



Syncope Trust And Reflex anoxic Seizures

Reflex Syncope (Vasovagal Syncope)



Working together with individuals, families and medical professionals to offer support and information on syncope and reflex anoxic seizures

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Glossary of terms

Reflex syncope

Reflex syncope is a transient condition resulting from intermittent dysfunction of the autonomic nervous system, which regulates blood pressure and heart rate.

12-lead ECG

12-lead electrocardiogram (ECG) is used to record heart rhythms whilst in hospital.

Heart rhythm monitor

Heart rhythm monitors are used to record heart rhythms for up to a week whilst away from hospital.

ILR

Implantable loop recorder (ILR) is a small thin device inserted under the skin to record heart rhythms.

The device can remain in place for up to three years.

Tilt table test

A tilt table test is an autonomic test used to induce an attack whilst connected to heart and blood pressure monitors.

Collapse

Abrupt loss of postural control

Blackout/T-LoC

Transient loss of consciousness without neurological deficit

Syncope

T-LoC due to transient global impairment of cerebral perfusion

Epilepsy

Repeated episodes of excessive asynchronous discharge of cortical neurones leading to a clinical event

Psychogenic blackouts

A cause of apparent blackouts without evidence of syncope or epilepsy

Fall

Patient goes down freely under the influence of gravity

TIA

TIA (transient ischaemic attack) is caused by a temporary disruption in the blood supply to part of the brain (also known as a mini stroke)

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What is reflex syncope?

SYNCOPE (sin-co-pee) is a medical term for a blackout caused by a sudden lack of blood supply to the brain. Reflex syncope is one of the most common forms of syncope, sometimes it is called neurally mediated syncope, or vasovagal syncope. Reflex syncope is usually the result of a transient disturbance of the mechanisms that maintain blood pressure and brain blood flow. In reflex syncope, blood that should be going to the brain is diverted to muscles. In an upright person, the brain quickly shuts down and consciousness is lost.

In all of us, autonomic sympathetic nerves pass from the brain to blood vessels that maintain blood pressure. In reflex syncope a poorly understood reflex suddenly withdraws the effect of these nerves, and blood pressure falls abruptly. Another part of this reflex involves the vagus nerve from the brain. When the vagus nerve stimulates the heart, it slows down. The activation of the vagus nerve can be very abrupt, causing the heart to slow suddenly, or even stop. The longest period of time that a heart has stopped during reflex syncope is 86 seconds. A fall in blood pressure and heart rate results in a fall in brain blood supply. At very low levels this can cause dizziness, visual disturbances and blackouts. These symptoms are most likely to be a problem when a person is upright (due to gravity further lowering blood pressure), but other factors such as food, heat, exercise, sight of blood and emotional stress can bring it on.

It is very important to make sure syncope and epilepsy are distinguished from each other; syncope

This booklet is designed for patients who have been diagnosed with reflex syncope and their carers.

It contains information on the diagnosis, treatment and management of reflex syncope.



affects 50% of the population but only 0.5-1% are affected by epilepsy.

The reason for confusion is CONVULSIVE SYNCOPE. When the blood suddenly drains from the brain, the brain can be irritated by lack of oxygen and lack of glucose from the blood. A "seizure" can result. A patient may have sudden loss of consciousness, twitching and jerking of the arms, legs and face, and even incontinence of urine or faeces. Patients may have an unusual warning just before, as in epilepsy, and may be confused afterwards, as in epilepsy. In syncope, it is common for people to look very pale, or "like they had died". In epilepsy they will not be pale, but if breathing is affected, a patient may go blue.

A blackout is too often assumed to be due to epilepsy. If you have any doubt, then please look at the STARS Blackouts Checklist which has been written specifically to help doctors and sufferers reach the correct diagnosis for an unexplained loss of consciousness.

What are the symptoms?

Symptoms vary from patient to patient, and from one faint to another but the most common symptoms are light headedness, dizziness, and nausea. Some people will feel very hot and clammy, sweaty and complain of visual and hearing disturbances. Many individuals become very pale. These symptoms are known as 'pre-syncope' and may or may not be followed by a complete blackout.

