Why should I measure at home?

Many people measure their own blood pressure because it helps them to feel in control of their high blood pressure and health, and involves them in making decisions about their treatment. Measuring blood pressure at home can also help your doctor or nurse to find out the following:

- **What your readings are like away from the surgery or clinic.** Some people's blood pressure is only raised when taken in a clinical or medical environment, such as the doctor's surgery. This can be caused by feeling anxious, or by being in a busy or noisy environment. This can affect readings by as much as 20-30mmHg (systolic readings)

- **To see how well your treatment is working and how you respond to medications**

- **To be sure that you have high blood pressure.** To diagnose high blood pressure your doctor needs more than one reading. Home measurements can be a good way of finding out what your blood pressure is like when you are more relaxed and going about your daily life.

Taking readings at home is not for everyone as it may make some people more anxious. If this happens, talk to your doctor and see if you are taking the readings too frequently or if you should stop doing so.

What machine should I use?

Most people who measure at home use an automatic machine. These are simple to use and range in price from about £50 to £150. Automatic machines inflate and deflate the cuff for you. Many chemists and pharmacies sell blood pressure monitors, or you can buy directly from manufacturers and suppliers.

Having a consistently accurate reading that you can trust is important as inaccurate readings can lead to misdiagnosis and can mean the difference between having treatment or not.

Here are some guidelines:

- **Choose a machine that measures from the top of the arm, rather than the wrist or the finger**

- **Choose an accurate monitor.** The British Hypertension Society (BHS) has compiled a list of accurate monitors as a guide for home users. Contact the Blood Pressure Association (BPA) for an up-to-date list or check the information section of the BPA web site.

- **Use the right size of cuff.** Some people find a standard cuff is too small or too large for them and this may give inaccurate readings. Inside the cuff is a bladder, which is the part of the cuff that inflates and deflates. This bladder should cover at least two thirds of the distance around your arm and should not overlap. If the bladder is too small the reading may be falsely high and if it is too big the reading may be falsely low. If you have any doubts, ask your doctor or nurse which cuff size you should use.

- **Have your blood pressure monitor re-calibrated** at least once every two years to check that it is still accurate. You can do this by sending it back to the manufacturer (there will be a fee).

It is useful to take readings at the same time of day so that you are consistent and are comparing ‘like with like’. Some people take blood pressure readings first thing in the morning and then again before they go to bed.

How do I take a reading?

- Wear a short sleeved T-shirt or loose fitting clothing so that the sleeve can be pushed up comfortably.

- Always use the same arm for readings, preferably the same arm on which your measurements are taken at your surgery or clinic.

- Before taking readings rest for five minutes. You should be sitting down, preferably at a desk or a table, in a quiet place, with your arm resting on a firm surface and your feet flat on the floor. It is very important that your arm is supported and that the cuff around the arm is at the same level as your heart. You may need to support your arm with a cushion to make sure it is at the correct height. Ensure that the arm is totally relaxed and not tensed.

When and how often should I take readings?

When and how often you take readings will depend on your blood pressure. When you first start to use your monitor at home, measure your blood pressure for a one week period, morning and evening (14 readings is enough to give your doctor an accurate average). Discount the first day’s measurements as they may not be accurate because you are unfamiliar with the monitor. You can then take readings less often - your doctor or nurse will be able to advise you.

If you change any medication, you may need to monitor your blood pressure more often for a period of time, though a change in treatment may take some weeks to have an effect. Your doctor or nurse can advise on this.

- Put the cuff on following the instructions that come with your monitor.
When the reading is being taken keep still and silent. Moving and talking can affect the reading.

Take two or three readings, each about two minutes apart, and then work out the average. A few people find that when they take two or more readings the first is always highest and then the readings become lower each time they take them. If this is the case keep taking readings until they level out and stop falling and then use this as your reading.

Record the reading either in the memory of the machine or on computer or paper. Make sure you keep accurate records – some people are tempted to round the numbers up or down and this could affect the treatment you receive.

There are several factors that can make your blood pressure rise temporarily: exercise, alcohol, illness, caffeine, tobacco, a full bladder, anxiety, excitement and pain are just a few. When you take readings make sure your bladder is empty and you have not just eaten a meal. You should also avoid taking measurements within 30 minutes of drinking caffeine or smoking.

If you get an ‘error’ message when you have taken a reading check the following:

- If you are using a machine that needs you to set the systolic level, try setting it higher than you did for the previous reading, for example increase it from 170 to 200.
- Refer to the manufacturer’s instruction booklet to check that you have the cuff in the right place and that you are taking the measurement correctly.

**What do your readings mean?**

The aim of treatment for high blood pressure is to reduce it, when measured by your doctor or nurse, to below 140/85 mmHg. As home measurements are often lower than those taken at a clinic or surgery you are ideally aiming to get your readings below 140/85 mmHg and preferably below 130/80 mmHg. This can be hard to achieve for some people. If you have diabetes or heart disease, or have had a stroke your doctor may set you a lower target.

As blood pressure varies in everybody by quite a large amount, you may get unexpected ‘one off’ high readings, so always repeat the measurement again at another time. If you find that on repeated measurement your blood pressure over a period of time is higher than usual, go and see your doctor or nurse. The important readings are the averages over a period of time and not individual readings.

Agree with your doctor or nurse what target you are aiming to reach, how often you will be taking readings and when to go back for an appointment. You can use the chart below to keep a record.

### Where to get more information

The BPA has a range of information booklets and fact sheets that cover areas such as medicines, diet, lifestyle changes and other risk factors for heart disease and stroke. The BPA has an up-to-date list of accurate blood pressure monitors.

### References

**Article:** Blood Pressure Measurement: recommendations of the British Hypertension Society 3rd Edition  
**Publication:** British Medical Journal Publishing Group 1997  
**Authors:** E O’Brien, J Petrie, W A Littler and others

**Article:** European Society of Hypertension recommendations for conventional, ambulatory and home blood pressure measurement  
**Publication:** Journal of Hypertension Volume 21, May 2003, Pages 821-848  
**Authors:** E O’Brien, R Asmar, L Beilin and others

**Article:** The role of home blood pressure measurement in managing hypertension; an evidence based review  
**Publication:** Journal of Human Hypertension, Volume 16, 2002, Pages 469-472  
**Authors:** Rickerby J

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### Table: How often to measure

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<tr>
<th>Date</th>
<th>How often to measure (days per week)</th>
<th>When to measure (time of day)</th>
<th>Your target blood pressure</th>
<th>Above this level go back and see your doctor/nurse</th>
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If you are monitoring your blood pressure at home, have readings consistently above 140/90 and have not seen your doctor or nurse about these readings then you should do so. The diagram below tells you what action you need to take and when, depending on your readings:

- 140/90 - 199/109: See your GP/ nurse within the next few weeks
- 200/110 - 239/119: See your GP urgently (within the next few days)
- Over 240/120: See your GP or go to A&E immediately

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60 Cranmer Terrace  
London SW17 0QS  
Tel: 020 8772 4994  
www.bpassoc.org.uk

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