

You are what you eat - a guide to healthy eating for patients with vasovagal syncope and PoTS

This information sheet provides dietary information and advice for patients and carers suffering with syncope or PoTS.

Blood pressure and pulse rate can be influenced by what we consume. These changes can be quite dramatic in a patient with vasovagal syncope or postural tachycardia syndrome (PoTS). This can work to the advantage or disadvantage of the patient.

Fluids

It has long been recognized that people who are dehydrated are prone to fainting. When fluid intake is insufficient, or fluid loss is excessive, the volume of blood circulating in blood vessels becomes reduced and blood pressure falls. An average healthy adult requires at least 1.5 liters of fluid per day. When exercising or in a hot environment, considerably more may be needed.

Patients with PoTS are often hypovolemic. This means that their blood volume is reduced in relation to the capacity of their blood vessels. Blood has a tendency to pool (collect) in hands, feet and abdominal (splanchnic) blood vessels. Increased fluid intake can boost blood volume and improve symptoms. Patients with vasovagal syncope often also pool blood. In patients with these conditions, fluid intake of over 2 liters per day is generally recommended and more on a hot day. If exercising, it is probably best to boost your fluid intake even before you start.

Monitoring: You may find it helpful to drink from a refillable sports bottle. This allows you to keep track of how much you have consumed, as it is very easy to underestimate this when you are busy. Younger patients are often advised to drink sufficient fluids so that their urine is pale yellow in color, i.e. not dark yellow or brown.

Alcohol: It is important to avoid excess alcohol consumption as alcohol dilates (opens up) blood vessels and can lower blood pressure and provoke syncope. Patients with PoTS are often alcohol intolerant. One glass can feel like two!

Sports drinks: Some patients find it useful to drink pre-packaged sports rehydration drinks containing electrolytes and glucose when they are at risk of developing symptoms. People who drink these in larger quantities should consider sugar free varieties to avoid excessive weight gain and tooth decay.

Rapid water drinking: Interestingly, in patients whose autonomic nervous system does not work properly, blood pressure can increase when drinking water, before the water leaves the stomach to enter the blood stream! This is called the 'pressor effect' and is thought to be triggered by stomach nerves sensing that the stomach has been stretched and triggering the sympathetic nervous system to raise blood pressure. If two glasses of water are swallowed rapidly, the effect will start within five minutes and may relieve symptoms of vasovagal syncope. In PoTS, the heart rate has been shown to drop.

Caffeine: Caffeine ingestion has been shown to produce a small rise in blood pressure. This may be of some use in patients with low blood pressure and syncope. However, it can also result in tachycardia (fast heart rate) and palpitations. Caffeine may encourage fluid loss. Patients appear to have mixed experiences with caffeine. Some find it helpful and some feel worse. Caffeine is found in coffee, tea, cola, energy drinks and even chocolate. Experiment!

Food

Salt: Patients with a tendency to low blood pressure and syncope are often advised to increase their salt intake. Patients with PoTS (except hyperadrenergic PoTS) may also benefit.

Always ask your healthcare professional (e.g. your doctor) if this is advisable. No-one really knows how much salt is useful, but 6g per day may be recommended for an adult. There is 6g of salt in a level teaspoon.

Some patients eat salty food such as crisps, salted nuts, bacon, sausages, feta, marinated olives,

vegetable extract, instant noodles, and packaged soups. Fast foods are often salty, but they also contain unhealthy fats and should be limited. It may be helpful to keep a little tub of salt in the car or handbag or 'acquire' tiny sachets from fast food restaurants, and add it to your food if needed. Salt tablets can be useful, although they can cause nausea as salt can irritate the stomach lining.

In the US, Slow Sodium is available on prescription and to buy. It has a wax coating which delays salt release until the tablet is in the small intestine, thus reducing nausea. Each tablet contains 600mg (ten tablets are equivalent to a teaspoon of salt). Salt tablets are not always absorbed and may help to retain fluid in the bowel, which may counteract any possible beneficial effect. Again, medical advice should be sought before use.

It may be helpful to combine both table salt and salt tablets. Take Slow Sodium with a high fiber cereal in the morning or in situations when it is difficult to add salt to food (e.g. when traveling). Add table salt to food at other times. Some medications used for PoTS and vasovagal syncope (e.g. Fludrocortisone) may not work unless the fluid and salt intake are sufficiently high.

Carbohydrates: Many patients with PoTS experience deterioration in their symptoms after meals. This is because blood is diverted to the splanchnic blood vessels, which supply the organs in the abdomen in an effort to digest food. Meals rich in refined carbohydrate (e.g. sugars and white flour) worsen this problem.

It is best to eat 'low GI foods'. This means that the food is digested more slowly and does not therefore produce rapid peaks in blood sugar levels. Low GI foods are often lower in carbohydrate and higher in fiber content. Examples include: bran or oat breakfast cereal, nuts, yoghurt, beans, fruit and vegetables, brown rice and pasta, wholegrain bread.

Fiber: It is important to avoid constipation with vasovagal syncope. Straining can induce fainting in susceptible patients. Eat high fiber foods such as bran cereal, fresh and dried fruits, vegetables, beans and lentils, whole meal bread, brown rice,

and pasta. Read the food label! Plenty of fluids also help to prevent constipation.

Potassium: Patients taking fludrocortisone for PoTS and vasovagal syncope are prone to losing potassium. This can be dangerous and in this situation potassium levels should be monitored by blood tests. If levels tend to be low, eat food containing potassium (e.g. bananas, avocados, dates, beans and lentils, spinach, mushrooms, melon, and dried fruits). If potassium levels are very low, medication may be recommended.

When to eat: Many patients with PoTS and vasovagal syncope find that their symptoms are worse if they eat large heavy meals or become hungry. It is best to eat little and often i.e. graze all day long. Reserve refined carbohydrates/high GI foods for evenings or times when you can lie down and rest afterwards. It can be useful to keep long-life, low GI food at work or in your car and handbag for those moments when you are caught out. Examples might be low fat flapjacks, oatcakes, nuts, malt loaf, dried fruits, and dark chocolate (over 70% cocoa solids). Try to keep your weight within normal limits (BMI 18.5 to 25). Low body weight can lower blood pressure and make you prone to fainting.

Why should you have to watch what you eat and drink when tired and unwell? This is all about a balanced diet which, with the exception of high salt intake, is what everyone should aspire to. It is healthy, you feel better and it can be rewarding. It also gives you some control over your symptoms.

Always consult with your healthcare professional before making dietary changes, especially if you take medications.



Acknowledgements: STARS would like to thank all those who helped in the development and review of this publication. In particular, thanks are given to Dr Lesley Kavi, Dr Adam Fitzpatrick, Dr Michael Gammage, Prof Richard Sutton and Dr Charlotte D'Souza and Francesca Lobban.