

## Dizziness / Vertigo

### Definition / Supporting Information

Children often find it difficult to understand and describe symptoms of dizziness and vertigo.

Dizziness is a term commonly used to describe subjective symptoms such as faintness, giddiness, light-headedness, or unsteadiness; it is not usually a serious sign but should be assessed by a doctor. Dizziness is not synonymous with vertigo.

Vertigo is a term used to describe a sensation of rotation, spinning or whirling motion and is accompanied by nystagmus. It is usually caused by conditions of the vestibular system or brainstem.

**Keywords / also known as:** unsteadiness, loss of balance, balance difficulty

### Essential History

#### Ask about:

- Circumstances around onset or any precipitating event
  - Trauma (see Head Injuries)
  - Standing up
  - Change in the position of the head
  - Excessive strain
  - Exertion such as flying, diving, coughing, sneezing
    - Paroxysmal?
    - Acute?
- Characterisation of the event in the patient's own words (eg, 'room spinning')
- Any changes to vision or hearing
- Exposure to medicines or toxins, or substance ingestion (see Drug Overdose and Poisoning)
- In adolescents, as indicated, consider a full HEADSSS assessment:
  - **H**ome
  - **E**ducation
  - **A**ctivities
  - **D**rugs
  - **S**exuality
  - **S**uicide / depression
  - **S**afety

- Associated events
  - Aura
  - Scintillating scotomas
  - Oral paraesthesias
  - Tinnitus
  - Drop attacks
  - Seizures
  - Loss of consciousness
- Altered mental status (see Altered Conscious Level)
- Duration of the event
- Confusion during the recovery period
- Weakness down one side of the body during the recovery period
- Symptoms or signs of vestibular disorder
  - Nystagmus
  - Hearing loss
  - Tinnitus
  - Difficulty navigating in the dark
  - Motion sickness
  - Nausea
  - Abnormal movements

## ‘Red Flag’ Symptoms and Signs

### Ask about:

- Cardiac symptoms (eg, palpitations)
- Hearing loss
- Sudden onset vestibular symptoms
  - Nystagmus
  - Hearing loss
  - Tinnitus
  - Difficulty navigating in the dark
  - Motion sickness
  - Nausea
  - Abnormal movements
- History of heart disease
- Family history of sudden cardiac death

### Look for:

- Cardiovascular signs
  - Irregular pulse (see Cardiac Arrhythmias)

- Neurological signs
  - Altered mental status (see Altered Conscious Level)
  - Signs of raised intracranial pressure
  - Abnormalities on cranial nerve examination
  - Nystagmus

## Differential Diagnosis / Conditions

### Differential Diagnoses of Vertigo

Information	Differential Diagnoses
<b>Family history</b>	
• Migraine	<ul style="list-style-type: none"> <li>• Benign paroxysmal torticollis of infancy</li> <li>• Benign paroxysmal vertigo of childhood</li> <li>• Migraine</li> </ul>
• Neurofibromatosis	<ul style="list-style-type: none"> <li>• Acoustic neuroma</li> </ul>
• Headache	<ul style="list-style-type: none"> <li>• Migraine</li> <li>• Central nervous system (CNS) disease</li> </ul>
• Head trauma	<ul style="list-style-type: none"> <li>• Temporal bone fracture</li> <li>• Labyrinth or brain stem concussion</li> <li>• Cerebellar contusion</li> <li>• Perilymph fistula</li> </ul>
• Neurological deficits	<ul style="list-style-type: none"> <li>• CNS tumour</li> </ul>
• Hearing loss	<ul style="list-style-type: none"> <li>• Cholesteatoma</li> <li>• Acoustic neuroma</li> <li>• Temporal bone fracture</li> <li>• Perilymph fistula</li> <li>• Labyrinth concussion</li> <li>• Labyrinthitis</li> <li>• Ramsay Hunt syndrome</li> <li>• Menière's disease</li> </ul>
• Triggered by change in head position	<ul style="list-style-type: none"> <li>• Benign paroxysmal positional vertigo</li> <li>• Perilymph fistula</li> <li>• Vestibular neuritis</li> <li>• Acute labyrinthitis</li> </ul>
<b>Medication History</b>	
<ul style="list-style-type: none"> <li>• Aminoglycosides</li> <li>• Loop diuretics</li> <li>• Phenytoin</li> </ul>	<ul style="list-style-type: none"> <li>• Ototoxicity</li> </ul>

<ul style="list-style-type: none"> <li>• Non-steroidal anti-inflammatory drugs</li> <li>• Chemotherapeutic agents</li> <li>• Quinine</li> </ul>	
<b>Medical History</b>	<b>Differential Diagnoses</b>
<ul style="list-style-type: none"> <li>• Motion sickness</li> </ul>	<ul style="list-style-type: none"> <li>• Benign paroxysmal vertigo of childhood</li> <li>• Migraine</li> </ul>
<ul style="list-style-type: none"> <li>• Recent upper respiratory tract infection</li> </ul>	<ul style="list-style-type: none"> <li>• Vestibular neuritis</li> </ul>
<ul style="list-style-type: none"> <li>• Fever</li> </ul>	<ul style="list-style-type: none"> <li>• Otitis media</li> <li>• Labyrinthitis</li> </ul>
<ul style="list-style-type: none"> <li>• Ear trauma</li> <li>• Barotrauma</li> </ul>	<ul style="list-style-type: none"> <li>• Perilymph fistula</li> </ul>

