Topics to Be Covered

- Common Neurologic Conditions that are encountered in the primary care provider's office:
  - Headaches
  - Dizziness
  - Neuropathy
  - Episode of loss of consciousness
  - When to Consult a Neurologist

Learning Objectives

- Identify the most common types of headaches
- Identify the most common causes of dizziness
- Identify the most common causes of neuropathy
- Identify ways to differentiate seizure vs syncope
- Know when to consult a neurologist

Case #1: Headache

- 24yr old woman presenting for evaluation of her L sided headache, predominantly over her L forehead and near her L eye.
- She began having headaches in her late teens, but they have ramped up since she started working as a teacher a year and a half ago. Now has HAs at least once/week.
- + for n/v
- + for photophobia, but no phonophobia
- Sometimes, prior to the HA, she sees flickering lights in the periphery of her vision
- No other neurologic sxs, but on further questioning, does relay having occasionally tingling in her L face, arm, and leg when the HAs are really bad.

Case #1Continued

- No associated lacrimation
- No associated sinus congestion or rhinorrhea
- Worse with stress
- No food triggers that she can identify
- OTC medications like Advil, Tylenol, and Excedrin provide little relief
- Symptoms resolve best with sleep.

Case #1 Continued

- Medications: Multivitamin & Loestrin OCP
- PMH: Anxiety
- PSH: Appendectomy
- Family Hx: No neurologic conditions
- Social: Works as teacher, lives with roommates. No Tobacco, Drinks 7-14 drinks/week, mostly on weekends.
- ROS: Negative

Case #1 Continued

- Physical Exam:
  - Vitals: P 76, BP 115/72, RR 12, SpO2 98%, BMI 24
  - Neuro exam: Normal

Case #1 Diagnosis?

- Is there any other information you would like to know?

Case #1 Diagnosis

- Migraine with aura
  - Though she doesn't always have the aura
- Should this patient stay on her OCP?

Stroke & Migraine

- Risk of stroke 2x/greater in patients with migraine w/aura
- Risk increases further for migraineurs with these characteristics:
  - Women
  - Less than 45
  - Smoke
  - Use combined OCPs

Schürks M, Rist PM, Bigal ME et al. Migraine and cardiovascular disease: systematic review and meta-analysis. BMJ. 2009 Oct 27;339:b3914. doi: 10.1136/bmj.b3914. Review

Types of Headache

- Primary Headaches
  - Migraine
  - Tension Headache
  - Trigeminal Autonomic Cephalgias (Cluster, Trigeminal Neuralgia, Paroxysmal Hemicrania, SUNCT, Hemicrania Continua)
  - Exertional Headaches
- Secondary Headaches
  - Medication Overuse Headache
  - Mass Effect from tumor/metastases/abscess
  - Increased Intracranial Pressure (Pseudotumor Cerebri)
  - Cerebral Venous Sinus Thrombosis (Headaches, Increased ICP, Stroke)
  - Cranial/Cervical Vascular Disease
    - Subarachnoid Hemorrhage
    - Carotid or Vertebral Dissection
    - Temporal Arteritis
  - Infection: Meningitis, Encephalitis, Abscess
  - Head/Neck Trauma
  - Low Pressure Headache (2/2 LP or Spontaneous Meningeal Tear)
- Headache 2/2 Medical Condition
  - Hypertension
  - Sleep Apnea

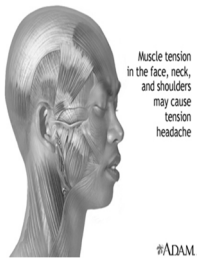
Most Common Headache Types:

- Tension (40%)
  - Lifetime Prevalence: 30-78%
- Migraine (10%)
  - Lifetime Prevalence: 18%
  - Women > Men
  - 15-20% with Aura
  - Runs in Families
    - 1st degree relatives w/migraine w/out aura: 1.4x more likely to develop migraine w/out aura & 1.9x more likely to develop migraine w/aura
    - 1st degree relatives w/migraine w/aura: 4x more likely to develop migraine w/aura, but not migraine w/out aura
- Cluster (1%)
  - Men > Women
- Chronic Daily Headache
  - Medication Overuse Headache
  - Chronic Migraine
  - Chronic Tension Headache

Hale, N & Pauuw, D. Diagnosis and Treatment of Headache in the Ambulatory Care Setting.*Medical Clinics of North America*, Volume 98, Issue 3, Pages 505-527.

