

# NEUROGENIC ORTHOSTATIC HYPOTENSION: TREATMENTS

## STEP 1: Medication review

Modify and/or discontinue drugs that can induce or exacerbate OH:

- Dopaminergic agents
- Antidepressants (esp. TCAs)\*
- Anticholinergics
- Antihypertensives: diuretics\*, nitrates\*, alpha-1 blockers\*, calcium channel blockers, hydralazine, minoxidil, beta-blockers, clonidine, alpha-methyldopa, ACEIs, ARBs
- PDE5 inhibitors

2 week  
assessment



## STEP 2: Non-pharmacologic measures

Incorporate daily:

- Blood volume repletion
- Salt intake adjustment
- Physical conditioning
- Core body temperature regulation
- Head of bed elevation
- Compression garment use<sup>†</sup>
- Diet modification
- B<sub>12</sub> deficiency/anemia correction

2 week  
assessment



## STEP 4: Combination pharmacologic measures

- Initiate a second agent if deemed necessary
- Begin at lowest starting dose and titrate to maximum tolerated dose

2 week  
assessment



## STEP 3: Pharmacologic measures

- Midodrine
- Droxidopa
- Fludrocortisone
- Pyridostigmine

## SINGLE-AGENT PHARMACOLOGIC TREATMENTS

Drug	Indication Status	Usual Dose	Notes
Midodrine	FDA-approved	2.5–15mg once to three times daily while awake; titrate based on response	<ul style="list-style-type: none"> <li>• Avoid within 5hrs of bedtime due to risk of supine hypertension</li> <li>• Caution in CHF, chronic renal failure</li> </ul>
Droxidopa	FDA-approved	100–600mg three times daily while awake; titrate every 48hrs based on response and/or tolerability	<ul style="list-style-type: none"> <li>• Avoid within 5hrs of bedtime due to risk of supine hypertension</li> <li>• Caution in CHF, chronic renal failure</li> </ul>
Fludrocortisone	Off-label	0.1–0.2mg once daily; max 0.3mg/day	<ul style="list-style-type: none"> <li>• Caution in CHF</li> </ul>
Pyridostigmine	Off-label	30–60mg once to three times daily	<ul style="list-style-type: none"> <li>• Beneficial in less severe patients</li> <li>• Does not worsen supine hypertension</li> </ul>

## NOTES

**Key:** ACEI = angiotensin converting enzyme inhibitor; ARB = angiotensin receptor blocker; CHF = congestive heart failure; nOH = neurogenic orthostatic hypotension; OH = orthostatic hypotension; PDE5 = phosphodiesterase E5; TCA = tricyclic antidepressant

\* Causes significant worsening of OH/nOH.

<sup>†</sup> Waist-high compression garments are the most effective, followed by thigh-high compression stockings. Abdominal binders are effective alternatives, which can be used alone or in combination with leg compression if needed.

## REFERENCE

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.

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