

Long COVID Syndrome Presenting as POTS/Dysautonomia

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POTS is (likely) the most common “*diagnosis*” of long COVID syndrome

- There is no study that assessed the prevalence of autonomic dysfunction among all long COVID patients to date.
- Many studies and surveys show high prevalence of autonomic dysfunction among long COVID patients.
- POTS is reported in 30-80% of all long COVID patients presenting with autonomic dysfunction.

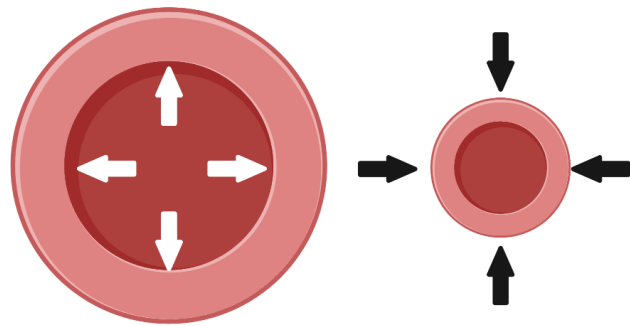
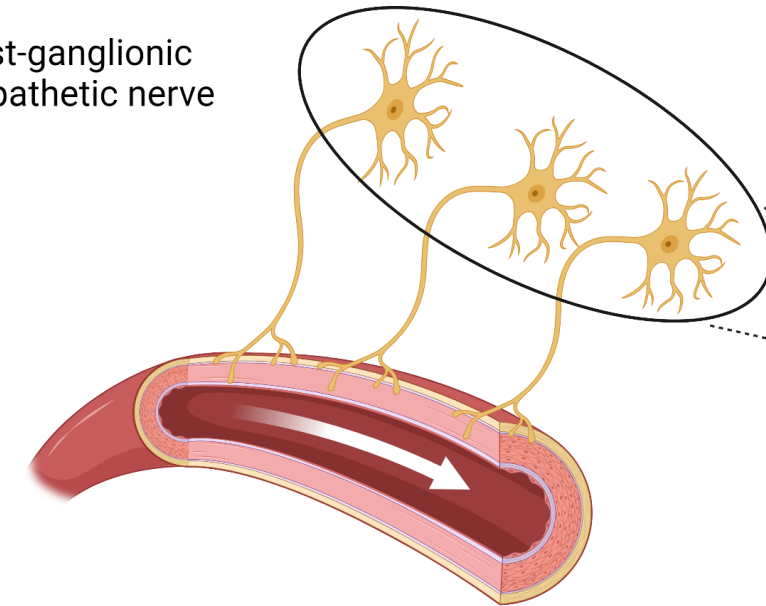
POTS is a syndromic diagnosis

- POTS may not be a single disease, but at least a diagnosis
- PEM, orthostatic hypotension (or tachycardia), loss of smells, etc. are all symptoms, NOT a diagnosis.
- POTS is a misleading name – tachycardia or lightheadedness are one of the mildest symptoms
- Tilt table test – supporting vs gold standard?

What is POTS?

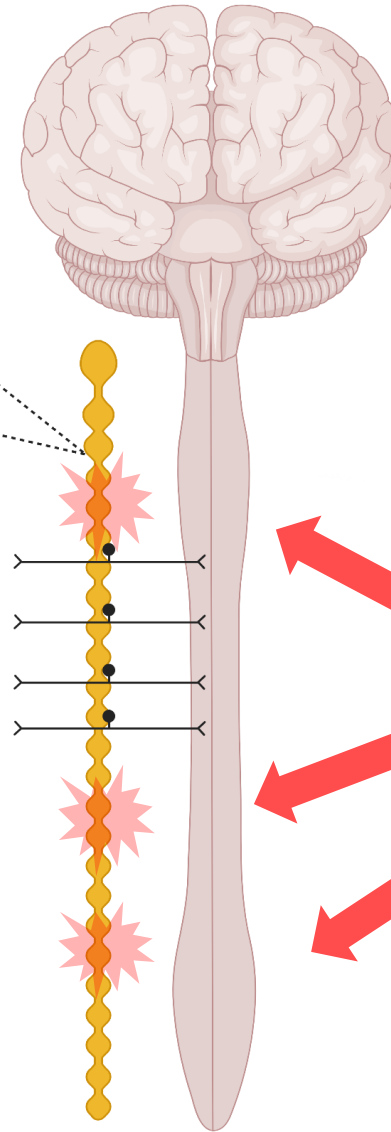
**“Paradoxical sympathetic
vasomotor dysfunction”**

