout the day and night. Elements that may influence blood pressure readings include stress levels, food or drink intake, recent physical activities, the measuring technique, and time of day.

An average taken over multiple readings is more relevant than a single measurement. Therefore, it is important to measure your blood pressure regularly to derive the overall trend for better management.

Q6. How can I better manage my blood pressure?

Better blood pressure management is not as complicated as it may seem. Every bit counts in the accumulated effort to improve blood pressure measurement. Below are some avenues where you can immediately improve.

Balanced Diet: Small adjustments toward a balanced diet featuring low-fat and low-sodium foods goes a long way to reducing the stress on the heart. Potassium and antioxidants can reduce multiple risk factors for heart disease.

Exercise: Structuring regular exercise into your routine contributes to a stronger heart. The intensity of exercise should be discussed with your healthcare provider.

Eliminating Adverse Habits: Minimize your alcohol and cigarette intake.

Remember to De-stress: Always remember to de-stress. Engaging in your hobbies is a great way to beat stress and relax.

Regular Self-Monitoring: Regular self-monitoring of blood pressure at home helps establish the trend and how well your treatment is going.



General Blood Pressure Meter Questions

Q7. What are the general features of FORA's blood pressure monitor?









Name	DUO ultima	DUO ultima Pro	ACTIVE plus	ACTIVE WIRELESS plus
Model No.	FORA D40 a/b/g	FORA D40 Pro	FORA P30 Plus	FORA P30 Plus BT
2 in 1 Technology (BP + BG)	✓	✓		
IRB Technology	✓	✓	✓	√
AVG Technology	✓	✓	✓	√
Auscultatory Option		✓	✓	✓
Memory Capacity	864	864	60	200
User Name	1	1	1	1
Date/Time Indication	✓	✓	✓	✓
Large Display & Operation Button	✓	✓	✓	✓
All-in-one Button Operation				
Talking Guidance	✓			
Data Connection	USB (D40 a/b/g) BT (D40b)/ GPRS (D40g)	USB	N/A	Bluetooth
Power Source	6V AA×4/ 3.7V Li-lon×4 (D40g) DC-6V Power Adaptor	6V AA×4 DC-6V Power Adaptor	6V AA×4 DC-6V Power Adaptor	6V AA×4 DC-6V Power Adaptor
Clinical Validated	✓	✓	✓	✓
Strip Enzyme (For Blood Glucose)	GOD	GOD		
No Coding Required (For Blood Glucose)	✓	✓		
Ketone Warning (For Blood Glucose)	✓	✓		
Other features	7, 14, 21, 28, 60, 90 Day Average	7, 14, 21, 28, 60, 90 Day Average		
Software Support	Healthcare TeleHealth	Healthcare TeleHealth	N/A	iFORA BP IFORA MP TeleHealth







Name	Diamond CUFF BP	Basic/ Basic Plus
Model No.	P80	P31a/ b
2 in 1 Technology (BP + BG)		
IRB Technology	✓	✓
AVG Technology	✓	
Auscultatory Option		
Memory Capacity	200	1/ 100
User Name	1	1
Date/Time Indication	✓	✓
Large Display & Operation Button		✓
All-in-one Button Operation	✓	
Talking Guidance		
Data Connection	Bluetooth	N/A
Power Source	6V AA×4	6V A×1
Clinical Validated	✓	✓
Strip Enzyme (For Blood Glucose)		
No Coding Required (For Blood Glucose)		
Ketone Warning (For Blood Glucose)		
Other features	iFORA BP APP	
Software Support	iFORA BP iFORA MP Healthcare TeleHealth	



Q8. What does the clinical validation on FORA's BPMs mean?

The clinical validation is a testament to the accuracy of FORA's blood pressure monitors. To ensure its accuracy, FORA's blood pressure monitors have passed the ESH 2010 validation (European Society of Hypertension 2010).

The ESH international protocol compares results of the FORA's device with those of a mercury manometer, which is widely recognized as the gold standard for blood pressure measurement. The test should follow the specific testing requirement and be processed and analyzed to guarantee the medical reliability of the blood pressure monitor. The FORA blood pressure monitor is accurate in static pressure within \pm 3 mmHg (or \pm 2 % of reading) and \pm 4% in pulse rate readings.

Q9. Are there differences between taking a blood pressure reading on the right arm vs. the left arm?

Blood pressure measurement values vary from the left arm to the right arm. The average variance is generally within 10 mmHg (millimeters of mercury) for most individuals. We suggest you use FORA's blood pressure monitors on the left arm as they are validated through clinical studies using the left arm. You should talk to your doctor before using the right arm to take a measurement.

