

Lithium Regime in Cluster Headache

Lithium Carbonate (Priadel®) is a preventative treatment used in the management of Cluster Headaches (CH). Patients usually benefit from dosages between 600 – 1200 mgs daily, though some require higher doses. Lithium has the potential for many side effects (see below) and therefore the dose has to be increased gradually as shown on the next page.

Prior to starting lithium blood tests to check kidney (renal) and thyroid function are essential as lithium can affect these organs. Renal and thyroid function tests will also need to be performed periodically during treatment (monthly for the first three months, then three to six monthly).

The level of lithium in the blood needs to be monitored carefully to ensure that it does not exceed the recommended levels. The lithium level needs to be checked one week after every dose increase. The lithium level needs to be checked at least 12 hours after the last dose; this usually entails having the last dose at night before 9pm and having the blood test done the next morning after 9am before taking the morning lithium dose. The lithium dose is altered depending on the result of the lithium level. In practice, this requires a blood test once every two weeks, allowing for the delay in getting the result back from the laboratory.

The starting dose of lithium is 300mgs twice daily. If the serum lithium level is below 0.8mmol/L and no significant side effects are being reported, then the dose is increased in increments of 100mgs twice daily. In this manner, the lithium dose is increased until the cluster headaches are suppressed, side effects intervene or the serum lithium level is in the upper part of the therapeutic range (0.8-1.0mmol/L). Only increase the lithium dose when informed to do so by your General Practitioner or Neurology team. If you start to get any side effects please let your General Practitioner or Neurology team know as soon as possible.

Side effects

Side effects of Lithium can be gastrointestinal disturbances (nausea, vomiting, loss of appetite, diarrhoea), fine tremor, polyuria (frequent urination), polydipsia (drinking excessively due to thirst), weight gain and oedema. Signs of intoxication are blurred vision; anorexia, vomiting, diarrhoea, and increased CNS disturbances (drowsiness, sluggishness, giddiness with ataxia, coarse tremor and speech disturbance). Severe overdose (serum level > 2mmol/L) is indicated by seizures, toxic psychoses, faints, hyperreflexia and hyperextension of the limbs and requires emergency treatment of poisoning. Underactive thyroid (hypothyroidism) and polyuria (nephrogenic diabetes insipidus) can occur with long-term use.

	Treatment	Investigation	Action
Baseline		Renal and thyroid function tests	Only start lithium if these results are normal
Weeks 1-2 Day 7 Day 14	Start lithium 300mgs twice daily and stay on this dose for two weeks Alter lithium dose as outlined in the "Action" section	Blood test for Lithium level	<ul style="list-style-type: none"> • If headaches resolved or significant side effects develop, then your medical team will advise you about the dose. • If lithium level < 0.8 then increase dose by 100mgs twice daily (i.e. if on 300mgs twice daily then increase dose to 400mgs twice daily) • If lithium level 0.8-1.0, then do not increase dose unless advised by your medical team • If lithium level >1.0 then will probably need to reduce the lithium dose
Weeks 3-4 Day 21 Day 28	Stay on the lithium dose started on day 14 for two weeks Alter lithium dose as outlined in the "Action" section	Blood test for Lithium level	<ul style="list-style-type: none"> • If headaches resolved or significant side effects develop, then your medical team will advise you about the dose. • If lithium level < 0.8 then increase dose by 100mgs twice daily (i.e. if on 400mgs twice daily then increase dose to 500mgs twice daily) • If lithium level 0.8-1.0, then do not increase dose unless advised by your medical team • If lithium level >1.0 then will probably need to reduce the lithium dose
Weeks 5-6	Continue cycle above as required		

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