

Working with Singers with Hypermobility Spectrum Disorders, Hypermobile Ehlers-Danlos Syndrome and Postural Orthostatic Tachycardia Syndrome

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Hypermobility

- **Benign; Asymptomatic**
 - age; anatomy; training; pregnancy
- **Hypermobility Spectrum Disorders (HSD)**
 - connective tissue disorders; joint instability and hypermobility; injury; pain: exclusionary of EDS
- **Hypermobile Ehlers-Danlos Syndrome (hEDS)**
 - one of 13 heritable connective tissue disorders under the EDS umbrella
 - all EDS types have joint hypermobility, skin hyperextensibility, and tissue fragility
 - hEDS: the most common subtype
 - clinical diagnosis (Ehlers-Danlos Society 2024)
- Up to 40% of people with HSD or hEDS have symptoms that can be diagnosed as POTS (Campbell 2021)

Hypermobility in the Arts and Singing

- HSD and hEDS may be found in **1/500** of the general population (Demmler et al. 2019)
- **More common** in musicians (Shiebani-Rad et al, 2013) and dancers (Skwiot et al. 2019)
- **Up to 74.6%** of those diagnosed with HSD/hEDS experienced **voice difficulties**, including but not limited to: dysphonia, vocal fatigue, lowered voice intensity and increased risk to; **poor proprioception**; **slower healing** of connective tissues (Jeffery et al. 2021). See also **below**.

Reported

Voice Characteristics and Symptoms

- **Range** characteristics
- Unusual **flexibility**
- Vocal **fatigue**/loss of stamina/hypofunction
- **Diminished intensity**/power/volume
- Difficulty: **breath management**
- **Hoarseness** or breathiness
- **Instability** or sudden loss of function
- Difficulty with **register transitions**
- Trouble producing and sustaining desired **pitch**
- Voice-related **pain**
- **Skeletal-muscular** issues (TMJD or neck/back)
- **Compensatory tension** or MTD
- **Choking**, spasm, coughing

(Partljič 2024, Demmler 2019, Menton et al. 2024)

