Autonomic Dysfunction

Your autonomic nervous system (ANS) is responsible for spontaneous bodily functions such as regulating body temperature, blood pressure, heart rate, and breathing. You normally don't have to think about these things because your ANS does it automatically. However, some people recovering from COVID experience an improper functioning of the ANS, a medical syndrome called *dysautonomia* or *autonomic dysfunction*.

A wide range of common Long COVID symptoms could be related to dysautonomia.

- Elevated heart rate (tachycardia)
- Heart palpitations or chest tightness
- Shortness of breath
- Fatigue and exercise intolerance
- Attention problems
- Dizziness and imbalance
- Anxiety
- Constipation
- Diarrhea
- Sweating or skin color changes

Dysautonomia is not a single illness. Your medical provider will evaluate you for several types of dysautonomia and make individualized recommendations based on your symptoms. Long COVID is most commonly associated with two types of dysautonomia:

- *Postural orthostatic tachycardia syndrome (POTS)* – characterized by a sustained heart rate elevation when sitting upright and/or standing.
- *Inappropriate sinus tachycardia* – involves heart rate elevation both with rest and activity; sometimes includes palpitations or other distressing symptoms.

Diagnosis of dysautonomia can happen in different ways. Your medical provider may make an initial diagnosis based on your description of symptoms and a physical examination. They may ask you to track your heart rate and/or blood pressure at home with a device. Additionally, you may be asked to perform a specialized standing test or be referred for evaluation with a cardiologist (tilt table testing).

Want more information?

1. Dysautonomia International - https://www.dysautonomiainternational.org/
2. Long COVID Physio - https://longcovid.physio/dysautonomia-pots

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Autonomic Dysfunction

Certain dietary and lifestyle changes may help people with Long COVID dysautonomia to reduce and manage their symptoms. Your medical provider will provide individualized recommendations, though the following is a list of commonly used techniques.

Dietary considerations:

- **Increase fluid and electrolyte intake.** Typical goals are consuming two liters of fluid (mostly water) and adding extra salt (4,000 mg sodium / 1.5 - 2 teaspoons) each day. Salty snacks to try include nuts, seeds, crackers, pretzels, salami, cheese, popcorn, soup, pickles, and olives. Some people also benefit from electrolyte drinks (examples include NormaLyte, Liquid IV, Vitassium, LMNT, Nuun).
- **Eat smaller meals and minimize carbohydrates.** Try eating 5-6 snack-sized meals throughout the day in lieu of two or three large ones. Also, try switching simple carbohydrates (like refined sugars and flours) for more complex ones (whole grain).
- **Consider new food sensitivities.** Pay attention to how your body reacts to gluten and daily products. Minimize or eliminate if needed.
- **Avoid alcohol and minimize caffeine.** They can worsen dehydration and symptoms.

Lifestyle considerations:

- **Use compression stockings.** The most effective types are listed at 30 mmHg of pressure and thigh height, though you may use a lighter degree of compression or a shorter style.
- **Try to exercise regularly.** Light reclined aerobic exercises, such as swimming, rowing and recumbent bicycling, as well as strengthening of the abdomen and legs, are most beneficial.
- **Wear a heart rate tracker.** Using a device which tracks heart rate can give immediate feedback on how your body is responding to activity, allowing you to make quick adjustments.
- **Elevate the head during sleep.** Raise your bedframe with bricks, cinder blocks, or heavy books so that your feet rest lower than your hips.
- **Consider a shower chair.** Showering can be a challenging activity due to standing, arm movements, and heat. Using a seat can help this to become more manageable.
- **Watch for your triggers.** Symptoms can be exacerbated by a variety of situations and activities. It's helpful to find out what worsens your symptoms so you can avoid or reduce a flare-up by planning ahead.

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