

Blackouts / TLoC

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How do I diagnose the underlying cause of a blackout?

- Vital Signs
- Lying and standing blood pressure.
- Heart sounds, neuro exam
- 12-lead ECG
- Measurement of blood glucose levels, if hypoglycaemia is suspected.
- Full blood count to check haemoglobin levels, if anaemia or bleeding is suspected.

Assess for the presence of a life-threatening cause for blackout, such as:

- Myocardial infarction and ischaemia
- Cardiac arrhythmia
- Pulmonary embolism
- Occult haemorrhage
- Aortic dissection
- Cardiac tamponade
- Severe hypoglycaemia
- Addisonian crisis

Ask the person (if possible) and any witnesses about, and record details of:

- The circumstances of the event.
- The person's posture immediately before loss of consciousness.
- Prodromal symptoms (such as sweating or feeling warm/hot).
- The person's appearance (such as pallor, whether eyes were open or shut).
- Presence or absence of movement during the event (for example, limb-jerking and its duration).
- Whether there was tongue-biting.
- Injury occurring during the event (record site and severity).
- Duration of the event (onset to regaining consciousness).
- Presence or absence of confusion during the recovery period.
- Weakness down one side during the recovery period.

Assess and record:

- Details of any previous blackouts, including number and frequency.
- The person's medical history and any family history of cardiac disease (including personal history of heart disease and family history of sudden cardiac death).
- Current medication that may have contributed to the blackout (for example, diuretics).

Suspect a possible underlying cardiac cause if there is:

- An ECG abnormality
- Suspected/confirmed heart failure
- Blackout occurring during exertion. However, note that blackouts that are exercise-induced but occur shortly after stopping exercise rather than during exercise may be vasovagal in origin (see below).
- Palpitations before loss of consciousness.
- A family history of sudden cardiac death in people aged younger than 40 years and/or an inherited cardiac condition.
- New or unexplained breathlessness.
- A heart murmur.
- Blackout without prodromal symptoms in people aged older than 65 years.

Suspect epilepsy as an underlying cause if there is:

- Prodromal déjà vu, or jamais vu.
- A bitten tongue.
- Head-turning to one side during the blackout.
- Loss of bowel and bladder control.
- Unusual posturing.
- Prolonged limb-jerking.
- Confusion following the event.

Suspect an uncomplicated faint (uncomplicated vasovagal syncope) if there is:

- An absence of features to suggest an alternative diagnosis (note: brief seizure activity can occur during uncomplicated faints and is not necessarily diagnostic of epilepsy) and The presence of features suggestive of uncomplicated faint (the 3 'P's):
 - Posture — blackout occurred after prolonged standing. Similar episodes may have been prevented by lying down.
 - Provoking factors — such as pain or a medical procedure.
 - Prodromal symptoms — such as sweating or feeling warm/hot before the blackout occurred.

Suspect situational syncope if:

- There are no features to suggest an alternative diagnosis and
- Syncope is clearly and consistently provoked by straining during micturition (usually while standing), defecation, or by coughing or swallowing.

Suspect carotid sinus syndrome if the blackout(s) occurred while turning the head to one side, particularly in men aged 50 years or older.

Suspect orthostatic hypotension if there is:

1. An absence of features suggesting an alternative diagnosis and
 2. A typical history — light-headedness, dizziness, weakness, tunnel vision. Symptoms should not occur while supine, should get worse on standing, and should be relieved by sitting or lying down. Some people may present with recurrent or unexplained falls. Symptoms are often worse early in the morning, in hot environments, after meals, after standing motionless, and after exercise.
- If the above criteria are met, measure lying and standing blood pressure (with repeated measurements while standing for 3 minutes). A fall in systolic blood pressure of at least 20 mmHg (at least 30 mmHg in people with hypertension) and/or a fall in diastolic blood pressure of at least 10 mmHg within 3 minutes of standing confirms the diagnosis.
 - Note: potential underlying causes for orthostatic hypotension include treatment with alpha-blockers, diuretics, tricyclic antidepressants, antihypertensives (particularly diuretics), levodopa or dopaminergic agonists, volume depletion, physical deconditioning due to prolonged bed rest, diseases causing peripheral neuropathy (such as diabetes mellitus), Parkinson's disease, or Lewy body dementia. Polypharmacy with antihypertensive and antidepressant medicines is often the cause of orthostatic hypotension in older people.

Consider differential diagnoses whose symptoms mimic blackout but which may not involve loss of consciousness, such as falls, psychogenic pseudosyncope or psychogenic non-epileptic seizures (suggested by frequent, recurrent episodes often with a long duration of apparent loss of consciousness, the nature of the events changing over time, and multiple unexplained physical symptoms in a person who may have generalised anxiety disorder, panic disorder, somatisation disorder, or major depression), or transient ischaemic attacks. Migraine is uncommonly associated with syncope. For further information, see the CKS topics on Falls - risk assessment (/falls-risk-assessment) and Migraine (/migraine). However, note that If there is uncertainty after initial assessment whether or not a true blackout has occurred, the event should be assumed to be a blackout until proven otherwise.

Be aware that people with multiple comorbidities may have several equally probable causes of blackout, for example, people with severe heart disease are also potential candidates for vasovagal faints. Also, be aware that in up to one third of cases, the underlying cause of blackout will not be determined.