ORTHOSTATIC HYPOTENSION

This is defined as a fall in systolic blood pressure of at least 20mmHg (or at least 30mmHg in people with hypertension) and/or a drop in diastolic blood pressure of at least 10mmHg within three minutes of standing up.

This may happen after:

- standing for long periods
- exercise
- eating.

In addition, this may be as a result of hypovolaemia (eg following diarrhoea or haemorrhage) or occur as a side effect of medications such as diuretics, antihypertensives, levodopa, alcohol, tricyclic antidepressants, antihistamines or phenothiazines.

Patients with orthostatic syncope typically feel light-headed, dizzy, weak and may have tunnel vision (loss of peripheral vision with retention of central vision) just before losing consciousness. Symptoms may be worse in the morning and in hot environments, and you can

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Although you may not come across fainting in your practice, it is something that many people will experience in their lifetime. It is often a one-off occurrence, but there may be a need to investigate those who faint frequently. Fainting is often referred to clinically as 'syncope', but healthcare professionals and patients may refer to it as 'blackout'. It is a symptom, rather than a condition itself.

WHAT IS SYNCOPES?

Syncope is a transient loss of consciousness followed by complete recovery without any residual neurological deficit.2

According to the National Institute for health and Care Excellence (Nice), as many as half of the population of the UK will experience syncope at some point in their lives. Between 3-5% of adult A&E admissions are due to syncope. However, it can be difficult to identify the underlying cause.²

There are wide variations that exist in terms of management, with some potentially dangerous underlying conditions not receiving the correct assessment, diagnosis and/or treatment. Others may undergo tests that are inappropriate, as well as costly to the NHS, and a substantial proportion go on to be incorrectly diagnosed and consequently treated for epilepsy.²

An important point made in the Nice guideline on 'Transient loss of consciousness ('blackouts') in over-16s' is the need to distinguish between the circumstances and nature of the episode and the mechanism by which the loss of consciousness has arisen.

Circumstances and nature should be used to guide assessment, whereas the mechanism determines treatment. An example is the term ‘exercise-induced syncope’ – not only is the wording unclear as to whether the individual fainted during exercise or shortly after stopping, but it also fails to indicate the underlying reason for the episode.¹

WHAT CAUSES SYNCOPES?

The causes of syncope can be split into three main categories:

Vasovagal syncope

This often occurs in response to a trigger such as:

- seeing blood or extreme emotional distress
- hypoglycaemia
- hypoxia
- hyperventilation with hypocapnia (less than normal levels of carbon dioxide in the blood).

Vasovagal syncope may also be referred to as 'reflex' or 'neurocardiogenic' syncope, or an 'uncomplicated faint'. It is the most common reason for blackouts in children and adults.

Carotid sinus syndrome, where pressure on the carotid sinus reduces blood supply to the brain (often due to a tight shirt collar) causing an individual to faint, also falls into this category.

Certain features indicate a vasovagal cause for syncope, which can be identified by asking patients about the ‘three Ps’:

- posture (fainting results from prolonged standing)
- provoking factors (such as pain or a medical procedure)
- prodromal symptoms (such as sweating or feeling overly hot or cold before losing consciousness).

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advise patients that they may be relieved by sitting or lying down. Orthostatic hypertension occurs more commonly in those aged over 65 years and is a common cause for falls in the elderly.

Cardiac abnormalities

Bradycardia, tachycardia, blood flow obstruction, vasodilatation or arrhythmias may lead to transient loss of consciousness due to a temporary reduction in cerebral blood flow. Syncope of cardiac origin is more common in older people, and there is often an absence of prodromal symptoms other than palpitations.

In addition, medications that are used to treat some cardiac abnormalities may have syncope as a side effect eg sotalol, flecainide and disopyramide.

There may be some overlap between causes, particularly cardiac and non-cardiac – someone with severe heart disease may well have a vasovagal faint, for example – and up to one third of cases are regarded as idiopathic due to no cause being identified.

In all cases, the mechanism leading to transient loss of consciousness is a temporary reduction in cerebral blood flow.

Careful assessment is important, starting with an evaluation of vital and neurological signs. Examples include: blood glucose testing for suspected hypoglycaemia; full blood count if anaemia or bleeding is suspected; blood pressure to determine an orthostatic cause; or an electrocardiogram if a cardiac cause is suspected.\textsuperscript{3,4,5}

What else could it be?

There are several conditions that may present with syncope – or appear to do so – but that are of a different origin, including:

- Stroke and transient ischaemic attacks. However, not all involve loss of consciousness – the neurological deficit (abnormal body function) that usually manifests after the immediate episode is a crucial point of differentiation.
- Epileptic seizures are sometimes mistaken for fainting, but distinguishing factors may include limb jerking, a sense of foreboding beforehand, head turning, tongue biting, and/or a loss of bladder or bowel control; in addition, the patient may be confused after the event.
- Mental health conditions, such as anxiety and cataplexy, may cause collapse, but do not necessarily involve true impairment of consciousness.\textsuperscript{3,4}

How is it managed?