Tension Headache

- Bilateral Pain → usually described as tension, pressure, or tightening
- Mild to moderate intensity
- Location of Pain: Forehead, Temples, Posterior Head and Neck
- Last 30 minutes to 7 days
- Not worsened by routine physical activity
- No n/v
- May have photophobia or phonophobia
- Worsened by stress
- Not typically disabling
- Usually improve with NSAIDs or Tylenol
- Can lead to medication overuse Has



International Classification of Headache Disorders, 3rd Edition. Cephalalgia 33(9) 629–808.
Image from: https://medlineplus.gov/ency/imagepages/19247.htm

Migraine

- Without Aura (Common Migraine)
  - Diagnostic criteria:
  - A. At least five attacks fulfilling criteria B–D
  - B. Headache attacks lasting 4-72 hours (untreated or unsuccessfully treated)
  - C. Headache has at least two of the following four characteristics:
    - 1. unilateral location
    - 2. pulsating quality
    - 3. moderate or severe pain intensity
    - 4. aggravation by or causing avoidance of routine physical activity (e.g. walking or climbing stairs)
  - D. During headache at least one of the following:
    - 1. nausea and/or vomiting
    - 2. photophobia and phonophobia
  - E. Not better accounted for by another ICHD-3 diagnosis.
- With Aura (Classic Migraine, Complicated Migraine)
  - Diagnostic Criteria
  - A. At least two attacks fulfilling criteria B and C
  - B. One or more of the following fully reversible aura symptoms:
    - 1. visual
    - 2. sensory
    - 3. speech and/or language
    - 4. motor
    - 5. brainstem
    - 6. retinal
  - C. At least two of the following four characteristics:
    - 1. at least one aura symptom spreads gradually over 5 minutes, and/or two or more symptoms occur in succession
    - 2. each individual aura symptom lasts 5-60 minutes
    - 3. at least one aura symptom is unilateral
    - 4. the aura is accompanied, or followed within 60 minutes, by headache
  - D. Not better accounted for by another ICHD-3 diagnosis, and transient ischemic attack has been excluded.

International Classification of Headache Disorders, 3rd Edition. Cephalalgia 33(9) 629–808.

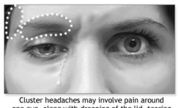
Migraine Triggers

- Sleep Deprivation
- Stress
- Changes in weather & temperature
- Menstruation, Some OCPs
- Head Injury
- Certain foods and Drinks
  - Red wine, Stinky Cheeses, Vinegars, Greasy Foods, Caffeine (overuse & withdrawal), Bright Lights

Migraine Headache Treatment

- Prophylactic
  - TCAs
  - β blockers
  - Ca channel blockers
  - Effexor
  - Anti-epileptic drugs (Topiramate, Depakote, Gabapentin)
  - Herbals, vitamins and supplements (i.e., Butterbur, Riboflavin, Magnesium, Feverfew)
- Abortive
  - Triptans (5-HT_1 agonists)
  - Ergotamines
  - NSAIDs (Ibuprofen, Toradol, Cambia)
  - ASA (Excedrin Migraine)
  - Fioricet, Fiorinal
  - Reglan/Benadryl
  - Steroids (i.e., Medrol dose pack)

Cluster Headache



Cluster headaches may involve pain around one eye, along with drooping of the lid, tearing and congestion on the same side as the pain