Post-ganglionic
sympathetic nerve

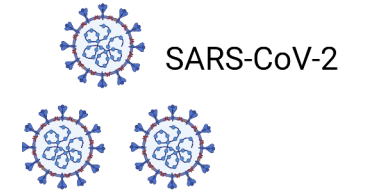


Vasomotor Pump

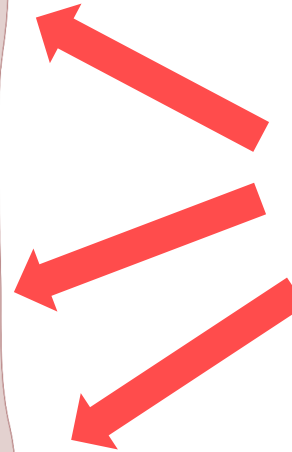
Sympathetic chain ganglia



Autoimmune inflammation



Molecular
Mimicry

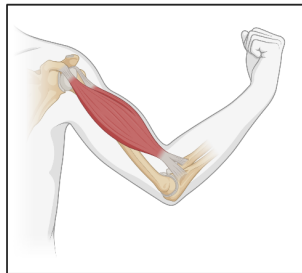


Vasomotor Symptoms



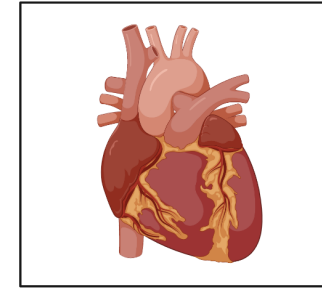
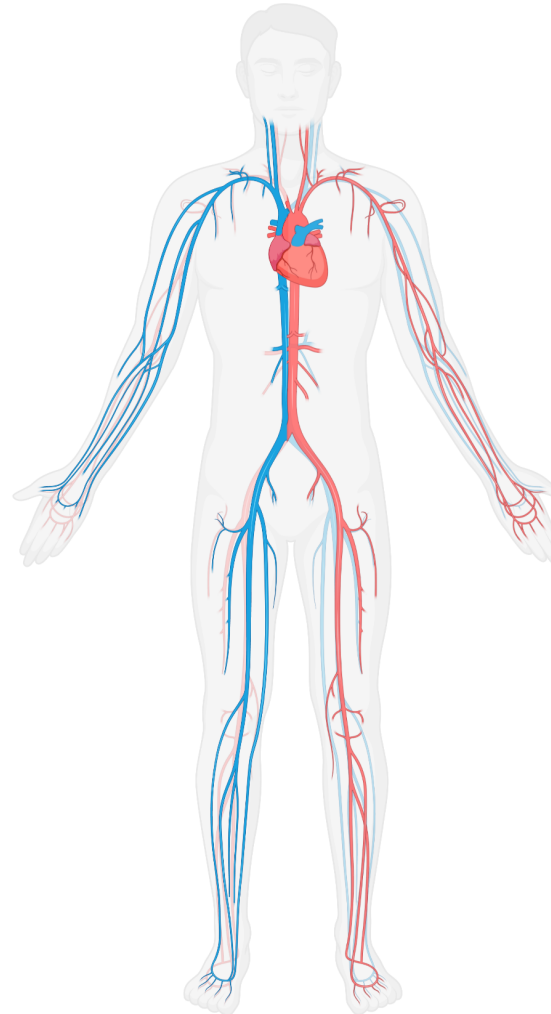
Reduced cerebral blood flow

Brain fog
Migraine
Lack of Concentration
Forgetfulness



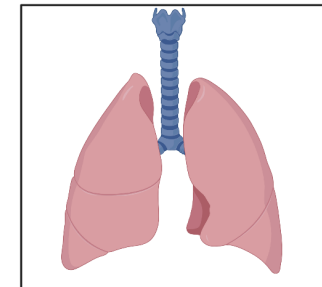
Skeletal Muscles

Post-exercise malaise (PEM)
Post-exertional flares
Delayed-onset muscle soreness (DOM)
Exercise intolerance