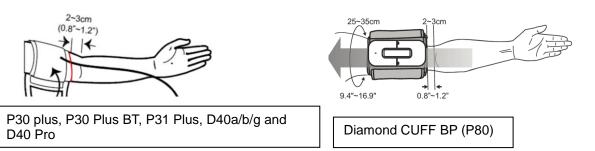


Q10. What are the things I need to check for before measuring my blood pressure to avoid varied readings?

- (1) Avoid caffeine, tea, alcohol, and tobacco for at least 30 minutes before the measurement.
- (2) Wait 30 minutes after exercising or bathing before the measurement.
- (3) Sit or lie down for at least 10 minutes before the measurement.
- (4) Take a 5-10-minute break between measurements. This break can be longer (the rest time should be more than 30 mins after doing exercises) if necessary, depending on your physical condition.
- (5) Blood pressure varies between each arm. Always measure your blood pressure on the same arm.
- (6) The accurate size and way to fit the cuff.
- (7) The accurate measuring position.

Q11. What is the accurate way to fit the cuff?

- A. Stretch your left (right) arm in front of you with your palm facing up. Slide and place the cuff onto your arm with the air tube and artery mark region (in red) toward the lower arm.
- B. Wrap and tighten the cuff above your elbow. The red line on the edge of the cuff should be approximately 0.8 to 1.2 inches (2 to 3 cm) above your elbow. Align the tube over the main arteries on the inside.



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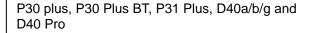


- C. Leave a little free space between the arm and the cuff. You should be able to fit 2 fingers between them.
- D. Press the hook material firmly against the pile material. The top and bottom edges of the cuff should be tightened evenly around your upper arm.

Q12. What is the accurate position to measure my blood pressure?

- (1) Sit down for at least 10 minutes before the measurement.
- (2) Place your elbow on a flat surface. Relax your hand with the palm facing up.
- (3) Makes sure the cuff is positioned around the same height as the location of your heart (15 cm lower than the heart may result in a higher reading of around 10 mmHg).







Diamond CUFF BP (P80)

(4) Press the Start button. The device will turn on and the cuff will begin to inflate automatically. Remain still and do not talk or move during the measurement.



Q13. What is Auscultatory Mode? Which FORA models can use it? Where we can get directions on using Auscultatory Mode?

- (1) This is a manual method that involves applying a stethoscope to the arm and listening to the pulse while the air is slowly let out from the cuff (the Korotkoff method). Only well-trained persons may use this mode to measure blood pressure manually.
- (2) The FORA blood pressure monitors that are equipped with Auscultatory mode are: DUO ultimate Pro (D40 Pro), Active plus (P30 Plus), and ACTIVE WIRELESS plus (P30 Plus BT).
- (3) Please refer to the owner's manual for each BPM. There are directions for Auscultatory Mode in the Measuring Blood Pressure section.

Q14. What is Oscillometric mode?

The Oscillometric method of measuring blood pressure utilizes an automated cuff to yield valid estimates of mean pressure by measuring the vibration of your blood traveling through your arteries and converting the movement into digital readings. All of FORA's digital blood pressure monitors apply the Oscillometric measurement method by default.

Q15. What are the benefits of having both Auscultatory and Oscillometric measurement modes?

FORA's blood pressure monitor is measured non-invasively at the arm based on the Oscillometric method. However, for people with common arrhythmias, such as atrial or ventricular premature beats or atrial fibrillation, Oscillometric techniques may have difficulty getting an accurate reading.



For people with such conditions, using the Auscultatory mode is recommended. The Auscultatory mode empowers doctors to measure blood pressure without having necessarily to rely on automated readings.

Q16. What is the warranty for my FORA Blood Pressure Monitor?

The warranty periods of FORA's blood pressure monitors are generally 3 years, based on the life expectancy of the unit. Cuffs and other accessories are generally 1 year. Please refer to the user guide of your device for specific information.

Connectivity and Data Transfer

Q17. Can I transfer data from my FORA Blood Pressure Monitor?

Certain FORA Blood Pressure Monitor models come with Bluetooth connectivity and are supported by the iFORA BP mobile app. You can pair up your device with your smartphone and sync your blood pressure readings to the iFORA BP app. For whether your device has Bluetooth connectivity, please check your user manual.

Q18. How do I pair my FORA BPMs with the iFORA BP app?

The process has been designed to be intuitive and easy. As each model has its pairing method steps, please refer to your user manual for the exact steps.

Spare Parts - Cuff

Q19. Does the FORA Blood Pressure Monitor come with a cuff?

All FORA Blood Pressure Monitors come with a wide-range cuff that supports 24 ~ 43 cm (9.4~16.9 inches), fitting most adults.



