

# Measuring Orthostatic Hypotension

Orthostatic hypotension is a leading reason for falls in the elderly. When a resident stands up, the position change can cause dizziness increasing the chances for a dangerous fall. Measuring orthostatic, or postural, blood pressure is an important part of any fall risk assessment.

## How To Take Orthostatic Blood Pressure Measurements

1. Ask the resident to lie down on the bed for five minutes to allow his/her blood pressure to settle to a normal supine pressure.
2. Take the blood pressure and pulse, recording the numbers and identifying them as “lying down.”
3. Next, have the resident stand upright, or sit upright if unable to stand. Wait one minute, and then take the blood pressure and pulse again. Record the results as “standing/sitting.”

## Evaluating the Results

1. Subtract the systolic (top number) blood pressure while sitting or standing from the systolic blood pressure while lying down. If the difference is a decrease of 20 mmHg or more, this supports a finding of orthostatic hypotension. Lying down – Sit/Stand = ?
2. Subtract the diastolic (bottom number) blood pressure while sitting or standing from the diastolic blood pressure while lying down. If the difference is a decrease of 10 mmHg or more, this supports a finding of orthostatic hypotension. Lying down – Sit/Stand = ?
3. Subtract the pulse rate while lying down from the pulse rate while sitting or standing. If the difference is an increase of 10 beats per minute or more, this is suggestive of orthostatic hypotension. In states of low blood volume, changes in the pulse rate can be a more sensitive indicator of orthostatic hypotension than blood pressure measurements. Sit/Stand – Lying down = ?

### EXAMPLE:

Your measurements are 142/84 and 62 (lying down) and 118/70 and 68 (sit/stand).

Step 1.  $142 - 118 = 24$  (positive for hypotension)

Step 2.  $84 - 70 = 14$  (positive for hypotension)

Step 3.  $68 - 62 = 6$  (negative for hypotension)

**Any one positive result indicates some degree of orthostatic hypotension.**

### When

1. With admission and quarterly fall risk assessments.
2. After any fall.
3. If the resident reports dizziness upon standing.
4. Weekly if the resident takes medication(s) known to cause orthostatic hypotension.

### **Resources:**

American Medical Directors Association. Falls and Fall Risk Clinical Practice Guideline. Columbia, MD: AMDA 2011

Merck Manual:

[http://www.merckmanuals.com/professional/cardiovascular\\_disorders/symptoms\\_of\\_cardiovascular\\_disorders/orthostatic\\_hypotension.html#v1144493](http://www.merckmanuals.com/professional/cardiovascular_disorders/symptoms_of_cardiovascular_disorders/orthostatic_hypotension.html#v1144493)