

## **Fainting (Syncope) and Feeling faint (pre-syncope)**

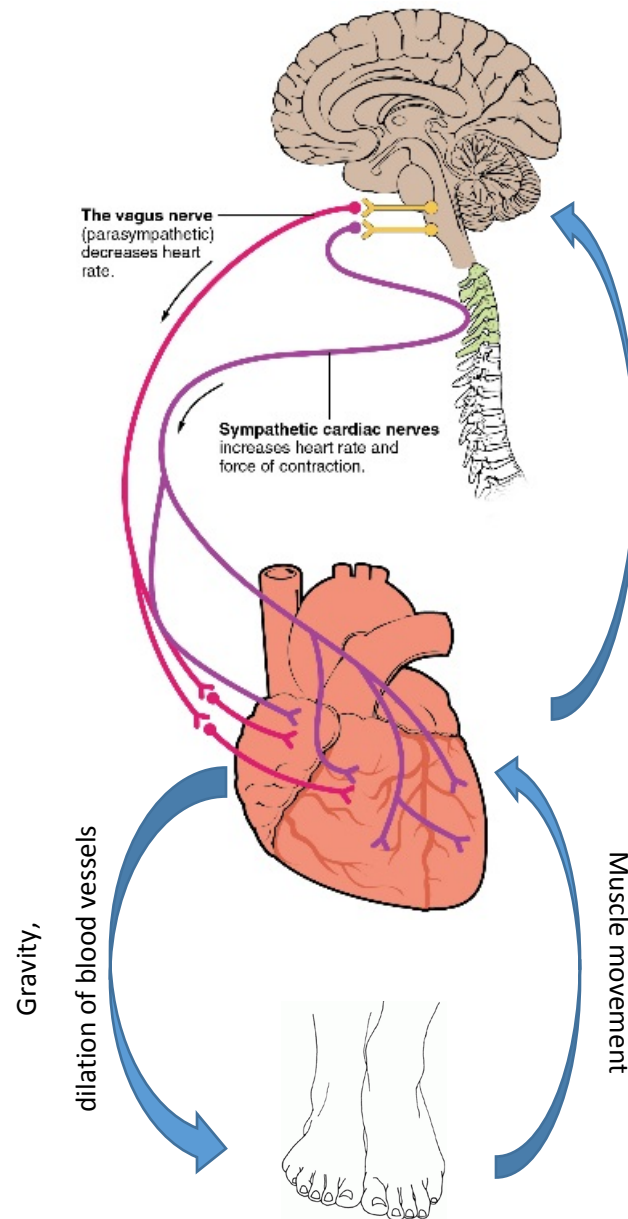
1. **Syncope and Presyncope are quite common** : 35-50% of the population will faint at some time in our life.
2. **It is caused when your brain temporarily does not receive** enough oxygen-rich blood. People can lose consciousness for many different underlying reasons:
  - a. Vasovagal (AKA neurally mediated, neurocardiogenic, reflex, typical, common, or simple syncope, wherein messages from the brain lower the blood pressure or heart rate or both)
  - b. Trauma/injury (such as concussion, etc.)
  - c. Neurological diseases (such as seizures/epilepsy, narcolepsy, autonomic failure, etc.)
  - d. Psychological causes (such as stress, anxiety)
  - e. Heart diseases (such as arrhythmia, heart attack, heart failure, congenital heart disease, etc.)
  - f. Other less common causes (diabetes, pregnancy, etc.)
3. For non-cardiac and non-worrisome fainting spells, **there is almost always a specific and predictable situation or trigger**. That trigger causes your nervous system (brain) to send a message to your other organs (heart and blood vessels) to change *your heart rate, your blood pressure, or both*. It progresses rapidly, then resolves rapidly: you usually feel it coming, and you usually feel better after several minutes once your circulation returns to normal.
4. **Usually it is not dangerous** (unless you injure yourself in a fall or in an unsafe location or activity). Though you feel lousy in the short term, it usually causes no long-term effects.
5. **Why was I referred to a cardiologist?** Simply stated, my job is to help you figure out if your episodes are due to heart disease. Understanding your individual symptoms is the key to figuring this out. As they say, "The devil is in the details." Based on the details of your events, I will make recommendations whether additional cardiac testing is needed. If I uncover clues about other non-cardiac causes, I might recommend that your pediatrician consider other non-cardiac testing also.



