

**POTS - An
Increasingly
Common
Diagnosis**

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A little about me...

- UConn undergrad - BS Nutritional Science
- Simmons grad school - MS Nutrition and Health Promotion + dietetic internship
- Diagnosed with POTS January 2023
 - TTT
 - Symptoms started in 2017
 - Through consistent movement, pacing, nutrition and lifestyle changes, I have largely reduced POTS symptoms

Disclosures: No conflicts of interest

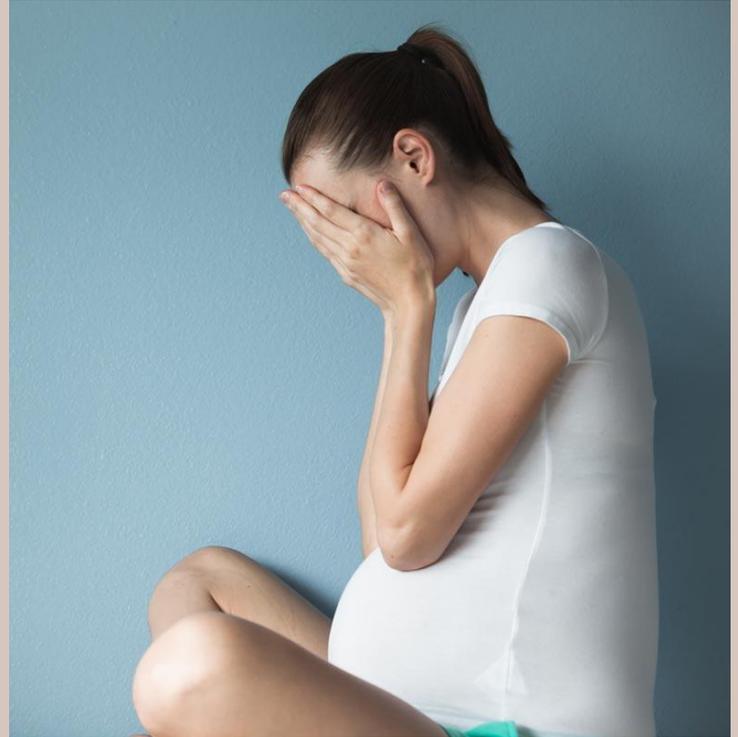


Learning objectives

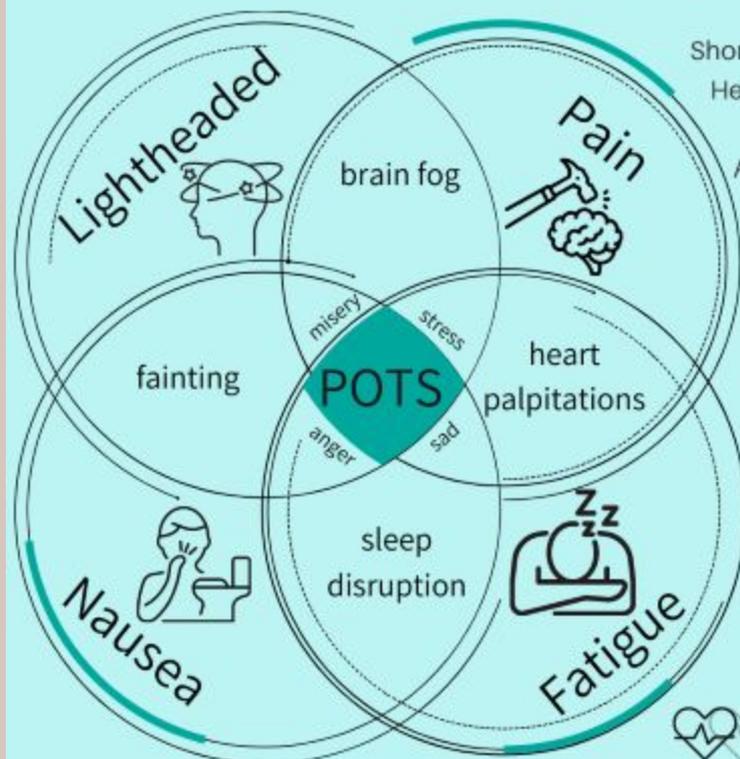
1. Be able to differentiate the 3 different subtypes of POTS.
2. Understand the dietary and lifestyle interventions that can help with symptom management.
3. Know what to look out for in patients and who to refer to if you suspect POTS is present.

What is POTS?

