## Avoiding Syncope due to Orthostatic Hypotension

**S**

When a patient stands, blood shifts to the lower body, leading to compensatory increases in heart rate, cardiac output, and systemic vascular resistance. It is characterized by a blood pressure drop of ≥20mm Hg or more. The result is light-headedness, syncope, or blurred vision that may lead to a patient falling. Patients may also experience shallow breathing, fatigue, nausea, lack of concentration. These symptoms typically occur within 2-5 minutes of standing.

**B**

- Normal increase is 10 beats/minute with standing, and systolic blood pressure should fall slightly.
- Between 300-800mL of blood pools in legs.

**A**

Orthostatic hypotension may occur in patients:
- at risk for hypovolemia (i.e., patients with vomiting, diarrhea, or bleeding),
- have had syncope or a near syncopal episode (dizziness or fainting),
- receive medications that cause orthostatic hypotension, or
- have a medical condition that causes syncope

**R**

- Measure orthostatic/postural vital signs regularly while the patient is in a supine position as well as in a standing position. If a patient can't stand, obtain postural vital signs while the patient sits.
- Elevate the head of the bed, and help the patient to a sitting position with the feet dangling over the side of the bed; if tolerated, have the patient sit in a chair briefly. Prompt the patient to transition slowly.
- Monitor intake and output and weigh the patient daily.
- Evaluate the need for assistive devices and help the patient with walking, especially for transferring in/out of bed/chair.
- Consider compression stockings.
- Encourage eating small, frequent meals.
- Increase AROM leg exercises, especially prior to getting up.

### How to Measure Orthostatic Vital Signs

**Supine (baseline)**

- Have patient rest 3-5 min→
- Take Supine VS

**Sitting**

- Sit patient up for 1 min.→
- Take sitting VS→
- Check for s/s

**Standing**

- Stand 3 min.→
- Take standing VS→
- Check for s/s

- Subtract values 3 minutes after standing (or if patient cannot stand, then sitting) from lying values.
- A decline of ≥20mm Hg in systolic or ≥10 mm Hg in diastolic blood pressure after 3 minutes of standing = orthostatic hypotension.
- A heart rate increase of at least 30 beats per minute after 3 minutes of standing may suggest hypovolemia, independent of whether the patient meets criteria for orthostatic hypotension.