Q20. What are the cuff sizes?

FORA's blood pressure monitors utilize a wide-range cuff that supports $24 \sim 43$ cm $(9.4\sim16.9 \text{ inches})$, fitting most adults. Please contact us if you require a smaller size: $19\sim25$ cm $(7.5\sim9.8 \text{ inches})$.

Q21. Does the size of the cuff matter, and how do I determine the cuff size that I need?

- (1) To get the correct measurement values, the appropriate size cuff for your arm is very important. If you use the wrong size, you will get inaccurate reading values and even error messages from your blood pressure monitor.
- (2) You can use a cloth tape to measure the circumference of your upper arm between your elbow and shoulder.

Q22. What happens when the cuff is out of life expectancy?

Cuffs are consumables. If the cuff is out of the life expectancy or overused, there may be air leakage in the rubber part between the bladder and the tube. The pressure monitor will display an Error-1 message on the screen. Please replace a new cuff to solve this problem.

Q23. What is the average life expectancy of a monitor cuff?

The general average life expectancy is 10,000 usages. This number may be affected by your storage conditions as well.

Cleaning and Storage

Q24. How do I clean my blood pressure monitor?

(1) To clean the device exterior, wipe it with a cloth moistened with tap water or a mild cleaning agent, then dry the device with a soft dry cloth. Do NOT flush with water.

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- (2) Do NOT use organic solvents to clean the device.
- (3) Do NOT wash or iron the pressure cuff.

Q25. How do I store my blood pressure monitor?

- (1) We highly recommend removing the batteries from the blood pressure monitor if you are not going to use the device for an extended period. Batteries may leak chemicals and damage your monitor.
- (2) Always store or transport the device in its original storage case.
- (3) Avoid dropping and heavy impacts.
- (4) Avoid direct sunlight and high humidity. The suitable storage and operation conditions are as the following:

ВРМ	Storage Conditions	Operation Conditions
P30 plus	Tomporoture: 20°C to 60°C (4°E to 140°E)	Temperature:10°C to 40°C (50°F to 104°F)
P30 Plus BT	Temperature:-20°C to 60°C (-4°F to 140°F)	Temperature. 10 C to 40 C (50 F to 104 F)
P31 Plus	Humidity: below 95% RH	Humidity: below 85% RH
Diamond	Temperature: -25°C ~ 70°C (-13°F to 158°F)	Temperature: 5°C ~ 40°C (41°F to 104°F)
CUFF BP	Humidity: 10% ~ 95%	Humidity: 15% ~ 93%
D40a/b/g	Temperature:-20°C to 60°C (-4°F to 140°F)	Temperature:10°C to 40°C (50°F to 104°F)
D-104/5/g	Humidity:5 - 95% RH	Humidity: below 85% RH
D40 Pro	Temperature:-20°C to 60°C (-4°F to 140°F)	Temperature:10°C to 40°C (50°F to 104°F)
	Humidity: 5 - 95% RH	Humidity: below 85% RH

Common troubleshooting

Q26. My blood pressure results appear to be abnormal, what should I do?

If you feel your blood pressure level is abnormal, please consult your doctor immediately for a proper diagnosis.



Q27. What are the common measuring error reasons?

Symptom	Cause	Solution
Error 1 message	 Inflation or pressure error: Cuff leakage. Motor line malfunctions or ruptures. 	Replace the cuff. Contact the local service member to repair the device.
Error b message	The battery is too low.	Replace the batteries.
Error E message	The IC inside the device could be damaged for unknown reasons.	Contact the local service member to repair the device.
Nothing is displayed after pressing the start button.	 Batteries exhausted or incorrectly installed. Device malfunction (PCB board burned). 	 Replace or correctly install the batteries. Contact the local service member to repair the device.
The pressure result is higher/lower than the user's average measurement.	 The cuff may not fit properly or the measuring position is wrong. There is insufficient rest before taking the measurement. 	 Please follow the manual to adjust your cuff and measuring position. Please rest at least 5-10 mins (30 mins after doing exercises).
	3. Device malfunction (the air tube broken inside the BPM).4. Arm unsupported while sitting or standing	3. Contact the local service member to repair the device.4. Follow the instruction to sit and put your measurement arm on the supported table.



The heart rate is	. Movement during the	1. Do not move and repeat the
higher/ lower than	measurement.	measurement.
the user's average rate.	2. The measurement is taken just after doing exercises.3. Device malfunction.	2. Rest at least 30 minutes before repeating the measurement.3. Contact the local service member to repair the device.

Please refer to the owner's manual to check the detailed error codes and error symptoms for different types of blood pressure monitors.