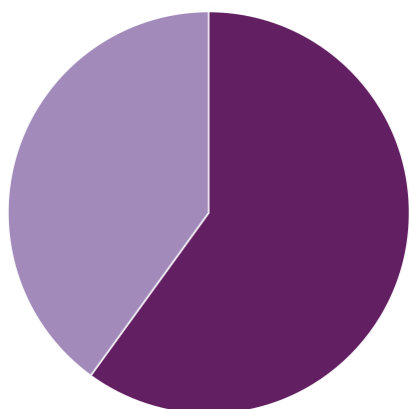


PSYCHOGENIC NON-EPILEPTIC SEIZURES (PNES)

What are PNES?

- resemble epileptic seizures but are **not** the result of **abnormal electrical discharges in the brain**
- a "**spike and wave**" pattern is **not** seen on the electroencephalogram (EEG)
- occur in **both children and adults**

Up to
40%
of patients evaluated in
**Ontario Epilepsy
Monitoring Units**
have PNES



- PNES are believed to be a physical reaction to an **emotional or psychological stressor**
- PNES are **real** and persons are **not faking** the seizures

What causes PNES?

- the exact cause is **unknown**
- a person does **not** have **voluntary control** over PNES
- PNES occur more frequently in **young adult women**
- **traumatic events** in childhood or adult life may be a contributing factor
- psychiatric comorbidities are common, including **anxiety, depression, personality disorder & post-traumatic stress disorder**

How are PNES diagnosed?

- the patient is monitored until a seizure occurs
- a **video-EEG** is interpreted by an **epileptologist**
- it is possible for a person to have **BOTH epileptic seizures and PNES**

Risk factors that favour a PNES diagnosis:



Traumatic brain injury



Female



Family history of epilepsy (modeling)



Childhood physical or sexual abuse

Clinical features that are characteristic of PNES include:

- gradual onset
- eyes closed at seizure onset
- involuntary body movements (e.g. writhing, flailing)
- forced eye closure (i.e. resistance to the eyes being pulled open by an examiner)
- crying during the seizure
- swallowing
- slumping
- intelligible speech (i.e. patients often respond to questions during an episode)
- hyperventilation



What are the PNES treatment options?

- **cognitive behavioural therapy**
- evidence and skills-based **psychotherapy**
- **stress reduction techniques** (e.g. meditation, deep breathing)
- **psychoeducation**

Recommendations:

- care should be **coordinated** between the multi-disciplinary **healthcare providers** (e.g. neurologist and a mental health professional)
- healthcare providers should conduct **regular follow-ups** to ensure patients are seizure free

