

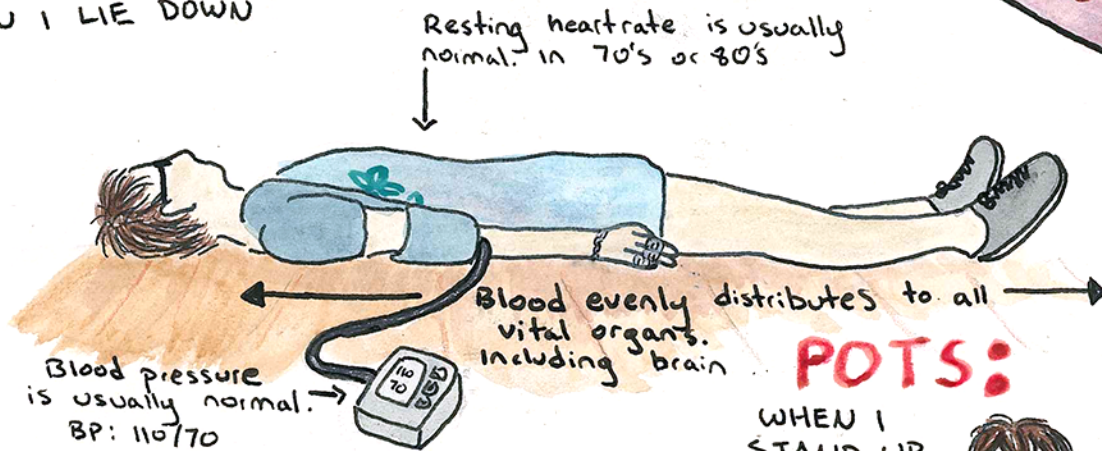
# POTS: A PERSONAL DIAGNOSIS AND TREATMENT STORY

BY RACHEL DL @wordcalculator

IN JULY OF 2018, ABOUT A MONTH BEFORE I BEGAN MY SOPHOMORE YEAR OF COLLEGE, I WAS DIAGNOSED WITH A NEUROLOGIC DISORDER CALLED POSTURAL ORTHOSTATIC TACHYCARDIA SYNDROME (POTS).

## POTS:

WHEN I LIE DOWN

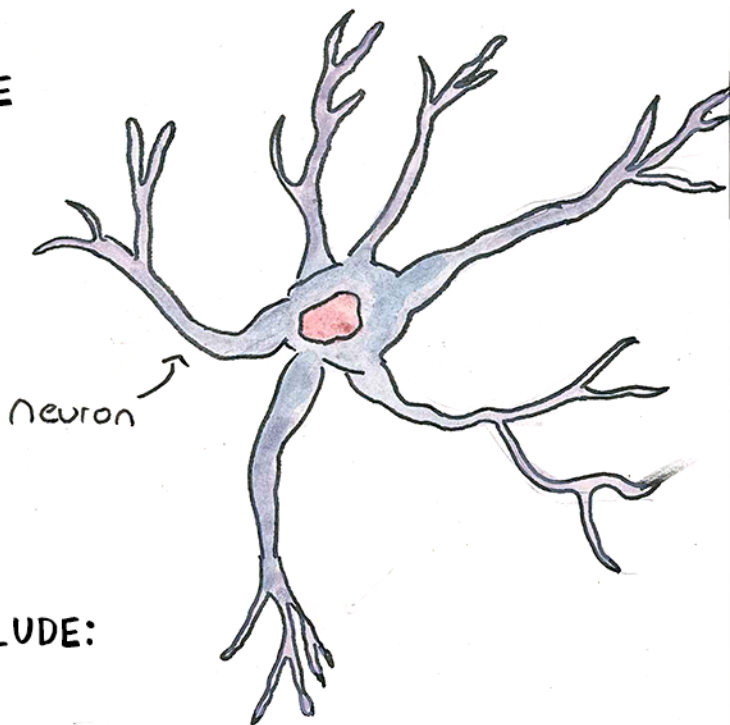


POSTURAL ORTHOSTATIC TACHYCARDIA SYNDROME, ALSO KNOWN BY ITS ABBREVIATION, POTS, IS THE NAME FOR THE CLUSTER OF SYMPTOMS THAT OCCUR WHEN THE BODY'S AUTONOMIC NERVOUS SYSTEM FAILS TO WORK AS IT SHOULD.