*ADAM

- Attacks of severe, unilateral pain
  - Orbital, Supraorbital, and/or Temporal
  - Lasts15–180 minutes
- Cyclical Pattern
  - Occurring from once every other day to eight times a day
  - Often worse at night
- The pain is associated with Ipsilateral:
  - Conjunctival injection &/or Lacrimation
  - Nasal congestion &/or Rhinorrhea
  - Forehead and Facial Sweating or Flushing
  - Miosis &/or Ptosis
  - Eyelid Edema
- Restlessness or Agitation

International Classification of Headache Disorders, 3rd Edition. Cephalalgia 33(9) 629–808.
Image from: https://medlineplus.gov/ency/article/000786.htm

Cluster Headache

- Possible Triggers
  - Smoking
  - EtOH
  - High Altitudes
  - Bright light
  - Exertion
  - Heat
  - Foods high in nitrates
- Treatment
  - Triptans (Subcutaneous or Nasal Sumatriptan)
  - High Flow Oxygen (10-15L/min) for 10-20 minutes
  - Prophylaxis: Calcium Channel Blockers (Verapamil)

Chronic Daily Headache

- 15 or more HA days/month for more than 3 months
- Chronic Migraine, Chronic Tension, and Medication Overuse HAs are most common underlying etiology
- Medication Overuse
  - Overusing any analgesics for at least 3 months
  - Usually for at least 14 days/month, but can vary for patients
  - More common in women
  - Usually have long history of an episodic HA disorder that has worsened over time

Hale, N & Pauuw, D. Diagnosis and Treatment of Headache in the Ambulatory Care Setting *Medical Clinics of North America*, Volume 98, Issue 3, Pages 505-527.

Trigeminal Neuralgia – "Tic Douloureux"

- Features
  - Onset: middle age-elderly
  - V3 > V2 > V1
  - Lancinating severe pain for a few seconds multiple times a day
  - Initiated by triggers: tooth brushing, chewing, cold air on face
  - Almost always unilateral
  - Often Misdiagnosed as dental problem
- Etiologies
  - Idiopathic >Vascular >Demyelinating > CN V tumor
- Treatment
  - Carbamazepine, Oxcarbazepine, gabapentin, Pregabalin, baclofen
  - Local anesthetic injections
  - Surgery, Stereotactic Radiosurgery (SRS)

Headache Red Flags

- Older age of onset ≥55 yrs
  - Concern for tumor, temporal arteritis
- Worst HA of their life
  - Concern for subarachnoid hemorrhage (SAH)
- Fever, nuchal rigidity
  - Concern for meningitis
- Focal neurological symptoms/signs
  - Concern for mass lesion

Red Flags (continued)

- Worse lying flat/awakening during night
  - Concern for increased intracranial pressure (ICP)
- Vomiting precedes headaches
  - Concern for increased ICP
- Induced by bending, lifting, coughing
  - Concern for increased ICP
- Pregnancy/dehydration
  - Concern for cerebral venous thrombosis

Headache Summary

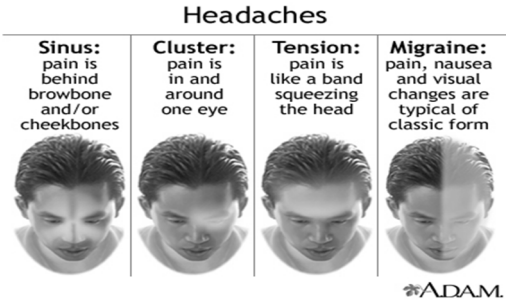


Image from: https://medlineplus.gov/ency/article/000797.htm

Case #2: "Dizziness"

- A 55yr old woman presenting for evaluation of her dizziness.
- Reports that over the last 2 weeks, she has been feeling "off balance" and "dizzy."
- PMH: Hypertension, Hyperlipidemia
- PSH: None
- Medications: Lisinopril & Lipitor
- Family History pertinent for stroke in mom at age of 60

Case #2 Continued

- At this point, what questions should we ask to determine the etiology of her dizziness?