Some people, particularly older people get very little or no warning symptoms before blacking out.

Some symptoms of fainting may be complex, with no warning and jerking of limbs and even incontinence. Some individuals may take quite a while to come round. The symptoms of some faints can appear like a seizure or fit but they do not have to be due to epilepsy.

How do I obtain a diagnosis?

Reflex syncope is not life-threatening, and with certain measures and sometimes medication, can be controlled. Fortunately the problems can improve with time. However, there are two important concerns. Firstly, some causes of syncope are not benign and can be very dangerous. These mostly occur in older patients but some children and young people can have electrical abnormalities of the heart that should not be overlooked and could be confused with reflex syncope if simple tests are not done. Some of the most important high-risk electrical diseases of the heart can be diagnosed or suggested by an ECG.

Obtaining a correct diagnosis can be achieved by consulting a doctor who is fully aware of the condition and takes a detailed history, a good description of the event by a witness and keeping a diary of events. Every patient who suffers a blackout should be given a 12-lead ECG.

- **12-lead electrocardiogram (ECG)** is done to check for any features on the resting ECG that might suggest a genetic, inherited or familial heart rhythm disorder, and for heart rhythm analysis.

The following tests are sometimes also used to help doctors make a diagnosis:

- **Heart rhythm monitors** are used to record heart rhythms for up to a week whilst away from hospital.
- **Implantable loop recorder (ILR)** is used to monitor heart rhythms for months at a time if the episodes are less frequent than every two weeks. The device can remain in place for up to three years.
- **Tilt table test** is an autonomic test used to induce an attack while connected to heart and blood pressure monitors. Ideally, this test should be performed with other autonomic tests, as these aid diagnosis and also help in treatment, especially in advising on non-drug measures to prevent or reduce blackouts.

What should I do if I feel dizzy or faint?

Immediate action advice

- **Sit down** immediately, draw your knees up and put your head between your legs or
- **Squat** if you can
- **Squeeze**
 - In all cases do **clenching** exercises
 - Clench your fists tight, dig elbows against your side, squeeze your tummy muscles
 - If sitting, raise your heels and squeeze your calf muscles
 - If standing and stable on your feet, cross your legs and tighten all your leg muscles and clench your buttocks
- **Lie down** flat and put your legs in the air, for example against a wall, or ask someone to hold them up for you.

This is the fastest way to get your blood pressure up and stop your symptoms.

- When you feel well, get up cautiously. However, if you have further symptoms you may need to lie down again.

For mild symptoms, the “Squeeze” exercises may be all you need.

What should my friends/family do if I faint?

1. Make sure the area is safe and remove any hazardous objects.
2. Carry out simple first aid checks (airway, breathing and circulation).
It is sometimes hard to check a pulse if the patient has low blood pressure.
3. Do not attempt to sit the patient up, you should place them in the recovery position on their side (to aid breathing).
4. Recovery is normally quite quick, however the patient may feel disorientated, weak or tired for a little while afterwards. The patient may benefit from being able to lie horizontally and getting up slowly.
5. If the patient does not regain consciousness in their normal recovery time, then they should be turned on their back with their legs raised. This will increase blood pressure and improve blood flow to the brain.
6. If recovery is slow, or if the patient feels different from how they normally feel after a faint, then they should seek medical assistance.

What can I do to prevent syncope attacks?

Long term prevention advice

Situations to avoid

- Avoid sitting or standing for long periods of time, for example in a bus, check-out queue or church, particularly in warm weather or hot environments. If you do have to stand still, then clench and unclench your calves or rock forward on the balls of your feet to encourage blood flow. If seated for long periods of time, for example while flying, raise your heels and squeeze your calf muscles frequently, fidgeting can be beneficial.
- Avoid lifting heavy objects or any type of strain on the body. This activity can send messages to slow down your heart rate and therefore lower your blood pressure.

Fluid intake

- Increase the amount of water you drink. Try to drink 3-4 pints (1.5-2.0 litres) of water in the first few hours of the day, then enough to keep your urine clear. If your urine is yellow you need to drink more.