WHEN I STAND UP



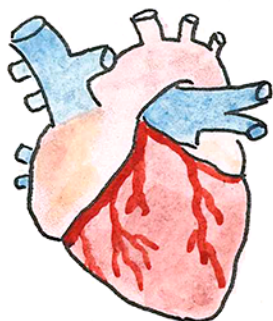
THE AUTONOMIC NERVOUS SYSTEM IS THE BODY'S "AUTOPILOT" (1). IT CONTROLS ALL THE BODY FUNCTIONS WE DON'T HAVE TO THINK ABOUT, THAT SHOULD HAPPEN AUTOMATICALLY.



MAJOR FUNCTIONS THE AUTONOMIC NERVOUS SYSTEM (ANS) CONTROLS INCLUDE:



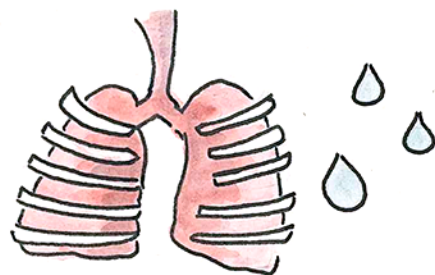
BLOOD PRESSURE



HEARTRATE



DIGESTION



RESPIRATION

SWEATING

WHEN THAT SYSTEM FAILS TO WORK PROPERLY:

## DYSAUTONOMIA

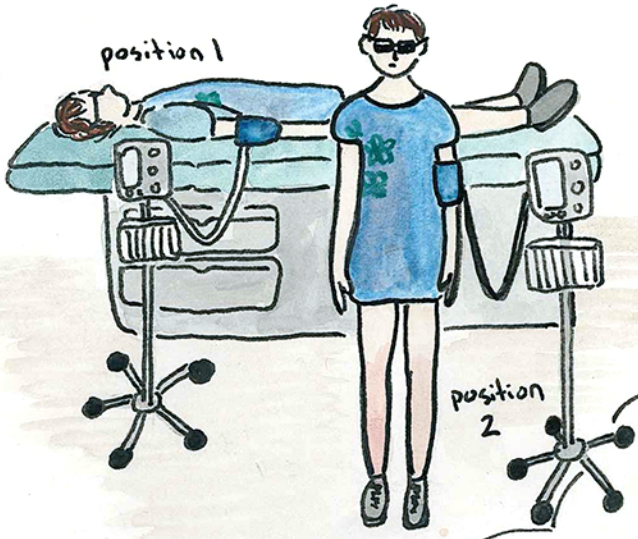


SYMPTOMS MAY INCLUDE DIZZINESS, SEVERE FATIGUE, SHORTNESS OF BREATH, FAINTING, GI TRACT SHUT DOWN, AND MORE. HOWEVER, THE PRIMARY INDICATOR THAT SOMEONE HAS POTS, ONE OF THE MANY FORMS OF DYSAUTONOMIA, IS AN ABNORMALLY ELEVATED HEARTRATE RESPONSE TO STANDING.

AS A RESULT...

# THE MOST COMMONLY USED DIAGNOSTIC TESTS INCLUDE:

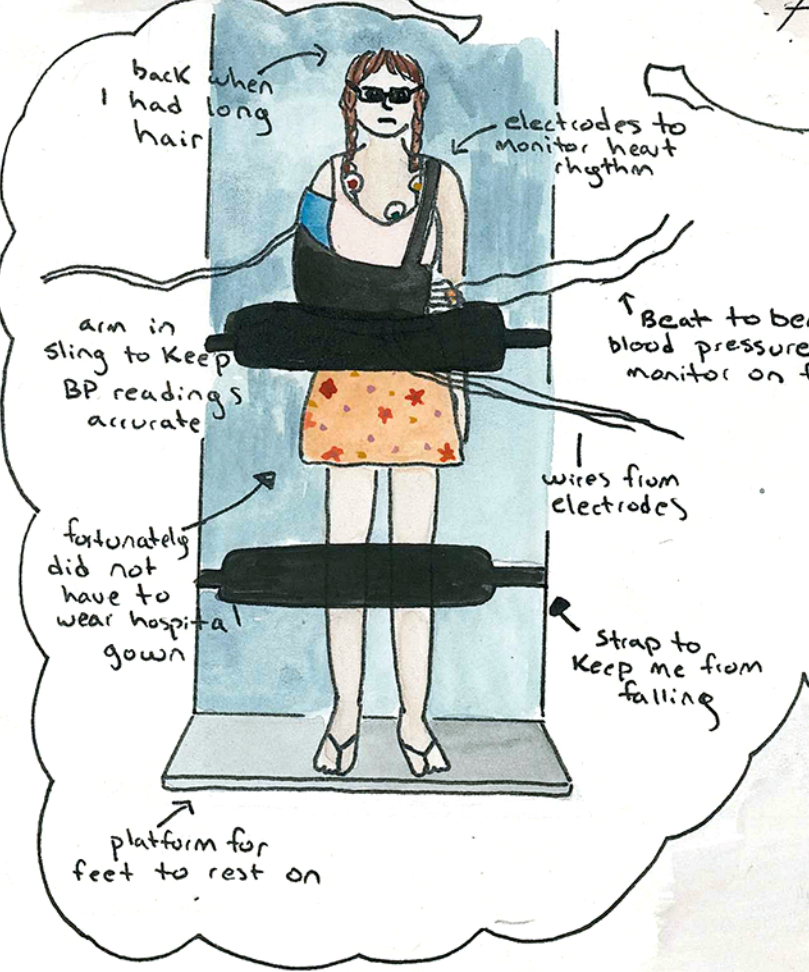
## 1 "POOR MAN'S TILT"