The immediate impact of fainting is obvious: the patient may injure themselves when they fall. In many cases, there are no long-term repercussions, with vasovagal and orthostatic syncpe cases generally associated with a good overall prognosis. Cardiac syncope is associated with a poorer prognosis, attributed to the severity of the underlying conditions and associated treatment.\textsuperscript{3,4}

Management of fainting is guided by the underlying cause, but the following actions may be taken:\textsuperscript{6}

- If a patient feels faint, encourage them to sit or lie down, ideally with their head lower than their legs, to encourage blood flow to the brain.
- If someone has fainted and does not regain consciousness within 1-2 minutes, put them in the recovery position and seek urgent medical help.
- After a patient faints, they may be confused and quite tired for up to 30 minutes. You should explain this to the patient and emphasise that it is completely normal.\textsuperscript{5}

Who is thought to have uncomplicated vasovagal syncope may find it helpful to try and recall what they were doing at the time in order to identify any potential triggers.\textsuperscript{3}

A patient who is thought to have fainted because of orthostatic hypotension can take some simple steps to try and reduce the likelihood of orthostatic symptoms, for example:

- moving from lying down to sitting and then standing, rather than doing it in one step
- eating small meals frequently – with more salt included if there is no reason that they cannot do this – while avoiding alcohol
- taking regular exercise, losing excess weight and stopping smoking
- reducing stress
- staying well hydrated
- elevating the head when sleeping
- physical counterpressure manoeuvres, such as: tensing the arm muscles; squeezing hands into fists; and crossing and uncrossing legs to encourage blood flow
- treating any symptoms of constipation, as straining can exacerbate orthostatic hypotension.\textsuperscript{3,5,6}

Syncope is one of the conditions listed by the Driving and Vehicle Licensing Agency (DVLA) that can affect driving, so individuals should be advised to speak to their GP as soon as possible, and notify the DVLA as necessary. Anyone with a job that may be impacted by fainting, for example someone who operates heavy machinery, should also be advised to speak to their health and safety representative.\textsuperscript{6,7}

When is it serious?

There are several serious causes of fainting, which, if not identified and addressed quickly, are associated with a high rate of mortality, including:

- myocardial infarction and ischaemia – syncope is usually preceded by chest pain and the patient is likely to have a history of coronary heart disease
- aortic dissection – chest and back pain will be present
- cardiac arrhythmias – this may be evident when checking the patient’s pulse, or they may have a history of the condition
- occult haemorrhage, for example from a GI bleed, tissue trauma, or ruptured aortic aneurysm or spleen, ovarian cyst or ectopic...
chest pain, and discomfort relieved by leaning forward
- Addisonian crisis (which should be suspected in patients with Addison's disease) – signs of a crisis include nausea, vomiting, fever and hyperpigmentation.^{3,4}

Patients can be signposted to the following resources for more information:
- NHS Choices is a good first stop at tinyurl.com/fainting1
- There is information on the various forms of syncope at syncope.co.uk at tinyurl.com/fainting4.

Fainting CPD planned learning

What are you planning to learn?
I want to learn more about fainting, including what it is, other terms used for the symptom and its main causes – including those associated with a high risk of morbidity and mortality. I also want to improve my knowledge of conditions that may be misdiagnosed as fainting, immediate management strategies and advice pharmacists and their staff can provide.

This learning will help me to improve my knowledge of the causes and management of fainting, to be able to confidently provide advice to patients and carers, to spot at-risk patients and know when to refer.

How are you planning to learn it?
- I plan to read more about vasovagal syncope on the syncope.co.uk website at tinyurl.com/fainting3.
- I plan to read more about orthostatic hypotension on the syncope.co.uk website at tinyurl.com/fainting4.
- I plan to find out about useful information to recommend to patients, such as on the NHS website at tinyurl.com/fainting1.
- I plan to complete the five-minute test at www.chemistanddruggist.co.uk/update-plus to test my knowledge and confirm what I have learned.

Give an example of how this learning has benefited the people using your services.
I carried out a medicines use review for a patient with hypertension and diabetes and during the consultation she mentioned that she had fainted twice in the last couple of weeks. She was a bit concerned as this had not happened before. I was able to discuss her symptoms and refer her to her GP, as the cause could be linked to her medication or condition. I gave her some advice about what to do if a person faints that she could pass on to her family and signposted her to the NHS website for further information.

Take the 5-minute test online

1. Fainting, or syncope, is a transient loss of consciousness followed by complete recovery without any residual neurological deficit.
   True or false
2. Around 10% of adult A&E admissions are due to syncope.
   True or false
3. Triggers for vasovagal syncope include dehydration, uncontrolled diabetes and some neurological conditions.
   True or false
4. Carotid sinus syndrome is where pressure on the carotid sinus reduces blood supply to the brain, causing an individual to faint.
   True or false
5. Orthostatic hypotension is defined as a fall in systolic and diastolic blood pressure of at least 30mmHg within three minutes of standing up.
   True or false
6. Medications such as diuretics, levodopa, tricyclic antidepressants, antihistamines and phenothiazines can cause orthostatic hypotension.
   True or false
7. Patients with orthostatic syncope typically feel light-headed, dizzy, weak, and may have tunnel vision just before losing consciousness.
   True or false
8. Orthostatic hypertension occurs more commonly in those aged under 65 years.
   True or false
9. Syncope caused by cardiac abnormalities is more common in older people.
   True or false
10. Cardiac syncope is associated with a poorer prognosis than vasovagal or orthostatic syncope.
    True or false

References
1. National Institute for health and Care Excellence clinical guideline 109 (September 2014) Transient loss of consciousness (‘blackouts’) in over 16s.
5. Syncope UK website (March 2019) Postural tachycardia syndrome POTS.
6. NHS.UK (December 2016) Fainting.
7. DVLA medical conditions and driving (July 2019) Blackouts, fainting (syncope), loss of consciousness and driving.