

Autonomic Nervous System Dysregulation: Physical Therapy Management

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Provider Fact Sheet (Part 2)

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a component of



GOLD Standard: Passive Tilt Table Test (TTT) or Head Up Tilt (HUT)¹⁷

- Typically performed in conjunction with other autonomic testing to determine Vagal nerve regulation of HR, neural regulation of BP and the effects of posture and Valsalva maneuvers. May include skin biopsy or EMG/NCS if small fiber neuropathy is suspected.
- Often requires physician guided temporary suspension of medications prior to testing.
- Results may be necessary for an accurate differential diagnosis of the subtypes of Dysautonomia and/or POTS and to determine risk factors of cardiovascular disease.

Management: Patient education is critical to build therapeutic alliance with individuals who struggle to obtain a firm diagnosis or effective pharmacological and non-pharmacological support for autonomic dysregulation. For individuals with a milder symptom profile, there are published guidelines for exercise training, and online resources for patient engagement and education.^{18,19,20}

Telehealth services may be the best option to initiate care for individuals who have immune or allergy hypersensitivities that prevent them from tolerating exposure to various environmental, visual, or tactile stimuli.²¹ Transit to therapy may cause fatigue that precludes one's ability to engage in a therapy session, and unexpected exacerbations or symptom flares may interfere with attendance at timed appointments. Telehealth can be useful to establish trust, to begin patient education, and to review concepts that can be practiced between therapy sessions.

Direct intervention is necessary to collect data, observe response to testing, accurately evaluate safety concerns, and to formally assess impairments to allow proper dosing of interventions. Vestibular and balance testing and training in person allows for safe exposure to perturbations and observation of maladaptive strategies that require variable methods of feedback and sensorimotor re-training for improved physiological responses. Progress toward goals should be measured on a regular basis with face-to-face visits, though wearable devices do allow downloading of data that can be added to the patient record to demonstrate autonomic function during routine daily activities or recommended therapeutic activities.²²

General principles of physical therapy that apply to this population include pacing of activity to avoid excessive fatigue and to gradually build exercise tolerance from a recumbent to an upright position.^{19,23} Physical therapists are ideal providers to

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formulate partnerships with people to design a path toward engaging in routine ADLs and life roles. Regular monitoring of all systems is necessary to account for the varied peripheral and central contributions to sensory and motor processing during recovery from autonomic dysregulation, and helps the individual regain control of their wellness through the practice of daily self-care. Depending on the chronicity of symptoms there may be a significant need for postural stabilization, vestibular and balance training, manual therapy, musculoskeletal interventions, breath control, and neuromuscular re-education due to adaptive shortening of muscles from disuse and deconditioning.

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