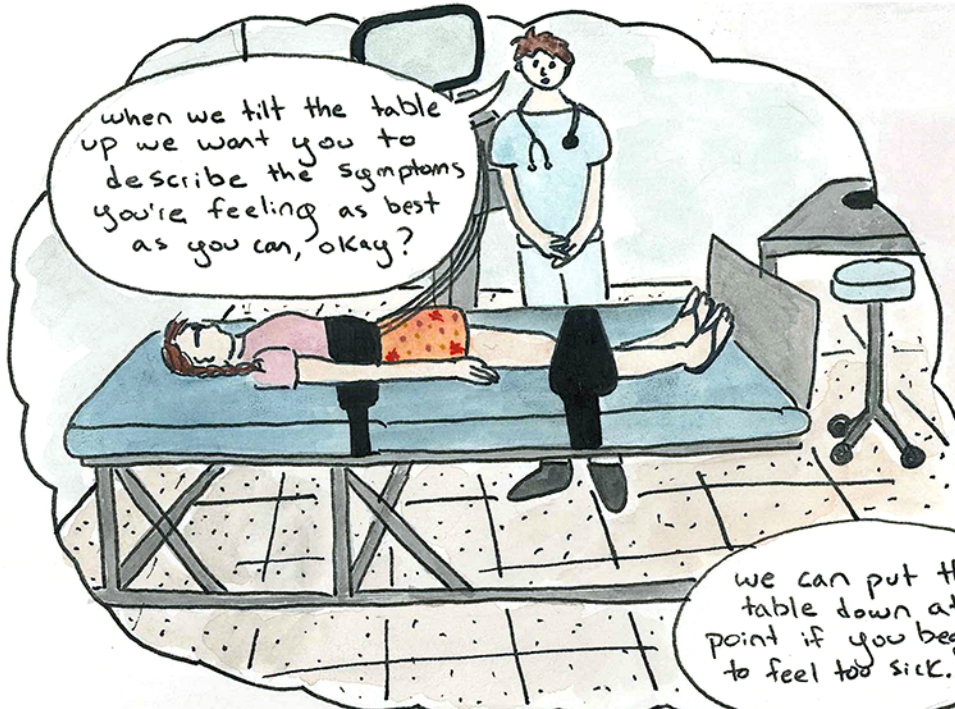


PATIENT LIES DOWN FOR SEVERAL MINUTES. PATIENT STANDS UP FOR SEVERAL MINUTES. VITAL SIGNS ARE TAKEN IN BOTH POSITIONS AND MONITORED FOR SIGNIFICANT CHANGES.

## 2 THE TILT TABLE TEST: JULY 18, 2018:

We start this test with you just laying on the table here for several minutes while we monitor your vital signs.



