

What is PoTS?

PoTS stands for postural tachycardia syndrome
First characterised and defined in 1993

PREVALENCE estimated to be 0.2%

Abnormal response by the autonomic nervous system to upright posture. In some, the mechanism is lack of vasoconstriction on standing causing pooling of blood in abdomen and limbs, reduced venous return to heart, compensatory tachycardia and altered cerebral circulation

More common in females age 15 - 50

DISABILITY - equivalent to disability found in heart failure + COPD

ASSOCIATED WITH

- hypermobile Ehlers-Danlos syndrome and hypermobility spectrum disorder
- after viral infection eg COVID-19, Glandular Fever
- ME/CFS
- autoimmune conditions
- growth/puberty in children

When to suspect PoTS

SUSPECT PoTS in

- medically unexplained symptoms
- ME/CFS
- hypermobile or post-COVID patients

SYMPTOMS

3 commonest symptoms are

- lightheadedness (presyncope)
- fatigue
- palpitations

Other symptoms include

- fainting
- nausea, bloating, abdominal pain
- cognitive dysfunction - 'brain fog'
- poor sleep
- exercise intolerance
- shakiness, sweating
- postural headaches and migraines

SIGNS *occur on standing/prolonged sitting*

- tachycardia
- acrocyanosis - red/purple puffy hands and feet (50% of patients)

How to diagnose PoTS

DIAGNOSTIC CRITERIA

Sustained increase in heart rate of 30 beats per minute (40bpm in teenagers) from lying to standing associated with symptoms of PoTS

STAND TEST - rest supine and record HR and BP. Then stand in a safe place and record BP and HR every 2 minutes for 10 minutes

INVESTIGATIONS - ECG. Exclude anaemia, hyperthyroidism, postural hypotension, pheochromocytoma

MISDIAGNOSIS

Mean time to diagnosis is 7 years

50% of patients receive a psychiatric misdiagnosis e.g. anxiety, depression, hypochondriasis

Other misdiagnoses - ME/CFS

SPECIALIST WITH AN INTEREST IN PoTS

There is a list of clinics on the [PoTS UK website](https://potsuk.org).

How to manage PoTS

AVOID TRIGGERS - heat, large meals, alcohol
- drugs that lower BP

FLUIDS - at least 2-3 litres a day in adults

SALT - Adults: +6g/day (unless contraindicated)

EXERCISE - initially supine, graduated regimen, can take several months to improve symptoms, caution if severe post-exertional malaise

POSTURAL MANOEUVRES to avoid fainting - avoid prolonged standing, elevate legs, tense buttocks + thighs, fold arms, tiptoe

COMPRESSION - class 2, waist high tights

DRUGS - include β blockers, calcium channel blockers, ivabradine, midodrine, fludrocortisone, clonidine, SSRI, desmopressin, pyridostigmine, octreotide

CBT - to help adjust to chronic illness

IV FLUIDS - in an emergency