

# Home Blood Pressure Monitoring

## Correct blood pressure measurement:

Blood pressure measurements consist of two numbers, the first (higher) number is called the **systolic blood pressure** and the second (lower) number is the **diastolic blood pressure**. The pulse is also recorded by the electronic machine. An example of a blood pressure measurement is 140/80 mmHg, which translates to 140 for systolic blood pressure and 80 for diastolic blood pressure, measured in millimeters of mercury. A normal office blood pressure is less than 135/85 with a pulse usually between 60-80 beats per minute (bpm) while at rest.

**Blood pressure is very variable**, which means it can change for several reasons. Many factors can increase our blood pressure, however, these elevated readings may not be significant to our health. Blood pressure is elevated:

- When you are in pain or upset
- Immediately after exercise (even walking)
- While you are talking
- After tobacco usage
- Immediately after caffeine usage (especially in infrequent users)

Elevation of our blood pressure during these circumstances does not predict future harm (aside from the other dangers from tobacco usage).

Blood pressure tends to be lower in the evening and lowest when we are sleeping. Blood pressure may vary by 50-70mmHg for systolic and 20mmHg diastolic depending on how it is measured. So, if you measure your blood pressure while talking, immediately after a cigarette and after walking back into the house, or while you are upset your measured blood pressure could be 190/100. The true blood pressure, when repeated under the proper conditions, could be 120/80. **The difference is not the fault of the machine, but rather it is an error in the method of the measurement.**

## The correct measurement technique is outlined below:

- Avoid caffeine, cigarettes, and alcohol for 30 minutes before the measurement
- Measure your blood pressure when you first wake up and before dinner (unless instructed differently by your doctor)
- Use the correct sized cuff for your arm, which is often a large cuff purchased separately
- Position the cuff in the proper position by placing the indicator or tubing on the body side (inside) of the elbow
- Keep your arm at heart level while measuring, preferably by resting your arm on a table in a comfortable position
- Place the cuff on your upper arm and then sit in a chair with your back supported and your feet on the floor for at least 5 minutes, without talking before starting the measurement
- Have a paper and pencil/pen available (preferably a graph that your doctor has provided) or use the newer blue-tooth monitors that transmits the readings to your phone
- If your blood pressure is elevated, you may repeat the reading and record the lowest of the two readings

You should, as a routine, measure your blood pressure on the **first day of every month both in the morning and evening** (unless instructed differently by your doctor). More often readings should occur when readings are elevated or after your healthcare provider has changed your anti-hypertensive medications.

## Optimal home blood pressure:

We know that measuring your blood pressure at home will result in lower readings than measurement in your doctor's office. This is because you are more relaxed at home. Your home blood pressure ideally should be less than 130/80. You should ask your doctor what your target blood pressure should be.