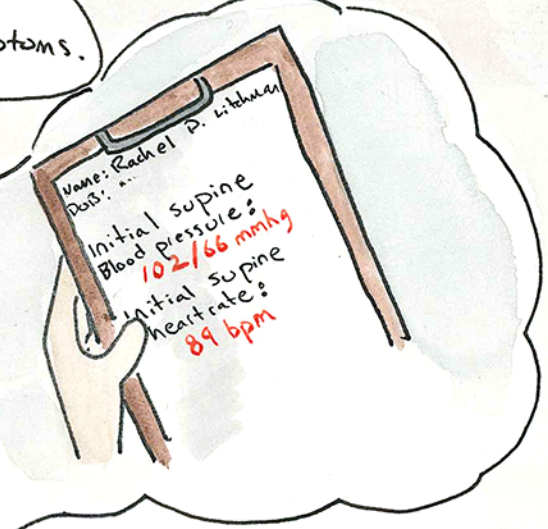


when we tilt the table up we want you to describe the symptoms you're feeling as best as you can, okay?

we can put the table down at any point if you begin to feel too sick.



Alright, our NP is here. we're going to tilt you up now. The nurse practitioner will be recording your vital signs and symptoms.

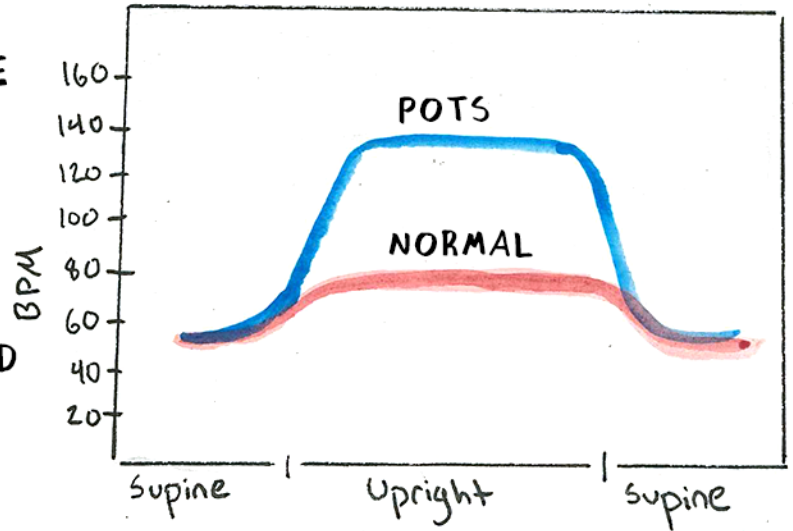


Name: Rachel D. Litchman  
DOB: ...  
Initial supine Blood pressure: 102/66 mmHg  
Initial supine heart rate: 89 bpm



ONE OF THE MAJOR DIAGNOSTIC CRITERIA THAT CAN BE OBSERVED ON THE TILT TABLE TEST IS A HEARTRATE THAT GOES UP  $\geq 30$  BPM FROM LYING DOWN TO STANDING.

A NORMAL HEARTRATE RESPONSE FROM LYING DOWN TO STANDING IS USUALLY A BRIEF INCREASE OF AROUND 10-20 BPM. THIS IS BECAUSE THE BODY MUST COMPENSATE FOR THE DOWNWARD FLOW OF BLOOD CAUSED BY GRAVITY (2).

