

Chiron Compounding Pharmacy Newsletter

L-methylfolate Adjunctive Therapy for Depression

Deplin® (L-Methylfolate Calcium) is commercially available in the US as 7.5mg or 15mg capsules.

Chiron can compound L-Methylfolate Calcium capsules for Canadian patients who would benefit from this medication.

Drug interactions:

No decreased effectiveness of drugs have been reported with the use of L-methylfolate; however several drugs have been shown to interact with folic acid, folate metabolism, the absorption of folate and the degradation of folate. Monitoring of folate levels may be necessary in patients receiving such drugs. Examples include: antiepileptic drugs, NSAIDs, oral contraceptives and sulfasalazine.¹

Contact Us!

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Indication for Use:

L-Methylfolate is a medical food dispensed by prescription for the clinical dietary management of the metabolic imbalances associated with depression. It is indicated for individuals who have suboptimal L-methylfolate levels and have major depressive disorder (MDD) with particular emphasis as adjunctive support for individuals who are on an antidepressant.¹

L-methylfolate Clinical Pharmacology:

L-methylfolate or 6(S)-5-methyltetrahydrofolate [6(S)-5-MTHF] is the primary biologically active isomer of folate and the primary form of folate in circulation. It is also the form which is transported across membranes into peripheral tissues, particularly across the blood brain barrier. In cells, L-methylfolate is used in the methylation of homocysteine to form methionine and tetrahydrofolate (THF). THF is the immediate acceptor of one carbon units for the synthesis of thymidine-DNA, purines (RNA and DNA) and methionine.¹

Folic acid, the synthetic form of folate cannot cross the blood brain barrier. It must also undergo enzymatic reduction by methylenetetrahydrofolate reductase (MTHFR) to become biologically active. Genetic mutations of MTHFR (C677T polymorphism) result in a cell's inability to convert folic acid to L-methylfolate. L-methylfolate is indicated regardless of C677T polymorphism.¹

Clinical Studies:

Long-term efficacy, safety, and tolerability of L-methylfolate calcium 15 mg as adjunctive therapy with selective serotonin reuptake inhibitors:

Subjects in this analysis were adult outpatients (18-65 years) previously enrolled in a trial comparing adjunctive L-methylfolate and placebo for MDD with an inadequate response to monotherapy using selective serotonin reuptake inhibitor (SSRI). Subjects who completed the acute trial were offered to enroll in this 12-month, open-label treatment phase with L-methylfolate and continued SSRI treatment, with scheduled visits for efficacy, safety, and tolerability every 12 weeks. Subjects treated with adjunctive L-methylfolate 15 mg were included in the efficacy analysis. Of 68 subjects who met criteria, 38% achieved full recovery, and none experienced a recurrence of MDD. For subjects entering the open-label phase in remission (n = 11), 91% achieved full recovery with L-methylfolate 15 mg, and none experienced a relapse or recurrence. Among 57 subjects who entered the open-label phase as nonremitted, 61% achieved remission. Of subjects who entered the open-label phase with a response without remission (n = 4), 50% had full recovery, and of subjects entering the open-label phase with no response (n = 53), 26% met recovery criteria.²

Methyl-folate use as Adjunctive Therapy in Patients with Depression:

L-methylfolate 7.5mg once daily has been studied as adjunctive therapy among 24 depressed patients with low folate levels who were also taking a tricyclic antidepressant (TCA) or a monoamine-oxidase inhibitor (MAOI) antidepressant. Under double-blind conditions, patients were randomized to receive either 5-MTHF or placebo as adjunct to their current antidepressant. 5-MTHF combined with an antidepressant was found to be significantly more effective than placebo in reducing depressive symptoms following 3 months (p <0.01) as well as 6 months (p<0.001) of treatment. 5-MTHF was well tolerated, with no serious adverse events reported.³

Methyl-Folate Trials in Patients with Depression:

Placebo controlled trials of folates as adjunctive therapy in major depression has confirmed that they enhance the response to standard antidepressant medication, even in the absence of folate deficiency. This study is a pilot randomized controlled trial comparing 5-MTHF monotherapy to amitriptyline in out-patients with mild to moderate depression. 31 patients with DSM-11-R criteria for a depressive episode of mild to moderate severity and a Montgomery Asberg Depression Score (MADS) of at least 14 were randomly allocated to 5-MTHF 50 mg (25 mg biologically active) or amitriptyline 150 mg for 6 weeks. Clinical response was defined as a fall in MADS of 25% or more. Non-responders to initial therapy were crossed over to the alternative active therapy for a further six weeks. Of 19 patients randomized (n = 16) or crossed over (n = 3) to treatment with 5-MTHF for six weeks, 42% responded.⁴

Please contact one of the pharmacists at Chiron today to assist you with tailoring treatment to meet your patient's needs.

References:

1. Product Information: Deplin, L-methylfolate calcium capsules. Pamlab, Inc., Covington, LA 2009.
2. Zajecka JM, Fava M, Shelton RC, Barrentine LW, Young P, Papakostas GI. Long-term efficacy, safety, and tolerability of L-methylfolate calcium 15 mg as adjunctive therapy with selective serotonin reuptake inhibitors: a 12-month, open-label study following a placebo-controlled acute study. *J Clin Psychiatry*. 2016 May;77(5):654-60. doi: 10.4088/JCP.15m10181.
3. Godfrey PSA et al. Methylfolate use as Adjunctive Therapy in Patients with Depression. *The Lancet*. 1990; 336:392-5
4. Reynolds EH, Crellin R, Bottiglieri T, Laundry M, Toone BK, et al. Methylfolate as Monotherapy in Depression. A Pilot Randomised Controlled Trial. *J Neurol Psychol*. 2015;3(1): 5.