## HOW REFLEX SYNCOPE HAPPENS

### Common Triggers and Situations:

- Sitting or standing in one place for more than a few minutes
- Position changes (standing quickly, bending over)
- Heat & humidity (showers!)
- Before or at the start of meals
- Low water intake, skipping meals, poor diet, caffeine
- Strong emotions (such as fear, pain, blood phobia)
- Stretching the back, neck, or arms
- Stimulating the hair (brushing), scalp, or eyes
- Straining (coughing, sneezing, laughing, swallowing, pooping, peeing, blowing a musical instrument, weightlifting, etc.)
- After abruptly stopping vigorous exercise and standing still
- Illness
- Tall & thin
- Athletic, with low resting heart rate
- Menstruation



### What one experiences before falling to the ground unconscious (fainting):

#### Presyncope

- "Off" or ill
- Hot, sweaty, nauseated, stomachache, anxiety
- Dizziness/lightheaded, off balance, needing support, or falling to the knee
- Vision changes (blurry, spots, dark)
- Hearing changes (ringing, muffled)
- Difficulty thinking and speaking
- Pale skin color
- Rapid and shallow breathing

#### Syncope

- Falling limp and unconscious
- Rapid recovery



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## TREATMENTS

Daily prescription medications have their place, but the first step is always natural/non-medication methods. Most kids will feel better if they adhere to these principles and will not require medication.

The goal of treatment is to have fewer and less severe episodes, to feel better, and to make this manageable. It may not be realistic to be 100% cured of these episodes. The key to success is having enough water flowing through your veins and prevent blood pooling, in 3 easy steps:

### 1. Fill your tank

- a. Hydrate, hydrate, hydrate. Water is best, and in combination with something to eat. Electrolyte drinks may be helpful, especially for athletes. Start as soon as you get up in the morning, and keep it up all day, especially prior to, during, and after exercise. Carry, use, and refill a water bottle constantly. Drink at least 64 oz of fluid per day. You'll know when you're drinking enough because you will urinate every 2-3 hours. If you can go all day at school without peeing, you need more fluid.
- b. Increase your sodium intake. Eat salty snacks, or add a little table salt to your meals.
- c. Eat a well-balanced diet: No skipping meals.
- d. Avoid caffeine: This includes sodas, coffee, teas, and so-called "energy drinks" that can damage your heart.

### 2. Move more

- a. Be active: Avoid lying down during the day, sitting for too long in one place, and naps.
- b. Transition gradually: Before you stand up, pump and flex your feet and legs. Then rise slowly. Pause in place while still wiggling and flexing your legs. Then go on your way if you feel fine.
- c. Antigravity counter maneuvers: If you must stand in place, flex your muscles. Put your weight on your toes, or shift your weight back and forth, or cross your legs, or clench your abdomen and buttocks. Consider wearing compression stockings.
- d. Exercise: Get at least 30 minutes of sustained "cardio"/aerobic exercise at least 5 days/week.
- e. Cool down: After vigorous exercise, don't just stop moving. Keep walking. In the same way you would do a "warm up" activity, do a "cool down" activity.

### 3. Identify and avoid your triggers

- a. Pay attention and figure out what things trigger your symptoms.
- b. Do everything you can to lessen or avoid those triggers.

**Even if I do everything above, what should I do if it still happens?**

**Know that this is likely to return.** If you feel it coming on, then follow these 3 easy steps:

1. **Recognize** the warning signs for what they are: a signal that you will faint if something does not change quickly.
2. **Respond.** If you feel like you might pass out, lie down (or at least sit down) immediately, in a safe place. Remember: fainting doesn't hurt you, but *falling can hurt you*.
3. **Stay down.** If someone faints, they should stay down for 5-10 minutes until your circulation returns to normal. Do not try to stand until you feel mostly back to baseline.



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