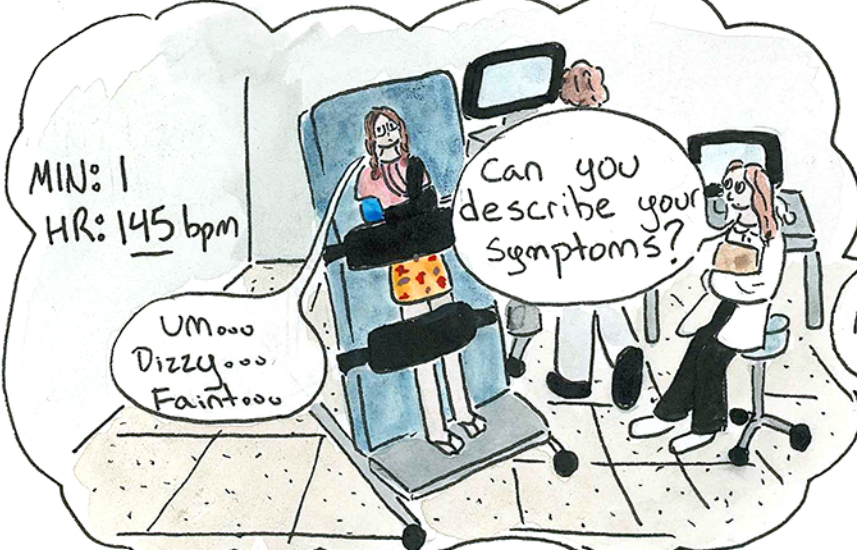


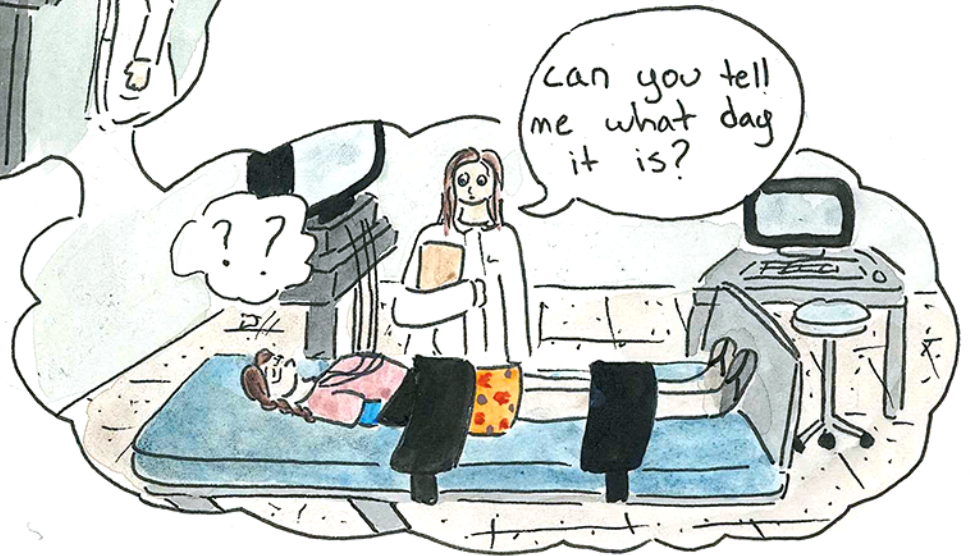
HOWEVER, WHEN SOMEONE HAS POTS, THIS COMPENSATORY MECHANISM, CONTROLLED BY THE AUTONOMIC NERVOUS SYSTEM, IS FAULTY.

AS A RESULT, WHEN SOMEONE WITH POTS STANDS (OR EVEN SITS!) UP...

HEART RATE GOES UP ↑

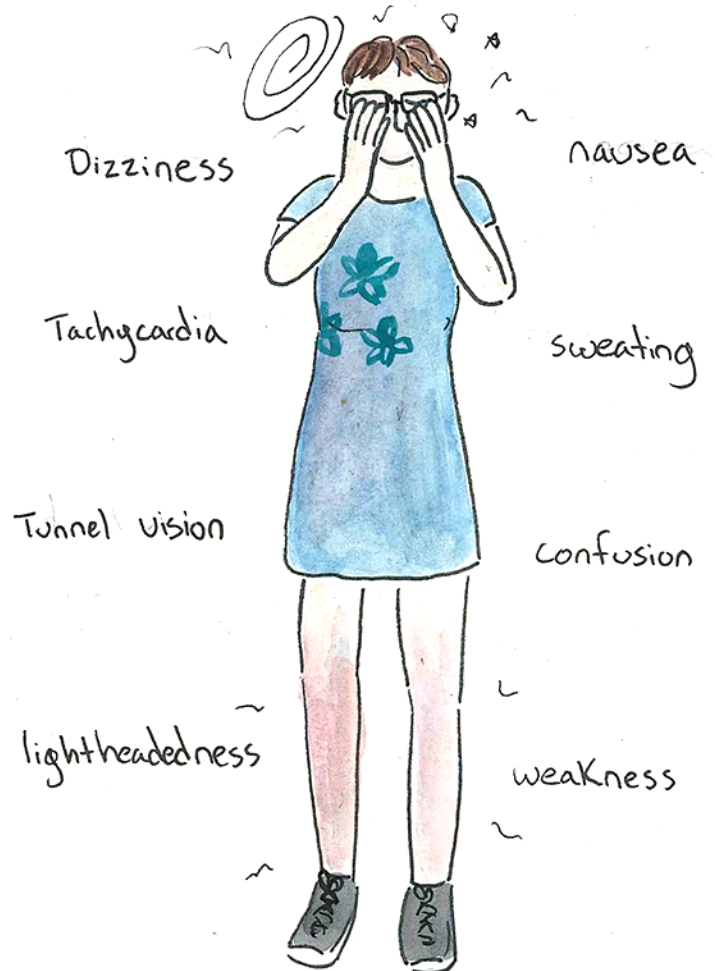
AND UP ↑





SOME PEOPLE WITH POTS FAINT AFTER PROLONGED PERIODS OF STANDING (3). HOWEVER, OTHERS MAY NOT FAINT BUT RATHER EXPERIENCE SOMETHING CALLED PRE-SYNCOPE.

