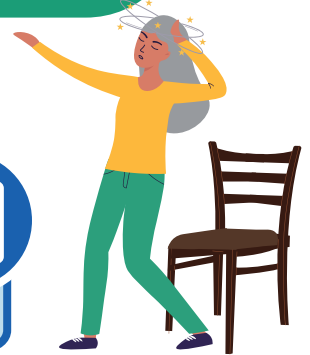


Postural Orthostatic Tachycardia Syndrome (POTS) in Post-COVID Patients: Diagnosis and Management

POTS is a disabling and often under-recognized lasting complication of COVID-19 infection. It's characterized by a rapid increase in heart rate when standing up, leading to dizziness, lightheadedness or palpitations. It may also be associated with other symptoms of dysautonomia. This handout provides guidance on post-COVID POTS diagnosis and management.



Patient History

Key symptoms: Dizziness, lightheadedness or palpitations lasting at least 3 months

Symptoms can worsen with posture change (i.e., from sitting to standing), exercise, meals, alcohol and warm environments.

Physical Examination



- **General health assessment:** Evaluate the patient's overall health status.
- **Differential diagnosis:** Rule out other rare but important acute conditions such as pulmonary embolism, sepsis and heart failure. Consider other causes of tachycardia like thyrotoxicosis, anemia and anxiety as well as cardiovascular, respiratory or neurological conditions.
- **Vital signs:** Record body temperature and pulse oximeter readings. Measure heart rate and blood pressure when the patient is both lying down and standing.

Investigations



Not everyone needs investigations. Investigations should be based on the patient's history and clinical findings. If appropriate, consider:

- **Electrocardiogram**
- **24-hour electrocardiogram**
- **24-hour ambulatory blood pressure or heart rate**
- **Chest x-ray**
- **Echocardiogram**
- **Blood tests**
- **Standardized tests**
 - **Active stand test**
 - **NASA 10-minute lean test**

Diagnostic Criteria for POTS

Upright standing heart rate change sustained for 10 minutes in absence of hypotension

Increase of heart rate by **≥40 bpm** (12-19 years old) **OR** **≥30 bpm** (≥20 years old) **OR** **Measuring ≥120 bpm** at any age



Non-Pharmacological Management



Research is lacking, but the following may be tried on a patient-by-patient basis:

- **Identify and avoid triggers**
- **Wear compression hosiery**
- **Consume salt: 10g/day** unless contraindicated
- **Replace fluids: 2-3 L/day**
- **Optimize sleep**
- **Gradually return to exercise** if tolerated
- **Practice relaxation techniques** such as yoga
- **Eat small frequent meals** and avoid carbohydrates

The above may help patients with symptoms of POTS even if they do not meet the formal diagnostic cutoff.

Pharmacological Management



There are no FDA approved drugs to treat POTS, but there are many pharmacological treatments used to manage symptoms. Specialists may prescribe:

- **Beta blockers**
- **Anticholinesterase inhibitors**
- **Ivabradine**
- **Peripheral vasoconstrictors**
- **Central adrenergic inhibitors**
- **Volume expanders**

Adapted from the British Medical Journal's (BMJ) Practice Pointer on "[Orthostatic Tachycardia after COVID-19.](#)"