### Differential Diagnosis of Dizziness

Information	Possible Diagnoses
<b>Family History</b>	
<ul style="list-style-type: none"> <li>• Unexplained syncope or sudden cardiac death</li> </ul>	<ul style="list-style-type: none"> <li>• Cardiac dysrhythmias</li> </ul>
<ul style="list-style-type: none"> <li>• Anxiety, panic disorders</li> </ul>	<ul style="list-style-type: none"> <li>• Anxiety</li> </ul>
<ul style="list-style-type: none"> <li>• Neurofibromatosis</li> </ul>	<ul style="list-style-type: none"> <li>• Acoustic neuroma</li> </ul>
<ul style="list-style-type: none"> <li>• Loss of consciousness or altered mental status (see Altered Conscious Level)</li> </ul>	<ul style="list-style-type: none"> <li>• Seizure</li> <li>• Dysrhythmias</li> <li>• Vasovagal syncope</li> <li>• CNS disease</li> <li>• Hypoglycaemia</li> </ul>
<b>Medical History</b>	
<ul style="list-style-type: none"> <li>• Acute or chronic blood loss</li> </ul>	<ul style="list-style-type: none"> <li>• Anaemia</li> </ul>
<ul style="list-style-type: none"> <li>• Palpitation or chest pain</li> </ul>	<ul style="list-style-type: none"> <li>• Dysrhythmias</li> <li>• Anxiety, panic disorder</li> </ul>
<ul style="list-style-type: none"> <li>• Recent life stressor</li> </ul>	<ul style="list-style-type: none"> <li>• Anxiety</li> </ul>
<ul style="list-style-type: none"> <li>• Last menstrual period</li> </ul>	<ul style="list-style-type: none"> <li>• Pregnancy</li> </ul>

## Investigations

To be undertaken by non-specialist practitioners (eg, General Practitioner (GP) Team):

- Laboratory testing has a limited role in the evaluation of dizziness and vertigo

- Check blood glucose levels if diabetic hypoglycaemia is suspected
- Check haemoglobin levels if anaemia or bleeding is suspected
- Conduct a pregnancy test, if appropriate

To be undertaken by specialist practitioners (eg, Emergency Department / Paediatric / Ear, Nose and Throat (ENT) Team(s)):

- Imaging is guided by clinical suspicion or a history of trauma: magnetic resonance imaging of the brain, or other neuroimaging may be helpful
- Audiometry and electronystagmography may be useful in evaluation of vertigo

## Treatment Approach

Treatment is aimed at the underlying disease entity.

### Specific Treatment

To be undertaken by non-specialist practitioners (eg, General Practitioner (GP) Team):

- Orthostatic hypotension with dizziness
  - Hydrate appropriately
  - Provide reassurance and education
    - Caution against rising suddenly
    - Educate about necessity of putting the head lower than the heart when symptoms occur
- Panic attack or significant stress presenting with dizziness
  - Further history should be obtained, including any suicidal ideation
  - Referral for counselling should be considered
- Migrainous vertigo
  - Treatment is symptomatic and targeted to the treatment of migraines (see Headache)
- Stop ototoxic medication

To be undertaken by specialist practitioners (eg, Emergency Department / Paediatric / Ear, Nose and Throat (ENT) Team(s)):

- Vestibular suppressants may be used to relieve the symptoms of vertigo and nausea
- Post-infectious vestibular neuritis
  - Treatment is symptomatic and supportive
- Consider micropressure therapy for refractory Ménière's disease
  - See Micropressure therapy for refractory Ménière's disease [[NICE interventional procedure guidance IPG426](#)]

## When to Refer

Refer urgently to specialist practitioners (eg, Emergency Department / Paediatric / Ear, Nose and Throat (ENT) Team(s)) if:

- Acute ataxia
- A clear history of vertigo
  - Especially with other neurological signs
  - After head trauma
  - After barotrauma
  - That does not respond to simple measures
- Suspected epileptic seizure
- Complicated migraine

Escalate care to Paediatric ENT Team if:

- Suspected perilymph fistula or cholesteatoma

## When to Admit

- Bacterial or suppurative labyrinthitis
- Head trauma with temporal bone fracture
- Space-occupying lesions
- Potentially life-threatening cardiac dysrhythmias
- Labile hypertension

## Patient / Carer Information

Explain the importance of ensuring that the child is well hydrated while exercising, especially when ambient temperature is warm.

***\*Please note: whilst these resources have been developed to a high standard they may not be applicable to children.***

- [Dizziness \(lightheadedness\)](#) (Web page), NHS Choices.
- [Vertigo](#) (Web page), NHS Choices.
- [Dizziness and balance problems](#) (Web page), Brain & Spine Foundation.

## Resources

### National Clinical Guidance

[Head injury: Triage, assessment, investigation and early management of head injury in children, young people and adults](#) (Web page), NICE clinical guideline CG176, National Institute for Health and Care Excellence.

[Micropressure therapy for refractory Ménière's disease](#) (Web page), NICE interventional procedure guidance IPG426, National Institute for Health and Care Excellence.

## Suggested Resources

***\*Please note: these resources include links to external websites. These resources may not have national accreditation and therefore PCO UK cannot guarantee the accuracy of the content.***

[Ear conditions](#), NICE pathways, National Institute for Health and Care Excellence.

[Headaches](#), NICE pathways, National Institute for Health and Care Excellence

Timothy C, Hain MD. [Benign paroxysmal positional vertigo](#) (Web page).

[Pediatric vestibular disorders](#) (Web page), Vestibular Disorders Association.

[Vertigo](#) (Web page), GP Notebook.

[Corticosteroids for the treatment of idiopathic acute vestibular dysfunction](#) (vestibular neuritis), (Systematic review) J Fishman, C Burgess, A Waddell, Cochrane ENT Group, May 2011.

## Acknowledgements

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### Update information

Created: 2017

Date last updated: -

Next review due: 2020