### PRE-SYNCOPE SYMPTOMS



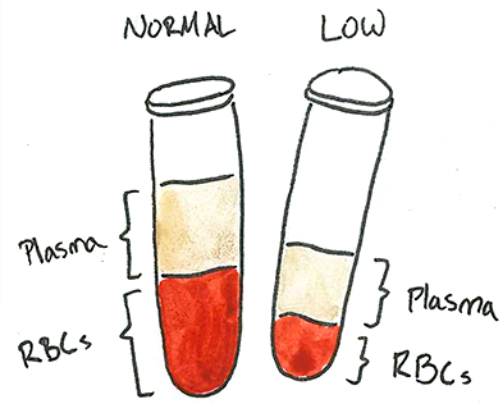
### PRE-SYNCOPE



WHAT ARE THE MECHANISMS THAT CAUSE THIS TO OCCUR?

\*syncope is a specific type of fainting related to not enough blood reaching the brain.

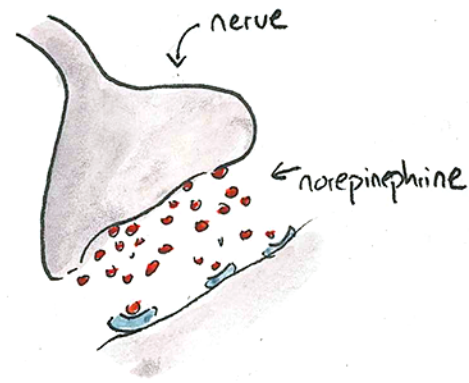
THERE IS STILL A LOT THAT IS UNKNOWN ABOUT POTS, BUT WHAT WE DO KNOW IS THAT...



70% OF POTS PATIENTS HAVE LOWER THAN NORMAL BLOOD VOLUME [4]



50% OF POTS PATIENTS HAVE DAMAGE TO PERIPHERAL AUTONOMIC NERVES [4]



AND 30% - 60% OF POTS PATIENTS HAVE HIGHER THAN NORMAL LEVELS OF THE HORMONE NOREPINEPHRINE UPON STANDING [5]

THIS CAN MEAN **HIGH HEART RATES, CHRONIC DEHYDRATION, AND POOLING OF BLOOD IN THE LOWER EXTREMITIES.**

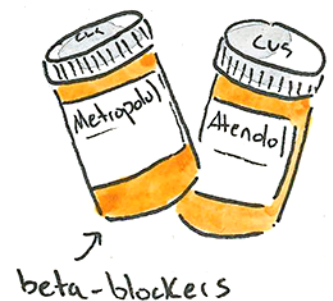
KNOWING THIS INFORMATION HAS HELPED DOCTORS FIND MORE EFFECTIVE TREATMENTS, INCLUDING:



INCREASED SALT AND FLUID INTAKE AND MEDICATIONS THAT DRAW SALT INTO THE VEINS TO INCREASE BLOOD VOLUME.

