mind map by Simon Brown
almostadoctor.com

# Seizures and Blackouts

- Epilepsy
  - Types of epilepsy
    - JAE
      - Juvenile Absence Epilepsy
      - Absence seizures
    - JME
      - Juvenile Myoclonic Epilepsy
      - Most common generalised epilepsy in adults
      - Myoclonic / tonic-clonic / absence seizures
  - Treatment
    - Localisation Related Epilepsy (LRE)
      - Lamotrigine
      - If rash develops then withdraw - could lead to Stevens-Johnson Syndrome (life threatening condition where epidermis separates from the dermis)
    - Primary Generalised Epilepsy (PGE)
      - Sodium Valporate (first line)
        - High efficacy
        - S/E decreased folate, hair loss, weight gain
        - Tetratogenic potential
      - Second line - Lamotrgine
- Types of Seizure
  - Generalised - burst of abnormal electrical activity throughout the brain
    - Absence (petit mal)
      - Brief LOC (blackout)
      - Common in adults
    - Myoclonic
      - Brief shock like jerk of muscles
      - Usually begin in childhood (can occur at any age)
    - Tonic Clonic (grand mal)
      - Initial tonic phase (muscles stiffen) with LOC
      - Then clonic phase (arms and legs jerk rapidly)
      - Incontinence may occur
      - Consciousness returns slowly with drowsiness and confusion
    - Tonic
      - Greatly increased tone in across body
      - Consciousness is preserved although person may fall
    - Clonic
      - Rapid alternating contraction and relaxation of muscles
      - Length of seizure varies
    - Atonic
      - Sudden and brief loss of muscle tone
      - May cause person to fall
  - Partial - burst of electrical activity in one part of the brain producing focal symptoms
    - Simple Partial
      - Abnormal motor, sensory, autonomic, or psychic experience
      - Usually less than 2 minutes
      - More likely in those who hav experienced brain injury
    - Complex Partial
      - Usually start in temporal / frontal areas
      - With aura
      - Moving to include other areas of the brain
      - "Nobody's home" expression
- Status Epilepticus
  - Seizures lasting for > 30 minutes
    - Mortality and risk of permanent brain damage increase with length of attack
  - Usually occurs in known epileptics
  - Management
    - Basic life support: airways, oxygen, suction, IV acces, fluids
    - Slow IV bolus phase to stop seizure (lorazepam)
    - IV infusion phase if seziure continues (phenytonin / diazepam)
    - General anaesthesia / ICU
- Management of Seizures
  - DVLA Guidelines
    - First seizure
      - 6 months off driving
      - LGV / PCV 5 years off driving
    - Epilepsy Diagnosed
      - 3 year license issued
      - Till 70 years license issued if 7 years free of seizures
      - LGV / PCV 10 years seizure free
  - Reassurance / general advice
  - Avoid dangers / avoid situation that provoke seizures
  - Drugs
  - Surgery
  - Treat underlying cause
- Causes of Seizures
  - Idiopathic
  - Birth trauma and anoxia (extreme hypoxia)
  - Head injury
  - Sepsis
  - Vascular e.g. stroke
  - Space occupying lesion
  - Congenital
  - Metabolic
  - Drug use / withdrawal
- EEG changes associated with Seizures
  - Often false positives
  - Epileptiform activity