Sodium Valproate

**USAGE:**
- A good ‘all rounder’. Often used first line in genetic generalised epilepsies (e.g. CAE, JAE, JME) and can be effective in Childhood Epilepsy with Centro temporal spikes and in refractory epilepsies such as Dravet Syndrome.
- Avoid use in confirmed (or suspected) mitochondrial disorders.
- In the very young (<2 years old), consider the risk of hepatotoxicity. The aetiology of the neurological problem is helpful in deciding whether to use or not.
- **There are significant concerns regarding teratogenicity and all women of child bearing age must be alerted to this (see precautions below).**

**SIDE EFFECTS:**

**Common side effects:**
- Appetite and weight gain (very common and can be intolerable).

**Other notable side effects:**
- Thrombocytopenia (usually dose related)
- Sedation
- Rash
- Dystonia/tremor (at higher doses)
- Pancreatitis
- Hepatotoxicity is idiosyncratic and those at most risk are children under the age of 2, metabolic aetiology, and/or multiple drugs, avoid mitochondrial disorders
- There is some association with ovarian cysts.
- Rarely a picture of pseudodementia is described.
- **For a complete list of adverse effects, appropriate formularies should be consulted.**

**DOSING:**
- The initiation and escalation dose depends upon age, weight, syndrome, seizure frequency and severity, and side effect profile.
- Unfortunately, a one dose regime does not fit all. A Paediatric Neurologist should be consulted if there is uncertainty.

**A commonly used regime is below:**
- Start 5mg/kg/day increasing weekly by 5-10mg/kg/day in two divided doses (depending upon weight of child).
- Usual dose range 10-30mg/kg/day in child less than 40kg.
- High doses of around 40mg/kg/day can be used. In dosages above this, advice could be sought from a paediatric neurologist.
- Dosages per kilogram can only be used in children of weight approximately up to 30-40kgs. Consult appropriate formularies for higher weights and in the adult range.
- **These dosages are only a guideline and appropriate formularies should be consulted as needed.**
**PREPARATIONS:**
- Syrup formulation is 40mg/ml – rounding to multiples of 40mg doses is convenient.
- Tablet 100mg - crushable
- There are enteric coated tablets (200mg and 500mg) in addition to non-enteric coated tablets.

**MONITORING:**
- Baseline FBE, LFTs and re-check 6-8 weeks after starting.
- Valproate levels can be measured but are variable and may not correlate to clinical efficacy – levels are done for a reason and not routinely measured.

**PRECAUTIONS:**
- Sodium valproate has been associated with significant concerns of teratogenicity (i.e. malformations, cognitive impairment, and Autistic Spectrum Disorder). This is particularly true at higher dosages. The risk of teratogenicity increases with increasing dosage. It is important clinicians and women of child bearing age are aware of this risk. Ideally, pregnancies in women with epilepsy should be planned and managed by a neurologist. Medication choices should be selected and discussed keeping in mind the safety of mother and foetus.