

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[†]
- Diet modification
- B₁₂ 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"> • Avoid within 5hrs of bedtime due to risk of supine hypertension • Caution in CHF, chronic renal failure
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"> • Avoid within 5hrs of bedtime due to risk of supine hypertension • Caution in CHF, chronic renal failure
Fludrocortisone	Off-label	0.1–0.2mg once daily; max 0.3mg/day	<ul style="list-style-type: none"> • Caution in CHF
Pyridostigmine	Off-label	30–60mg once to three times daily	<ul style="list-style-type: none"> • Beneficial in less severe patients • Does not worsen supine hypertension

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.

[†] 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.