

## **Orthostatic hypotension: a mini-review**

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**Background:** Orthostatic hypotension (OH) is difficult and little studied issue with expanded quantity of probably causes. Last data claimed that nearly 25% of neurology patients had age-related OH [1]. Residents of nursing homes and patients with persisting autonomic dysfunction are at the highest risk of having OH and its dramatic effects as trauma or even sudden death [2].

**Methods:** PubMed and Google Scholar resources were used to write the review.

**Results:** Pathogenesis of OH depends on pathophysiology cause, but in general it is influenced by physiological reflex disruption [1, 3]. Changing position from supine to standing leads to collection of 500-700 ml of vein blood under the heart [1, 4]. Physiologically it requires a boost in sympathetic effect on vessels and heart to enhance venous return. Therefore, OH is lowering of blood pressure at least 20 and/or 10 mmHg according to systolic and diastolic BP at the third minute of standing. If a heart rate increases by less than 15 beats, it implies neurogenic OH which is connected to pathophysiology OH [4]. Symptoms depend on hypoperfused tissue or organ and are divide into cerebral (dizziness, blurred vision, cognitive slowing, syncope), muscular (low backache, coat-hanger ache) and non-specific features (general weakness, fatigue) [3]. Severities of symptoms distinguished by four functional classes (FC) of OH, where occasional symptoms lead to 1 FC, and daily persistent severe symptoms refer to 4 FC [2]. Diagnosis is usually clear after taking patient history and a bedside orthostatic test, but some cases require ambulatory blood pressure monitoring, tilt-table test, plasma noradrenaline level and depend on the cause. EMG, QSART, autoimmune antibodies, chest CT, serum and urine electrophoresis, fat-pad biopsy and genetic testing can be utilised [4]. Only symptomatic patients require investigation and

treatment. Posture test should not be routine [1]. Management includes pharmacology and non-pharmacology interventions. First strategy leads to lifestyle changes, and second one is taking medicine such as fludrocortisone, midodrine, droxidopa, atomoxetine, pyridostigmine [1, 2, 4].

**Conclusion:** OH is wide-spread problem with quiet similar pathogenesis but various probable causes [4] and symptoms need to be further investigated to understand the impact of hypoperfusion on target organs and look for the most effective treatment strategies.

### Literature

1. Gilani, Artaza, et al. "Postural hypotension." *bmj* 373 (2021).
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3. Mathias, Christopher J. "Autonomic diseases: clinical features and laboratory evaluation." *Journal of Neurology, Neurosurgery & Psychiatry* 74.suppl 3 (2003): iii31-iii41.
4. Italo Biaggioni, MD, Lucy Norcliffe-Kaufmann, PhD, Horacio Kaufmann,MD (Jul 29 2020) BMJ Best Practice Orthostatic hypotension.