Reduced preload

Fatigue
Dizziness
Lightheadedness

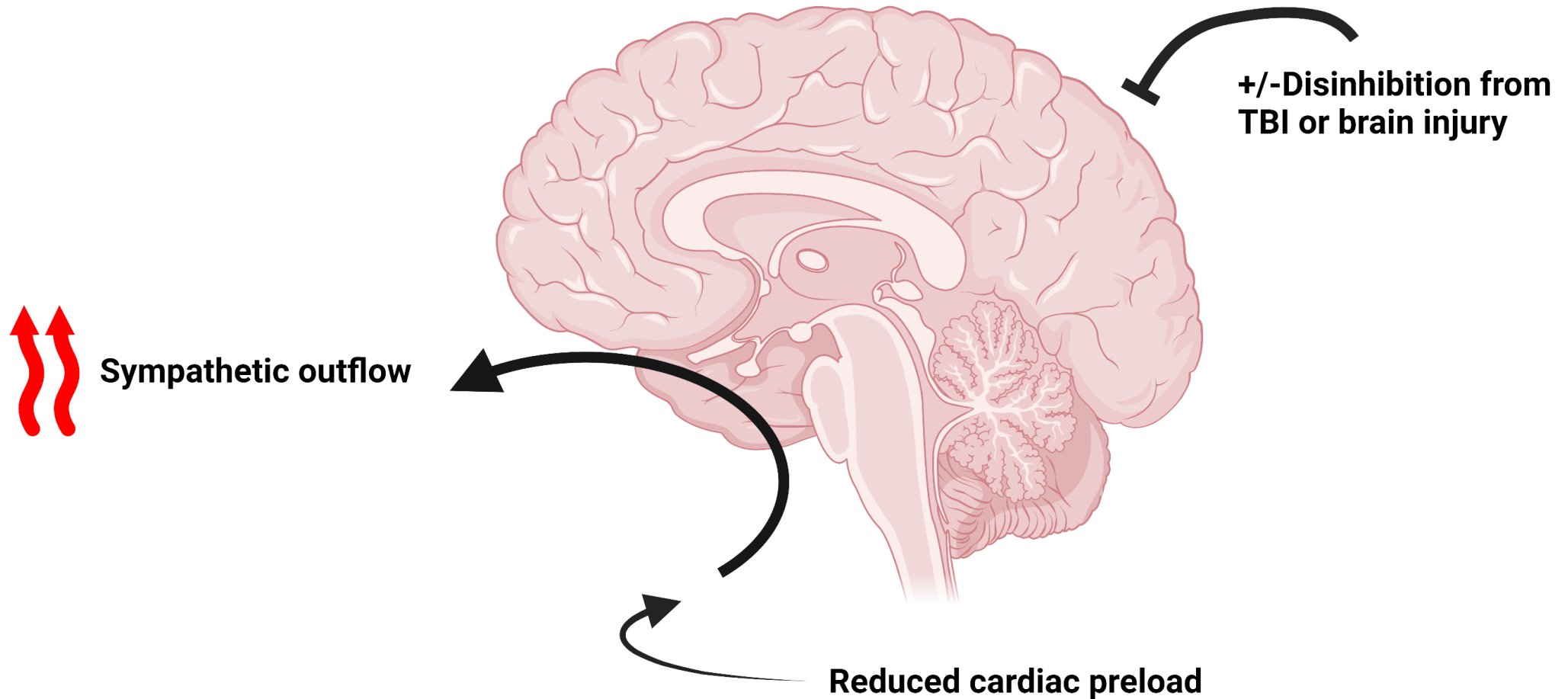


Reduced pulmonary perfusion

Exertional dyspnea
Air hunger



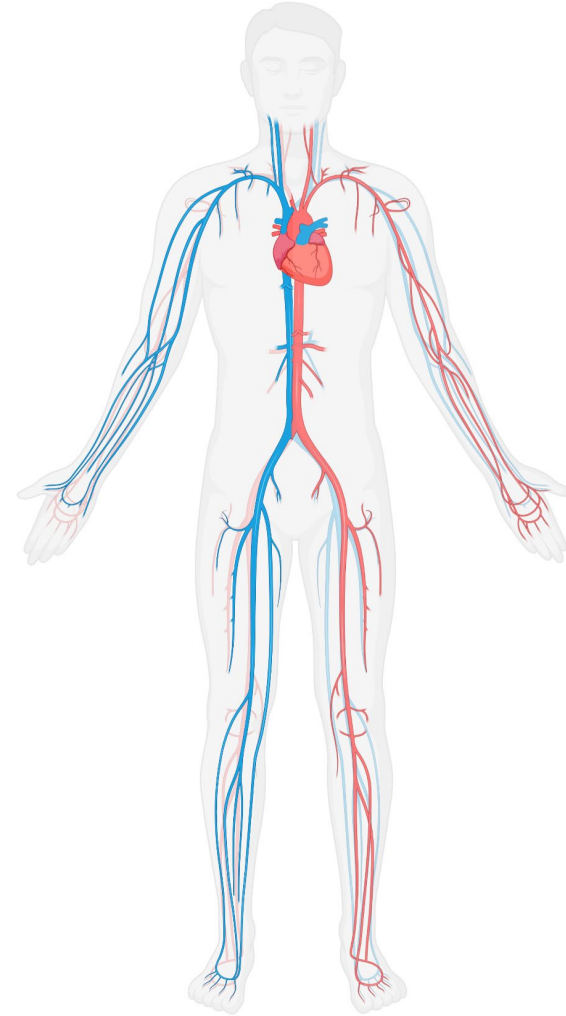
Intact or exaggerated Baroreflex (CNS)