Case #2 Continued

- She describes her dizziness as intermittently feeling like the room is spinning.
- She has had associated n/v, but no HA
- It is worse with turning her head, especially when she is lying down.
- She denies any double or blurred vision
- No difficulties w/speech or swallowing
- No Precipitating trauma
- No tinnitus or hearing loss
- Vitals
  - BP 132/78, P 84, RR 12, SpO2 98%, BMI 33
- Normal Neurologic Exam except for: + Dix Hall Pike to the Left

Dizziness Defined

- Means different things to different people:
  - Lightheadedness
  - Spinning
  - Sense of movement
  - Imbalance/Disequilibrium
  - Vague constellation of fatigue/malaise
- Accounts for roughly 5% of primary care visits

Categories of Dizziness

- Vertigo
  - False sense of motion
  - 45-54% of patients w/dizziness
- Disequilibrium
  - Feeling off balance or wobbly
  - Up to 16% of patients w/dizziness
- Presyncope
  - Feeling of losing consciousness/blacking out
  - Up to 14% of patients with dizziness
- Lightheadedness
  - Vague feelings, possibly feeling disconnected w/the environment
  - About 10% of patients with dizziness

Vertigo Defined

- Dysfunction of the Vestibular System
- Any false sensation of movement
- Most commonly hear "room spinning"
- Can central (from vestibular nuclei, cerebellum and their connections) OR
- Can be peripheral (from the labyrinth or the vestibular nn)

Differential For Vertigo

- Peripheral
  - Benign Paroxysmal Positional Vertigo (BPPV)
  - Labrynthitis
  - Vestibular Neuritis
  - Acoustic Neuroma (Vestibular Schwanomma)
  - Meniere's Disease
- Central
  - Vascular/Stroke → Posterior Circulation
  - Cerebellopontine angle (CPA) Mass/Tumor
  - Vertiginous Migraine/Vestibular Migraine

Peripheral Vs Central

- Peripheral
  - Usually worse w/head movement
  - Usually brief episodes of dizziness
  - Positive Dix Hall-Pike Maneuver
    - Rotatory Nystagmus (Torsional) + Vertigo
    - Nystagmus can have up to 20 second delay, is fatigable, and habituates on repeat testing
- Central
  - Other associated neurologic symptoms or exam findings (i.e., weakness, dysarthria, ataxia)
  - Persistent symptoms rather than intermittent

Other "Dizzy" Diagnoses To Consider

- Stroke
- Vertiginous Migraine
  - Should have associated headache or at least hx of migraines
  - May have aura, photophobia, phonophobia
- Lightheadedness → ?Pre-Syncope
- Ataxia
  - Cerebellar, Cerebellar outflow
- Loss of Proprioception, Dorsal Column Dysfunction

Case #3 Neuropathy

- Patient is a 69yr old man presenting for progressive numbness and tingling in his lower extremities that is at times painful.
- Also reports trouble with his balance in the last month or so, but no weakness.
- He has occasionally numbness and tingling in his hands as well.
- No Meds, PMH or PSH, but doesn't really go to the doctor.
- Drinks 10-14 drinks/week

Case #3 Continued

- Patient is obese, normal vital signs
- Neuro exam with diminished PP in toes and feet b/l to mid-shin. Vibration also diminished at toes as well. Proprioception subtly diminished b/l. Reflexes 1+ in BUE and Patellars, absent achilles. 5/5 strength.

What work up could be start with?

- HgA1c or Fasting Glucose
- Vitamin B12
- TSH w/reflex T4
- RPR
- +/- HIV

- More advanced
  - SPEP w/reflex IFE
  - Heavy metal screen
  - EMG/NCV → which may then direct additional screening.

