

SCREENING

**If OH/nOH suspected, ask patient the following questions:**

1. Recent fainting or blackouts?
2. Dizzy or lightheaded upon standing?
3. Vision disturbances when standing?
4. Difficulty breathing when standing?
5. Leg buckling/weakness when standing?
6. Neck pain/aching when standing?
7. Symptoms improve or disappear when sitting or laying down?
8. Worse in the AM or after meals?
9. Any recent falls?
10. Other symptoms that occur when standing or within 3–5mins of standing and get better when sitting or laying down?

**High-risk<sup>1</sup> patient?**

Routine screening recommended

**Positive response to ≥1 screening question**

DIAGNOSIS: STEP-WISE APPROACH

**In-Clinic Monitoring**

Monitor patient's BP/HR after 5 minutes in supine (preferred) or seated position then repeat measurement after 1 and 3 minutes of standing

**At-Home Monitoring**

Patient/caregiver measures BP/HR after 5 minutes in supine position or before arising in the AM; repeat measurement after 3 minutes of standing. If symptomatic, repeat testing while standing. Check vitals for 7 days before clinic visit; record in diary

**Medication Review<sup>2</sup>**

Examine patient's medication list to identify those that may cause or worsen OH/nOH; modify as needed

**Evaluate Causes of OH/nOH**

Obtain complete history (eg, cardiac) and perform physical exam, ECG, lab testing (eg, CBC, BMP, TSH) to rule out non-neurogenic causes of OH

**Specialty Testing**

Considered in at-risk individuals with unexplained symptoms who do not meet the orthostatic BP criteria; includes: extended at-home BP monitoring, 24-hour ambulatory BP monitoring, and autonomic function tests

≥20/10mmHg decrease in BP with standing?

Symptoms strongly suggest OH?

Consider supine-to-stand BP test or head-up-tilt

No

Yes

Patient has OH

HR increase of <15bpm upon standing<sup>3</sup>

HR increase of >15bpm upon standing<sup>3</sup>

Diagnosis of nOH

Diagnosis of non-neurogenic OH

**NOTES**

**Key:** BMP = basic metabolic panel; CBC = complete blood count; nOH = neurogenic orthostatic hypotension; OH = orthostatic hypotension

<sup>1</sup> Higher risk for OH/nOH: 1) neurodegenerative disease associated with autonomic dysfunction (eg, Parkinson's Disease, Multiple System Atrophy, Pure Autonomic Failure, Dementia with Lewy Bodies); 2) unexplained fall or episode of syncope; 3) peripheral neuropathies associated with autonomic dysfunction (eg, diabetes, amyloidosis, HIV); 4) age ≥70yrs who are frail or on multiple medications; 5) postural dizziness or non-specific symptoms that occur only when standing.

<sup>2</sup> Common medications that may cause OH or exacerbate nOH: Tricyclic antidepressants, diuretics, nitrates, alpha-1 blockers, dopaminergic agents, anticholinergics, PDE-5 inhibitors, beta-blockers, calcium channel blockers, ACEIs, ARBs, clonidine, hydralazine.

<sup>3</sup> Without confounding medication effect (eg, beta blockers, alpha/beta blockers, diltiazem, verapamil) or intrinsic cardiac rhythm disturbances (eg, sick sinus syndrome, complete heart block, pacemaker).

**REFERENCES**

Gibbons CH, Schmidt P, Biaggiono I, et al. The recommendations of a consensus panel for the screening, diagnosis, and treatment of neurogenic orthostatic hypotension and associated supine hypertension. *J Neurol*. 2017 Jan 3. doi: 10.1007/s00415-016-8375-x.