



THE UNIVERSITY OF
TENNESSEE
HEALTH SCIENCE CENTER.

Occupational Therapy Strategies for Postural Orthostatic Tachycardia Syndrome

Department of Occupational Therapy, College of Health Professions

Emily Bennett MOT/S, Mackenzie Dew MOT/S, Rachel Geissler MOT/S, Marjorie Jamerson MOT/S,
Laura Mendez MOT/S, Hunter Tockey MOT/S, Summer Weldon MOT/S

Faculty Member: Dr. Pamela Lewis-Kipkulei, PhD, OTD, OTR/L Practitioner Mentor: Mary Matthies OTR/L

BACKGROUND & RATIONALE

- Research showed that POTS affects 500,000 to 3 million people in the US.
- Diagnosis has become more prevalent, but there is little research to support evidence-based treatments, specifically in occupational therapy practice.
- Impacts the following aspects of daily life: physical, functional participation, autonomy, cognition, energy and sleep.

PICO QUESTION

What OT strategies are effective in increasing occupational performance in adults newly diagnosed with postural orthostatic tachycardia syndrome (POTS) in acute care?

SEARCH METHODOLOGY

- **Databases search included:** AJOT, CINAHL, MEDLINE, Embase, Google Scholar, PubMed, and SCOPUS.
- **Search terms:** acute care, intervention, postural orthostatic tachycardia syndrome (POTS), and occupational therapy.
- **Inclusion Criteria:** adults 18+, articles published in English, full-text access, and Postural Orthostatic Tachycardia Syndrome.
- **Exclusion criteria:** ages younger than 18, articles in other languages, and studies done 15+ years ago.
- Included searches with Ehler-Danlos Syndrome, because of the similar symptoms and interventions found in the articles.

SEARCH RESULTS

- Fifty-five articles were screened for duplicates, abstracts, and full text content resulting in the critical review of the final twenty-five articles published between 2009 and 2022.

Level 1	Level 3	Level 4	Level 5
Meta-Analysis = 1	Cohort Study = 1	Case Study = 7	Expert Opinion = 2
Randomized Control Trial = 3	Pretest-Posttest Design = 1	Case Report = 2	Literature Review = 2
	Randomized Cross-Sectional Study = 1	Retrospective Review = 1	Narrative Review = 1
		Survey = 3	

MAIN FINDINGS AND LIMITATIONS

- **Lifestyle Changes** such as pacing, energy conservation, adaptive equipment, occupational and environmental adaptations improve symptoms of POTS (Dochod, 2022).
- **Abdominal compression** with low dosage of propranolol are effective in improving orthostatic tachycardia symptoms (Smith et al., 2020)
- **High dietary sodium intake** increased plasma volume, lowered standing plasma norepinephrine, and decreased instances of orthostatic hypotension (Garland et al., 2021).
- **Exercise Training with lifestyle changes** helps to decrease heart rate from supine to stand and to improve quality of life (Bourne et al., 2021).

Limitations

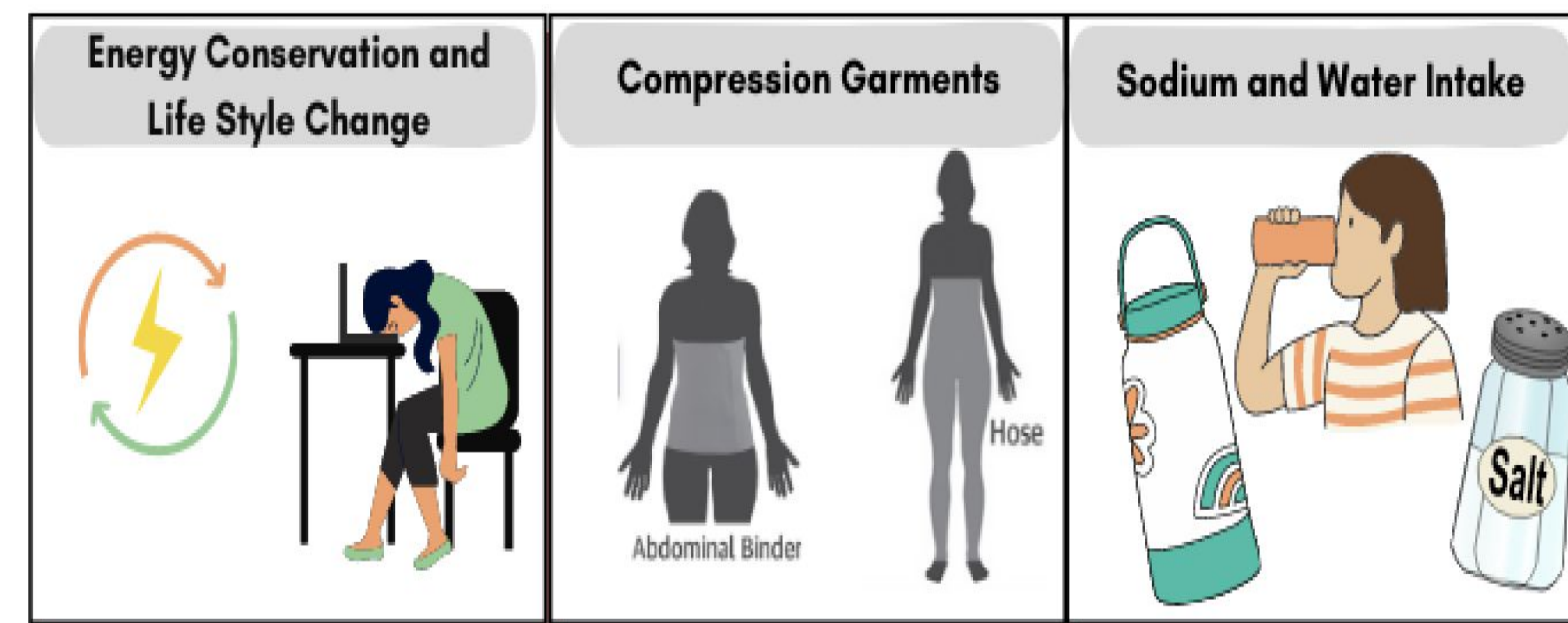
- High drop-out rates
- Small sample sizes
- Lack of heterogeneity
- Low generalizability
- Lack of high quality research
- Potential bias (inherent, selection)
- Participant compliance

CLINICAL BOTTOM LINES

Occupational therapists can use compression garments, exercise interventions, as well as lifestyles and diet changes to guide their interventions with clients who have POTS.

RECOMMENDATIONS FOR IMPLEMENTATION

- **Compression garments** are to be used with caution.
- Recommended **Exercise Training** and **lifestyle changes** such as energy conservation strategies, nutritional strategies, psychosocial supports, and sleep hygiene.
- Further **high level research** is recommended for effective OT interventions.



REFERENCES & HANDOUT