Diet

- Eat regular meals, including breakfast. Eat small meals often and avoid meals with large quantities of carbohydrates (bread, pasta, pastry). Increase your salt intake (only after discussion with your doctor, and never if treated for high blood pressure).
- Caffeine may worsen syncope in some patients; you should try avoiding or limiting your intake of caffeine-containing drinks (coffee, tea and cola-type drinks) to see if this helps your symptoms.
- Avoid excess alcohol. Alcohol will make your symptoms worse. You may find that you can tolerate a small drink, but avoid drinking large amounts.

Salt Intake

- Increase your salt intake (only after discussion with your doctor, and never if treated for high blood pressure).

Exercise

- Improve muscle tone in your legs with regular exercise, this helps to return blood to your heart.

Medications

- Ensure you receive a regular review of your medications. Low blood pressure can be a side-effect of some medications. Once prescribed, medications should be **reviewed at least once a year** to ensure they are not the cause of the problems.

Posture

- Avoid sudden changes in posture. Bending or stooping suddenly may make your symptoms worse. Try to pause in between changes in position.
- Sleep with the top end of your bed raised a few inches. This action will help prevent fluid loss during the night and so keep your blood pressure up.

Clothing

- Try to keep cool and wear loose layers of clothing which can be easily removed if you become hot.
- Wear high leg support tights during the day, but remove them before bed. Support tights prevent blood from pooling in your legs.

Are there any other treatments?

Very rarely, tablets may be prescribed for reflex syncope, but the majority of people manage their condition following the simple preventive advice described above.

In some cases, where evidence has shown sudden falls in heart rate associated with fainting, a pacemaker may be of benefit.

For some patients who are able to identify the trigger to their attacks, cognitive behaviour therapy (CBT) may help to break a vicious circle of anxiety or similar type of problem.

Driving and reflex syncope

Most people with reflex syncope can continue to drive as long as:

- They have warning symptoms
- They do not have episodes while sitting or lying down
- They do not have another cause for their blackouts

Please ask your doctor and/or check with the DVLA if you are uncertain about your condition and driving. Please consult the DVLA for further information on the latest guidelines.

Flying and reflex syncope

Follow the preventive advice already discussed. Drink plenty of fluids during the flight, avoid alcohol, move around the cabin when you can and take evasive action quickly if you get symptoms. Ensure you contact your insurer using the term “common faint” regarding your symptoms, particularly if you have frequent symptoms or are taking medication for reflex syncope.

Misdiagnosis

A wrong diagnosis of epilepsy can be very damaging to a patient and their family. Unfortunately misdiagnosis of epilepsy in syncope is common. It is thought to occur in 20 – 30% of adults and 39% of children diagnosed with epilepsy. This represents about 125,000 people in the UK. The All-Party Parliamentary Working Group on Epilepsy reported that there were at least 75,000 people wrongly diagnosed with epilepsy in England alone, and all were taking anti-epilepsy drugs that they didn't need to take. This is worrying because anti-epilepsy drugs are a common cause of damage to unborn babies. If there are doubts about the diagnosis, a specialist opinion is essential and should be sought from an epilepsy specialist.

If this expert believes the blackouts may be due to syncope then an individual should be referred to an electrophysiologist (heart rhythm expert) for assessment and diagnosis. The cause of misdiagnosis is not completely clear, but fainting is often not "simple", and has "convulsive features". These include; sudden collapse without warning, jerking and twitching of the limbs and urinary incontinence. These "convulsive" features occur in generalised epilepsy, but also occur in fainting. Eye-witnesses and family may observe these features, and immediately assume wrongly that the blackout is caused by epilepsy. Careful clinical assessment is needed to separate epilepsy from "convulsive syncope".

Reflex syncope is also known as

neurocardiogenic syncope, vasovagal syncope, neurally mediated syncope, common benign fainting, malignant vasovagal syncope and emotional fainting

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Please remember this publication provides general guidelines only. Individuals should always discuss their condition with their own doctor.

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