Types of Neuropathy

- Mononeuropathy
  - Affecting single nerve
  - Compression or Entrapment
  - Most Common: Carpal Tunnel, Ulnar Nerve at Elbow, Peroneal Nerve at Knee
- Mononeuropathy Multiplex
  - Several mononeuropathies
- Polyneuropathy
  - Generalized process involving the peripheral nerves
  - Can be sensory, motor, or both

Common Causes of Polyneuropathy

- Diabetes Mellitus; Hyperglycemia
- Alcohol
- Vitamin Deficiencies (Vitamin B12, B1, B6, and E)
- Infectious (HIV, Lyme)
- AIDP (Acute Inflammatory Demyelinating Polyradiculoneuropathy) aka Guillain Bare
- CIDP (Chronic Inflammatory Demyelinating Polyradiculoneuropathy) → recurrent episodes of neuropathy, can be paraneoplastic
- Toxins (lead, arsenic, etc)
- Hereditary
- Autoimmune: Thyroid dysfunction, Lupus, Sjrogen's
- Other Causes of Neuropathy-Like Symptoms
  - Restless Leg Syndrome
  - Peripheral Vascular Disease

Case # 5: Loss of Consciousness (LOC)

- Patient is an 80yr old man presenting with an episode of LOC.
- His family reports that he complained of feeling unwell and appeared to lose color in his face. He then fell to the ground and was unresponsive. His eyes were open and he had brief "shaking" of his arms and legs. Afterwards, he was confused, but only for a few minutes.
- He did urinate on himself, but no tongue biting.

Case #5 Continued

- On EMS arrival, his vitals were HR 86, BP 145/86, SpO2 97%
- His accucheck was 119
- Medications: Metoprolol, Atorvastatin, & Irbesartan
- PMH: Hypertension, Hyperlipidemia, and CKD
- Social: Lives with his daughter, retired
  - Drinks 1-2 drinks/month
  - Tobacco: quit 20yrs ago
- ROS: negative for any recent illnesses
- Physical Exam: notable for some distal peripheral neuropathy in his feet, otherwise normal.
- Head CT was normal except for some chronic microvascular changes.

What's The Diagnosis?

- Seizure?
- Syncope?
- If only we had a crystal ball….or an EEG hooked up to the patient at the time of the event ☺

Seizure vs. Syncope

- Syncope is one of the most common non-epileptic attacks diagnosed as epileptic
- Syncope
  - Paroxysmal event of LOC & postural tone caused by cerebral hypoperfusion w/spontaneous recovery
  - If there cerebral perfusion/oxygenation is cut off for 8-10 seconds, then can see:
    - LOC
    - Pallor & Sweating
    - Brief (seconds) of extensor stiffening or spasms
    - May have a few Irregular myoclonic jerks of the limbs
  - The amplitude of the myoclonic jerks, the degree of stiffening, and the recovery time after syncope vary → which leads to confusion about the diagnosis

Panayiotopoulos, C.P., Imitators of epileptic seizures, 2012

Quick Review of Types of Syncope

- Neurally-Mediated (Reflex Syncope)
  - Vasovagal
  - Situational Syncope (cough, micturition, defecation, swallow, etc)
  - Carotid Sinus Hypersensitivity
- Orthostatic Syncope
  - Not just volume depletion; Can be primary to conditions like Multisystem Atrophy or secondary to conditions like Diabetes or Amyloidosis (autonomic neuropathy) or Medication induced

Crompton, D & Berkovic, S. Lancet Neurol 2009; 8: 370–81

Quick Review of Types of Syncope

- Cardiogenic
  - Arrhythmia
    - Sinus Node Disease
    - AV conduction
    - Long QT, Brugada
    - Medication Induced
  - Structural Heart Disease or Cardiopulmonary Disease
    - Valvular disease
    - Cardiomyopathy
    - Ischemia
    - PE