GUIDANCE for Teachers

Resources



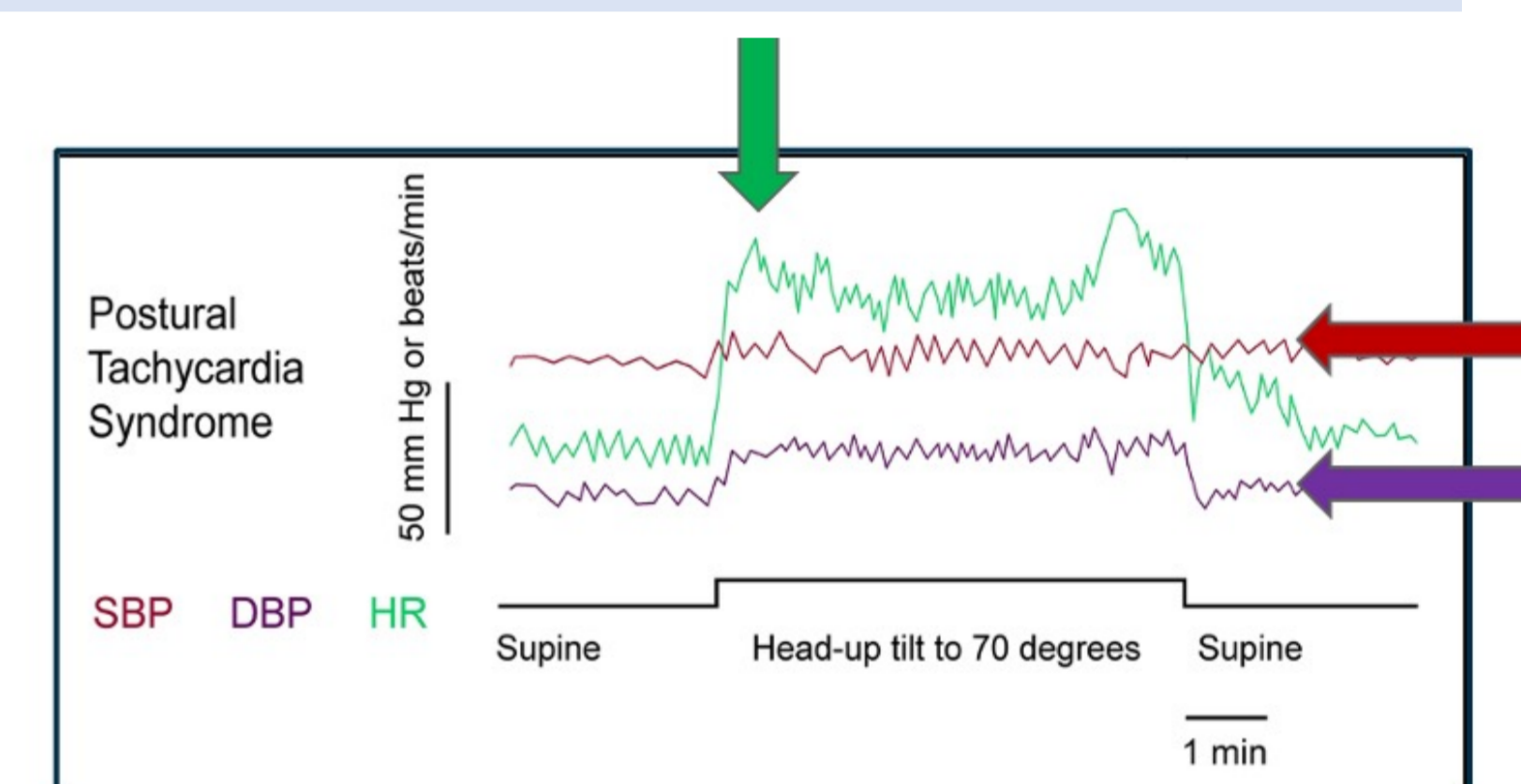
Sources



POTS: Postural Orthostatic Tachycardia Syndrome

- **POSTURAL**: pertaining to the *position* of the body
- **ORTHOSTATIC**: relating to standing *upright*
- **TACHYCARDIA**: increased *heart rate* (≥ 30 bpm for adults within ten minutes of standing; no orthostatic hypotension; often ≥ 120 bpm) (Freeman et al, 2011)
- **SYNDROME**: a *group of signs and symptoms* that occur together
- **SYMPTOMS INCLUDE**: Dizziness, brain fog, weakness, sleep difficulties, shortness of breath, and difficulty standing (Johns Hopkins 2024, Miglis 2018)

Tilt Table Test Results



(Cheshire and Goldstein, 2019)

POTS Prevalence and Diagnosis

- **170 cases/100,000** as of 2021 (Atuesta-Rodriguez et al. 2021)
- Commonly diagnosed among **Caucasian, adolescent female** (Agarwal et al. 2007)
- **Dysfunction of the ANS**; onset often following a traumatic event, surgery, or viral illness (Attard et al. 2023)
- Heterogenous nature makes it **difficult to diagnose** (Anjum et al. 2018)
- Currently, most accurate testing is the **tilt table test**. (Cheshire and Goldstein 2019)
- Numerous **comorbidities**, including **Long COVID, HSD, hEDS** (Shaw et al. 2019, Attard et al. 2023)

Reported Effects on Singers

- **Vocal Function**
 - **Breath regulation** (shortness of breath and fatigue)
 - Loss of **range**
 - Loss of **stability** and **intensity** (less control)
- **In Performance**
 - **Brain fog** and focus
 - Increased **stage fright**
 - **Staging** requirements (standing or sudden changes in posture)
 - **Fear of disclosure** leading to stigma, feeling of “being left behind” (Stryker 2024)

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