# Levetiracetam

Levetiracetam is a highly soluble and permeable compound. The pharmacokinetic profile is linear with low intra- and inter-subject variability. Due to its complete and linear absorption, there is no need for plasma level monitoring. Levetiracetam is not known to have significant drug-drug interactions, it is chemically unrelated to existing antiepileptic active substances. The mechanism of action of levetiracetam still remains to be fully elucidated.

## Initial IVI loading

20mg/kg (rounded to nearest 250mg) in a minimum 100mL Sodium Chloride 0.9% or Glucose 5% over 15 minute infusion. Maximum loading dose 3000mg.

## Maintenance dose (PO/NG/IV)

Adult over 50kg:

1 gram BD.

Can be titrated to 1.5g BD if tolerated and clinically indicated.

## Renal impairment

| Group | Creatinine clearance | Dose and frequency |
|---|---|---|
| Normal | > 80 mL/min | 500mg - 1,500mg BD |
| Mild | 50-79 mL/min | 500mg - 1,000mg BD |
| Moderate | 30-49 mL/min | 250mg - 750mg BD |
| Severe | < 30 mL/min | 250mg - 500mg BD |
| CAVVHDF | - | 250-750mg BD (Dose as CrCl 30-49mL/min) |
| ESRF patients undergoing dialysis | - | 500 to 1,000 mg once daily |

## Hepatic impairment

In patients with severe hepatic impairment, the creatinine clearance may underestimate the renal insufficiency. Therefore a 50% reduction of the daily maintenance dose is recommended when the creatinine clearance is < 60mL/min.