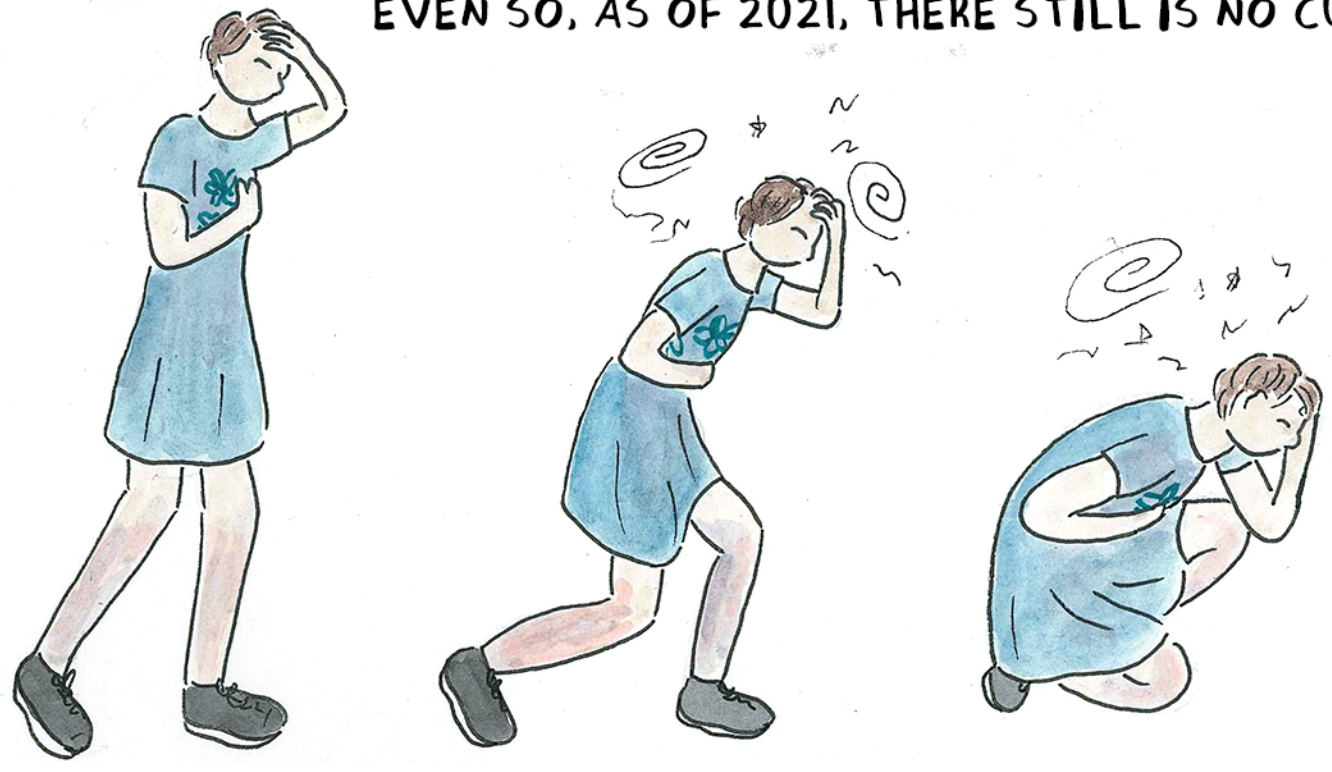


MEDICATIONS, EXERCISES, AND COMPRESSION GARMENTS, WHICH CAN COMBAT BLOOD POOLING.



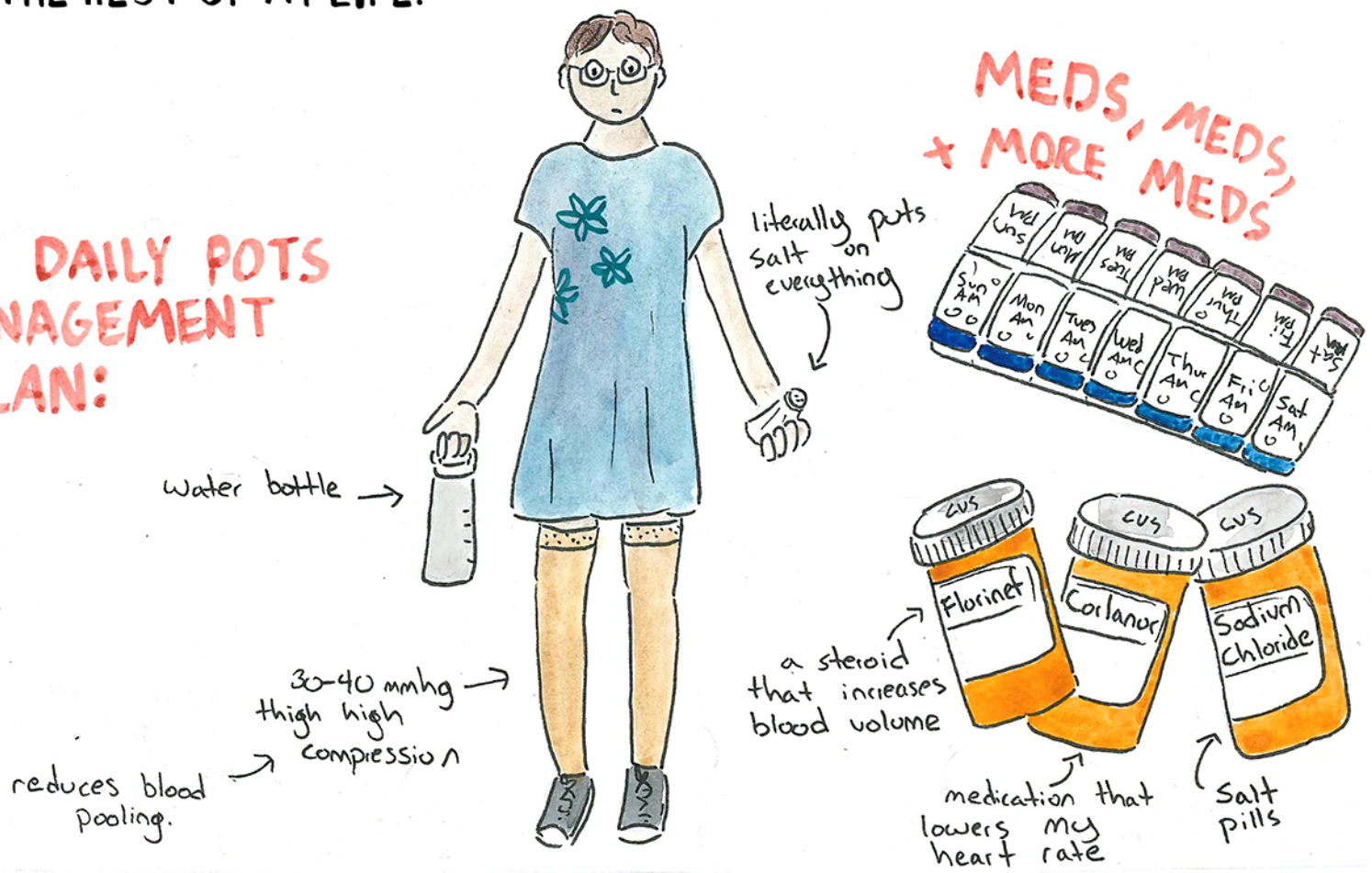
MEDICATIONS TO TARGET HIGH HEART RATES AND LOWER LEVELS OF NOREPINEPHRINE.

