

## Some Causes of Blood Pressure Inaccuracies

Many outside forces contribute to blood pressure measurement variability.

The following is a list of influences that can be easily controlled:

### Cause

- The cuff is too small
- The cuff is too large
- The artery line is not centered
- The arm is above heart level
- The arm is below heart level
- Patient's feet are not flat on the floor
- Patient's back is not supported
- Legs crossed
- Patient in pain
- Patient talking
- Patient has full bladder
- Patient has difficulty breathing
- Patient doesn't rest 3-5 minutes
- White Coat Syndrome
- Tobacco or Caffeine use
- The cuff is placed over clothing or has separate bladder/ cover

### Systolic Effect

- + 10-40 mmHg
- 5-25 mmHg
- + 4-6 mmHg
- + 2 mmHg / inch
- 2 mmHg / inch
- + 5-15 mmHg
- + 5-15 mmHg
- + 5-8 mmHg
- + 10-30 mmHg
- + 10-15 mmHg
- + 10-15 mmHg
- + 5-8 mmHg
- + 10-20 mmHg
- + 11-20 mmHg
- + 6-11 mmHg
- +/- 10-40 mmHg

### References:

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2. Pickering Thomas G, Hall John E, Appel Lawrence J, Falkner Bonita E, Graves John, Hill Martha N, Jones Daniel W, Kurtz Theodore, Sheps Sheldon G, Roccella Edward J. Recommendations for blood pressure measurement in humans and experimental animals: Part 1: Blood pressure measurement in humans: A statement for professionals from the Subcommittee of Professional and Public Education of the American Heart Association Council on High Blood Pressure Research. *Hypertens* 2005; **45**: 142-161. <http://www.bloodpressure-drs-practical-guide.com/bloodpressurecuff.html>
- 3.