Crompton, D & Berkovic, S. Lancet Neurol 2009; 8: 370–81

Syncope Prodrome

- Presyncopal Symptoms
  - Usually develop over 1-5 minutes
  - Lightheadedness
  - Nausea
  - Sweating
  - Palpitations
  - Greying or Blacking of Vision
  - Muffled Hearing
  - May improve with lying down
  - Setting is Important
    - Quickly standing
    - Prolonged standing especially if associated w/hot, unventilated, crowded places or after drug/EtOH use → leads to peripheral vasodilation
    - Increased vagal tone → seeing blood or terrifying scenes, pain

Crompton, D & Berkovic, S. Lancet Neurol 2009; 8: 370–81

Overlooked Features of Syncope

- Convulsions occur in 70–90% of syncope
- Hallucinations (visual or auditory) occur in up to 60% of syncope
- Syncope doesn't have to occur from the upright position
- Sudden onset, urinary incontinence and trauma can happen w/syncope
- Abdominal pain can be confused w/epigastric aura
- Pallor and sweating can be symptoms of autonomic epileptic seizures with or without secondarily GTCs.
- Complete recovery may not be rapid and post-ictal confusion may occur → not as bad as see in GTCs
- Eyes OPEN in GTCs and Syncope. May see eyes rolling into back of head or deviation in both

Panayiotopoulos, C.P., Imitators of epileptic seizures, 2012

Case #6

- Patient is a 24yr old woman presenting after an episode of loss of consciousness.
- Witnesses report that she complained of feeling unwell followed by her falling to floor and hitting her head. She had "jerking" of her extremities for about 90 seconds that resolved on their own.
- Afterwards, she was confused and had blood coming out of her mouth.
- Her eyes were open during the event and she appeared to turn somewhat blue in the face
- PMH/PSH: unremarkable

Case # 6 Continued

- In the ER, her HR is 110, BP is 135/70, SpO2 is 94% on RA
- She is oriented to person, but not place or time.
- She does not know how she got to the ED. She just remembers that she was walking in the store.
- She has no prior history of LOC
- She does drink EtOH, mostly on weekends (6-8 drinks)
- She had been drinking more the weekend prior and has been sleep deprived studying for her finals.
- Her HCT is normal.

Case #6 Diagnosis?

- Likely seizure
  - Possibly 2/2 to sleep deprivation and increased EtOH use

Definitions

- Seizure
  - An episode of altered behavior or sensorium caused by excessive & hypersynchronous firing of neurons
- Epilepsy
  - Recurrent seizures, two or more unprovoked seizures separated by more than 24 hours

Seizure Classification

- Generalized seizures
  - Tonic-clonic seizures (previously - Grand Mal)
  - Absence silures
  - Tonic seizures (stiffening seizures)
  - Clonic seizures (shaking seizures)
  - Myoclonic seizures (shock-like jerks of a muscle or muscle group)
  - Atonic seizures (drop attack seizures)
- Partial seizures
  - Simple partial seizures (consciousness preserved)
  - Complex partial seizures (consciousness altered)

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Neurologic Etiologies

- Idiopathic, symptomatic and cryptogenic epilepsies
- Each one can be generalized or localization related
  - Idiopathic: no specific etiology can be established
  - Symptomatic: specific, primary cause (cortical dysplasia, mesial temporal sclerosis etc)
  - Cryptogenic: presumably symptomatic, but the cause has not been discovered.

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More Neurologic Etiologies

- Stroke
  - Strokes that affect the cerebral cortex lead to seizures in 5%-15% of patients
  - Usually, post-stroke seizures do not indicate development of a seizure disorder and long-term anti-convulsant therapy typically not recommended
- Meningitis or encephalitis
- Tumor and other mass lesions
- Dementia
- Head trauma
- Medication Noncompliance

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Medical Etiologies

- Hypoglycemia
- Hyponatremia
- Hyperosmolar states
- Hypokalemia
- Uremia
- Hepatic encephalopathy
- Porphyria
- Drug/Alcohol overdose or withdrawal
- Global cerebral ischemia from cardiac arrest
- Hypertensive encephalopathy/ PRES
- Eclampsia