EVEN SO, AS OF 2021, THERE STILL IS NO CURE.



POSTURAL ORTHOASTATIC TACHYCARDIA SYNDROME AND THE RELATED DYSFUNCTION OF THE AUTONOMIC NERVOUS SYSTEM ARE CHRONIC CONDITIONS. THIS MEANS I WILL LIKELY BE LIVING WITH POTS FOR THE REST OF MY LIFE.

### MY DAILY POTS MANAGEMENT PLAN:





IT HAS BEEN 3 YEARS SINCE MY INITIAL DIAGNOSIS, AND WHILE MY POTS HAS CERTAINLY NOT BEEN EASY TO LIVE WITH, IT'S BEEN A **RELIEF** TO KNOW THAT MY SYMPTOMS AREN'T JUST "IN MY HEAD."



JUST REMEMBER, EVEN THOUGH POTS PATIENTS MAY FALL UNDER THE SAME DIAGNOSTIC UMBRELLA, NO TWO EXPERIENCES ARE THE SAME.

# REFERENCES

- (1) The Nemours Foundation. (2018, April). Postural Orthostatic Tachycardia Syndrome (POTS). Kids Health. [http://kidshealth.org/en/parents/pots.html#:~:text=Postural%20orthostatic%20tachycardia%20syndrome%20\(POTS\)%20is%20a%20disorder%20that%20can,%20L%20blood%20pressure%20and%20breathing.](http://kidshealth.org/en/parents/pots.html#:~:text=Postural%20orthostatic%20tachycardia%20syndrome%20(POTS)%20is%20a%20disorder%20that%20can,%20L%20blood%20pressure%20and%20breathing.)
- (2) Raj S. R. (2006). The Postural Tachycardia Syndrome (POTS): pathophysiology, diagnosis & management. *Indian Pacing and Electrophysiology Journal*, 6(2), 84-99.
- (3) Stewart J.M. (2009). Postural Tachycardia Syndrome and Reflex Syncope: similarities and differences. *The Journal of Pediatrics*, 154(4), 481-485. <https://doi.org/10.1016/j.jpeds.2009.01.004>
- (4) Safavi-Noeini, P., & Razavi, M. (2020). Postural Orthostatic Tachycardia Syndrome. *Texas Heart Institute Journal*, 47(1), 57-59. <http://doi.org/10.14503/THIS-19-7060>
- (5) Nicholson, L. (2021, January 2). Causes/Subtypes. POTS UK. <http://www.potsuk.org/causes-subtypes>.