

# POTS

POSTURAL ORTHOSTATIC TACHYCARDIA SYNDROME

## Short Treatment Guide

### What is POTS?

**POTS is a type of autonomic dysfunction.** When a healthy individual stands up, gravity pulls blood down from the chest into the abdomen and legs. To adapt to this blood shifting, their blood vessels squeeze more tightly, and their heart rate increases a bit. These changes in the body maintain blood supply to the heart and brain. In POTS patients, these changes are abnormal, causing an increase in heart rate of 30 beats/min or more (40 beats/min or more for those age 12-19 years), without a decrease in blood pressure.

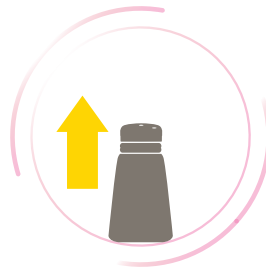
### What can I do to help with my POTS symptoms?



#### Increase WATER Intake

**Drinking more fluid (3L/day) will help increase your blood volume.**

This will help your body more easily adapt to standing and may reduce your POTS symptoms. These should be water or water equivalents.

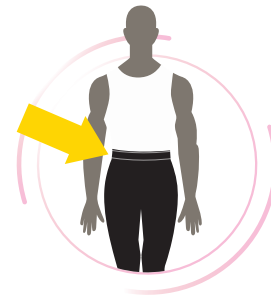


#### Increase SALT Intake

Some POTS patients have less blood in their bodies, compared to people without POTS. They also have higher levels of a chemical messenger called norepinephrine. Norepinephrine increases heart rate.

**Increasing your salt intake may help improve POTS symptoms by increasing the amount of blood in your body.**

Additionally, a high salt diet reduces the amount of norepinephrine in the body. This helps reduce the heart rate to normal levels.



#### Wear COMPRESSION Garments

When you stand up, gravity shifts blood from the heart level to below the heart level. With less blood coming back to the heart, sometimes the heart rate must be increased to maintain the blood flow.

**Compression garments help push blood that has pooled in the lower body back to the heart.**

If you are going to try this, you **MUST** squish the abdomen. Garments that include compression of your abdomen are the most effective. Below the knee socks are not effective. This is because there is more blood pooled in the abdomen than there is in the lower leg.



## EXAMPLE EXERCISE TRAINING PROGRAM

Recumbent Bike 30 mins		Swim 30 mins		Row 30 mins		Swim 30 mins  *ADD LEG WEIGHTS
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**Non-upright exercise at first** (and maybe forever). Being upright, let alone upright and exercising, can be difficult for POTS patients. Try rowing, recumbent cycling or swimming!

**Exercise at least every other day** (4/week). Many patients will try for 5-6/week knowing that “life gets in the way”. Be patient! It can take up to 6 weeks to notice improvement.

**Manage expectations** You will likely feel WORSE initially. You may feel more fatigued and worn out. This will improve as you become more fit.

**Add leg strengthening exercises.** Increasing your muscle mass in your thighs can help your body return blood to the heart more effectively when standing. Strength training is not a replacement for aerobic exercise, but can be added as an additional step.

NOTES:




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### PRO TIPS

- \* **DRINK 3L of water daily** Carry a 750mL water bottle with you everywhere to remind yourself to drink water. Drinking from a large water bottle will help you keep track of how much water you intake throughout the day by paying attention to how many times you refill. 
- \* **EAT 10-12 grams of salt daily** Add salt to meals or to hot water and lemon juice. Two teaspoons of salt contain about 10-12 g of salt (4-5 g of sodium). Measure that amount into a Ziploc bag and incorporate it into your foods and fluids. Visualizing the amount you need will ensure you reach your goal. Eating sodium rich foods like nuts, cheese and soup will also help. 
- \* **Non-upright EXERCISE 30 minutes, 4 times a week** Set a time of day to exercise and try not to vary too much. This will prevent you from putting off exercise until the next day. 
- \* **WEAR COMPRESSION** A POTS compression garment should have a strength of 20-30mmHg or 30-40mmHg. Ask your doctor about medically prescribed compression or purchase athletic style compression (generally 15-20mmHg). These garments are especially important on days where you are on your feet for extended periods of time. 