

View this article online at: patient.in/heart-health/home-and-ambulatory-blood-pressure-recording

Home and ambulatory blood pressure recording

Blood pressure recording outside of the doctor's surgery is recommended in most people who are suspected of having high blood pressure. This is because readings taken while people are going about their daily lives are more accurate than those taken in a doctor's surgery. They may also be used to give the doctor information about how well a blood pressure medicine is working.

The ideal method is ambulatory blood pressure monitoring, which uses a portable recorder. If this is inconvenient or uncomfortable, readings can be taken using a traditional blood pressure machine at home.

Why is it important for you to monitor your blood pressure?

Some people find it a bit stressful to have their blood pressure checked in a doctor's surgery. This can then cause their blood pressure to go up in that situation. This is known as white coat syndrome. If your blood pressure is raised, the doctor will not know if this is because of the stress of being in the surgery (white coat high blood pressure) or because your blood pressure is usually and persistently high, even when relaxed at home. A persistently high blood pressure is known as hypertension. [See the separate leaflet called High Blood Pressure \(Hypertension\)](#). This leaflet is just about ways of recording your blood pressure.

The unit for measuring blood pressure is known as millimetres of mercury, or mm Hg for short. The National Institute for Health and Care Excellence (NICE) recommends that if your blood pressure is found to be 140/90 mm Hg or above, you should check it at home and during your normal day-to-day activities. The best way to do this is using an ambulatory blood pressure monitor which can be worn for 24 hours a day. But, if you find this uncomfortable or inconvenient, a home blood pressure monitor can be used.

Ambulatory blood pressure monitoring is also sometimes used to check how well medicine used to treat hypertension is working.

Ambulatory blood pressure monitoring

The ambulatory blood pressure monitor checks your blood pressure at frequent intervals throughout one day and one night. It consists of a cuff which wraps around your arm. The cuff is attached to a small electric recording device on a belt or strap worn on your body. The doctor or nurse who supplies the device should make sure the cuff is the right size for your arm. You should keep the device safe and dry and not have a bath or shower whilst wearing it. From time to time you will feel a tightening sensation in your arm. This is whilst the cuff is inflating to take your blood pressure. It will not last very long and most people will not be worried by it. Try not to move your arm whilst the cuff is inflating. If the device cannot record your blood pressure it will try to repeat the process up to three times. The machine is usually set to record twice an hour whilst you are awake and hourly at night.

The ambulatory monitor can be worn whilst you go about your everyday activities. So, it will give an accurate impression about how your blood pressure behaves under normal circumstances. The doctor will look at multiple readings spread throughout the day. (The minimum number is 14 but it may be many more than that.) The results will help them decide whether or not you have high blood pressure (hypertension).

Home blood pressure monitoring

This is an alternative to ambulatory blood pressure monitoring. The process for doing this will be exactly the same as that used by the doctor or nurse in the surgery. You will be given a blood pressure monitor to use at home. Wrap the cuff around your arm just above the level of the elbow. (Check the instructions with the monitor to make sure the tubing is in the right position.) You should be seated comfortably with your arm supported (for example, on a table) at the level of your heart. Press the button to inflate the machine and then make a note of the reading.

You should measure your blood pressure twice a day, once in the morning and once in the evening. On each occasion you should take two readings, one minute apart. You should take readings for at least four days and ideally for seven days. The doctor should use all the readings, apart from those taken on the first day, to calculate your average blood pressure.

What your readings mean

- If your blood pressure is below 140/90 mm Hg at the surgery, it will be considered normal.
 - If your blood pressure is above 140/90 mm Hg at the surgery but your average ambulatory or home reading is below 135/85 mm Hg, it will be considered normal.
 - If your blood pressure at the surgery is 140/90 mm Hg or above and your average ambulatory or home reading is 135/85 mm Hg or higher, it will be considered high.
-

Further reading

- [Hermida RC, Smolensky MH, Ayala DE, et al](#); 2013 ambulatory blood pressure monitoring recommendations for the diagnosis of adult hypertension, assessment of cardiovascular and other hypertension-associated risk, and attainment of therapeutic goals. *Chronobiol Int.* 2013 Apr;30(3):355-410. doi: 10.3109/07420528.2013.750490.
- [Stevens SL, Wood S, Koshiaris C, et al](#); Blood pressure variability and cardiovascular disease: systematic review and meta-analysis. *BMJ.* 2016 Aug 9;354:i4098. doi: 10.1136/bmj.i4098.

- [Hypertension in adults: diagnosis and management](#); NICE (August 2019 – last updated November 2023)
- [Arakawa T](#); Recent Research and Developing Trends of Wearable Sensors for Detecting Blood Pressure. *Sensors (Basel)*. 2018 Aug 23;18(9). pii: s18092772. doi: 10.3390/s18092772.

Disclaimer: This article is for information only and should not be used for the diagnosis or treatment of medical conditions. Egton Medical Information Systems Limited has used all reasonable care in compiling the information but makes no warranty as to its accuracy. Consult a doctor or other healthcare professional for diagnosis and treatment of medical conditions. For details see our [conditions](#).

| | | |
|-------------------------------------|---|---------------------------|
| Authored by: | Peer Reviewed by: Dr Hayley Willacy, FRCGP | |
| Originally Published: 19/11/2023 | Next review date: 26/05/2020 | Document ID: doc_13823 |

View this article online at: patient.in/heart-health/home-and-ambulatory-blood-pressure-recording

Discuss Home and ambulatory blood pressure recording and find more trusted resources at [Patient](#).



To find out more visit www.patientaccess.com
or download the app



Follow us