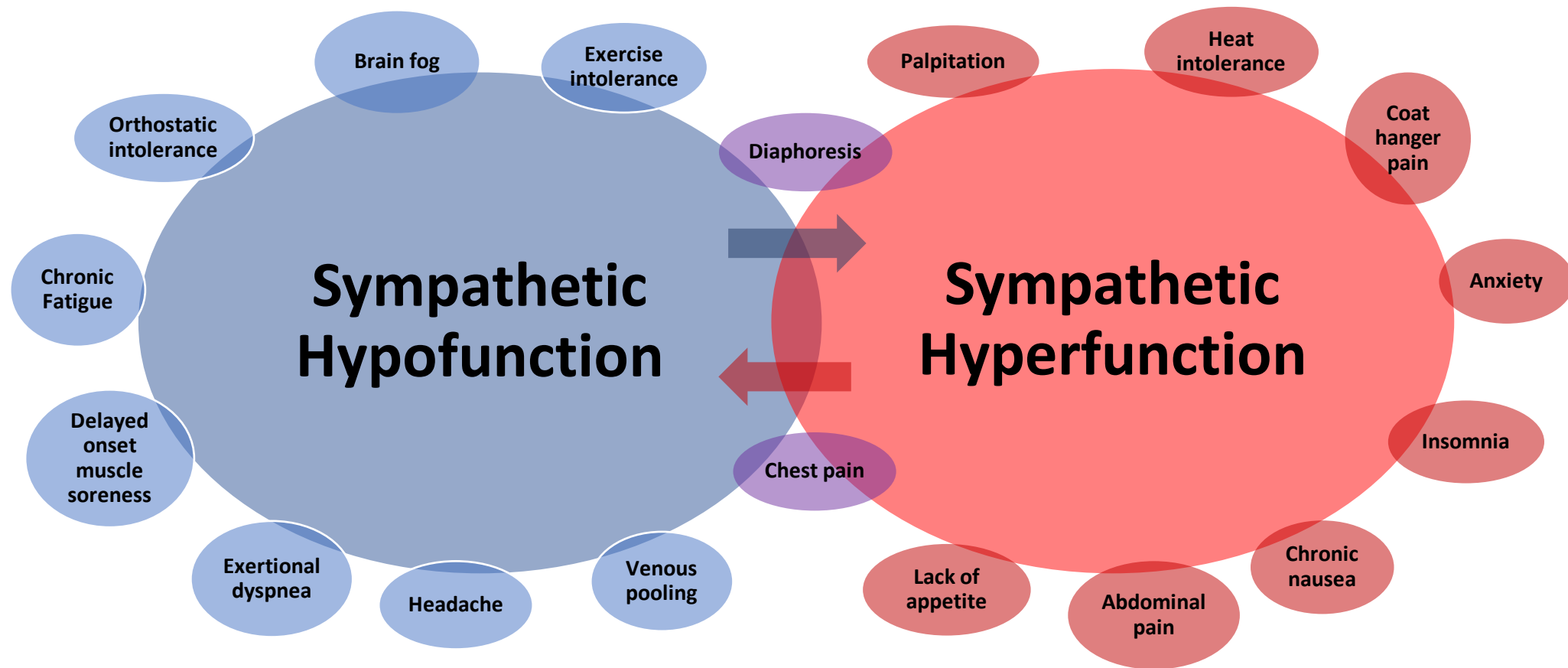
Sympathetic overcompensation

“Fight or Flight” Symptoms

Anxiety
Palpitation
Orthostatic Tachycardia
Orthostatic hypertension
Sleep disturbance
Nausea and vomiting
Constipation
Alternating diarrhea
Hyperhidrosis



POTS Symptom Cluster



Summary

- POTS is probably the most common and debilitating form of long COVID.
- POTS is a syndromic diagnosis.
- Diagnostic efforts and therapy should be targeted towards autonomic nervous system in long COVID syndrome.
- It is time to take action!