- Dysautonomia condition - *not* cardiac
 - 9 out of 10 cases occur in females
 - 75% of those diagnosed are women ages 15-50
 - Affects 1% of teens, 1-3 million people total
- Hallmark symptom - orthostatic intolerance
- Common causes
 - Pregnancy
 - Major surgery
 - Trauma
 - Viruses like mono, Lyme, COVID
- Treatment options
 - Medications for severe cases
 - Managed through exercise, nutrition and lifestyle changes



Common POTS Symptoms



- Lightheadedness (99%)
- Tachycardia (97%)
- Pre-syncope (94%)
- Headache (94%)
- Difficulty concentrating (94%)
- Nausea (90%)
- Shortness of breath (88%)
- Heart palpitations (87%)
- Muscle pain (84%)
- Abdominal pain (83%)



Subtypes of POTS

- Hypovolemic POTS
 - Abnormally low blood volume → low blood pressure
 - Kidneys excrete excess sodium and water
 - Weakness, decreased tolerance to exercise
- Hyperadrenergic POTS
 - Elevated plasma norepinephrine levels
 - Rise in systolic BP >10 mmHg while standing for 10 min → high BP
 - More extreme tachycardia, anxiety, nausea/vomiting
- Neuropathic POTS
 - Decrease in sympathetic NS function (esp in legs) → excessive blood pooling
 - Post infection, surgery or trauma, or may be autoimmune
 - Loss of sweat in extremities, cyanosis of feet

How is POTS diagnosed?

- Initial testing
 - Complete physical exam
 - 12-lead EKG
 - Orthostatic vital signs observed
- Standing Test
 - Take pulse and BP while lying down
 - Patient stands, repeat pulse and BP every 2 min for 2-10 min
 - Adults: HR +30 BPM
 - Children: HR +40 BPM
 - BP shouldn't decrease >20/10 mmHg
- Tilt Table Test (TTT)
- Quantitative sudomotor autonomic reflex testing (QSART)

Common co-occurring conditions

- MCAS - most common with hyperadrenergic
- EDS
- Sjogren's and Celiac
- SIBO
- Small fiber neuropathy - neuropathic POTS

Nutritional interventions

- Increase sodium and electrolytes (hypo and neuro)
 - 3-10 g sodium per day
 - Some recommend up to 12 g sodium
- High fluid intake
 - 2-3 L fluids per day
- Small, frequent meals
 - Lower in fat and fiber
- Focus on meal hygiene
 - Chew food to applesauce consistency
 - Eat sitting in upright position
- Reduce high glycemic index foods

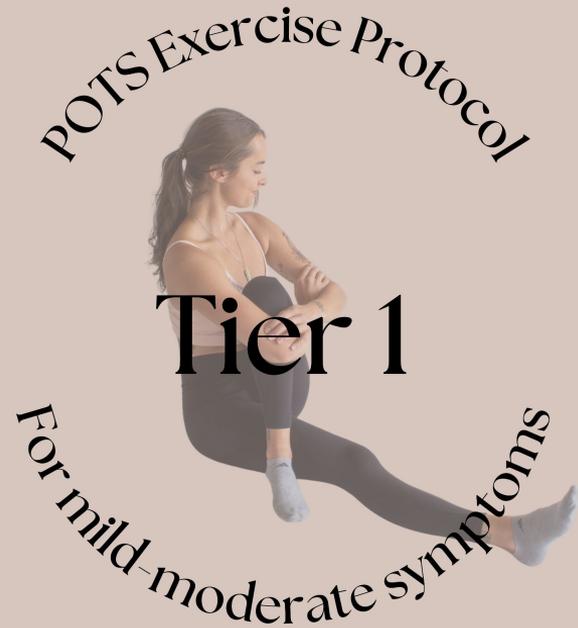
Lifestyle interventions

- Compression socks/leggings (except with hyper)
- Avoid long periods of sitting or standing
- Avoid standing up too quickly
- Utilize a heart rate monitor
 - Helps with pacing
- Stay cool
- Schedule events later in the day



Movement interventions

- Pace yourself with exercise and day-to-day activity
 - Take frequent breaks
- Systematic movement programs to slowly increase tolerance to exercise and position change
 - Begin with all seated movements, low intensity cardio, move to more upright seated movements and add some weights, finally fully standing cardio and weights, increasing intensity over time
 - My POTS Protocol is a 3 month program utilizing these principles



What providers can help POTS patients?

- Cardiologists: If very high HR/BP involved and medication is needed
- Neurologist
- Dietitian: to provide nutritional recommendations and support
- Well-trained PT or personal trainer for improving movement capacity



Assessment

- What are the criteria for a POTS diagnosis?
- Which type of POTS is associated with high blood pressure?
- Which types of POTS are associated with lower BP?
- What are 3 most commonly co-occurring conditions?
- What nutritional interventions can dietitians recommend to POTS patients?

Key takeaways

- POTS is being diagnosed more than ever
- 3 different types, each treated slightly differently
- Symptoms can vary greatly in severity - refer if out of your comfort zone



Questions?

Thank you!



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Sarah Criscuolo



References

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