Slide borrowed from colleague, Dr. Hrayr Attarian

Work-Up

- CBC
- CMP
- Utox Screen
- Anti-convulsant levels
- MRI Brain Epilepsy Protocol
- EEG, could start with a routine EEG and refer to neurology

Quick Overview of Meds

- Generalized seizures (tonic-clonic, tonic, clonic, myoclonic)
  - Start with lamotrigine, other options include topiramate, levetiracetam and valproic acid
- Partial seizures (simple or complex) and secondarily generalized seizures
  - Start with oxcarbazepine or carbamazepine, other options include phenytoin, lamotrigine, lacosamide, topiramate, zonisamide and levetiracetam
- Notes
  - Usually not treated after single seizure
  - Treat the seizure and the medication side effects, not the AED serum level

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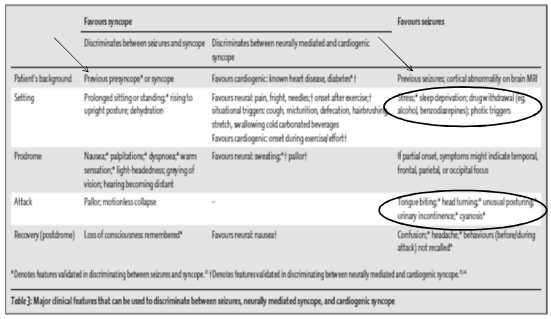
Summary of Seizure vs Syncope



	Favours syncope		Favours seizures
	Discriminates between seizures and syncope	Discriminates between neurally mediated and cardiogenic syncope	
Patient's background	Previous presyncope* or syncope	Favours cardiogenic: known heart disease, diabetes*†	Previous seizures; cortical abnormality on brain MRI
Setting	Prolonged sitting or standing;* rising to upright posture; dehydration	Favours neural: pain, fright, needles;† onset after exercise;† situational triggers: cough, micturition, defecation, hair brushing, stretch, swallowing cold carbonated beverages Favours cardiogenic: onset during exercise/effort†	stress;* sleep deprivation; drug withdrawal (eg, alcohol, benzodiazepines); photic triggers
Prodrome	Nausea;* palpitations;* dyspnoea;* warm sensation;* light-headedness; greying of vision; hearing becoming distant	Favours neural: sweating;*† pallor†	If partial onset, symptoms might indicate temporal, frontal, parietal, or occipital focus
Attack	Pallor; motionless collapse	–	Tongue biting;* head turning;* unusual posturing;* urinary incontinence;* cyanosis*
Recovery (postdrome)	Loss of consciousness remembered*	Favours neural: nausea†	Confusion;* headache;* behaviours (before/during attack) not recalled*

*Denotes features validated in discriminating between seizures and syncope.[9] †Denotes features validated in discriminating between neurally mediated and cardiogenic syncope.[9,10]

Table 3: Major clinical features that can be used to discriminate between seizures, neurally mediated syncope, and cardiogenic syncope

Crompton, D & Berkovic, S. Lancet Neurol 2009; 8: 370–81

When to phone a friendly neurologist?

- Really, the answer is ANYTIME.
- But, here's some general guidelines:
  - You're not sure what's going on with the patient
  - They have multiple neurologic complaints that don't seem to fit together neatly into one diagnosis
  - You're not sure how to interpret the result of an MRI, CT, EMG/NCV, etc in the context of the patient's complaints

When to phone a friendly neurologist? (continued)

- Intractable Headaches
  - Particularly, medication overuse, chronic migraine, and atypical headaches that don't seem to fit into one category
- Concern for Seizure
  - Especially when the event has characteristics that could be syncope or could be seizure and a cardiac etiology has been ruled out
- Frequent Falls
  - Could be neuropathy, could be dizziness, could be disequilibrium/balance issues, could even be syncope or seizure
- Help with medication management
  - You've tried as many neuroleptic medications as you're comfortable with and you're ready for someone else to give it a try