

From the Desk of:

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Depression is the leading cause of disability in people between the ages of 15 and 44 years.¹ It affects 21 million Americans and results in 8 million healthcare visits each year.² Major depressive disorder is encountered in 10% to 20% of primary care patients, and primary care clinicians play a critical role in the care of these patients.³ Unfortunately, despite the wide selection of antidepressant medications available to treat these patients, less than 30% of patients attain remission with monotherapy, and overall, sustained recovery occurs in only 43% of patients.

Clearly, better tools or a more comprehensive approach to treating depression is needed. The latter, in the form of nutritional supplements, is promising. One nutrient in particular, omega-3 fatty acids, has shown promise in a number of pathological processes, including cardiovascular disease, cancer, and Alzheimer's disease, and its potential is being explored for use in the metabolic syndrome.⁷⁻⁹ Recently, there has been some evidence that omega-3 fatty acids may be effective in treating depression as well.

Omega-3 fatty acids are not produced by the body and must be absorbed through the diet, with fish being the primary source. Interestingly, high per capita levels of fish and seafood consumption have been associated with lower rates of major depressive disorder, postpartum depression, and bipolar disorder.¹⁰ More recently, results of a study of US military suicides indicated that the risk of suicide death was 14% higher per standard deviation of lower docosahexaenoic acid (DHA),¹¹ an essential component of synaptic cell membranes.¹² The risk of suicide death among males was 62% higher for those with low serum DHA.¹¹ Furthermore, there appears to be a correlation between the severity of the depressive symptoms and the degree of omega-3 deficiency, and evidence from one postmortem study suggests that the DHA content of the orbital frontal cortex of those with major depressive disorder is significantly lower than in controls.¹³

It is possible that essential fatty acid metabolism may be disturbed in those with depression. One study conducted in 10 depressed patients and 14 matched healthy controls found a significant depletion of red blood cell membrane omega-3 fatty acid content in depressed subjects despite there being no differences in dietary intake of omega-3 fatty acids.¹²

A few studies have investigated the efficacy of omega-3 supplementation in depression. In 2 randomized, double-blind, placebo-controlled studies, the addition of omega-3 fatty acids to standard antidepressant therapy resulted in response rates of 53% to 60% in patients who had recurrent or persistent major depressive disorder. In contrast, patients receiving placebo had response rates of only 10% to 29%.^{14,15} A recent study conducted in mania and bipolar depression found that there was strong evidence to support the use of omega-3 fatty acids in bipolar depression, but not in mania.¹⁶ Of note, there have also been suggestions that the effects of omega-3 fatty acids on depression may not be linear. Evidence from one study suggested that there may be a therapeutic window and that high doses of omega-3 fatty acids (>1000 mg) may attenuate the effects of antidepressant medication.¹³

There is less evidence regarding the association between iron and depression. However, a study conducted in 192 female medical students did find a prevalence of depression of 34.7%, with mean serum ferritin levels showing a significant inverse correlation with the presence of depression.¹⁷

Thus, both omega-3 fatty acid and iron levels may be important in depression. Use of supplements to correct deficiencies that are due either to poor diet or disturbances in the metabolism of these nutrients

may prove a valuable addition to current standard antidepressant therapy. EnLyte[®], a recently introduced prescription vitamin indicated for the adjunctive treatment of depression, contains 40 mg of conjugated phosphatidylserine docosahexaenoic acid (PS-DHA) as well as CitraFerr[™], which has 13.6 mg of ferrous gluconate chelate. PS-DHA mimics the fatty acid composition and fatty acid profile of human brain PS.¹⁸ EnLyte[®] also contains folates and other B vitamins; deficiencies of these have been associated with depression as well. Furthermore, folates have been used successfully as adjunct treatment in depression.¹⁰

Use of a supplement such as EnLyte[®], either as monotherapy in mild to moderate depression or as adjunctive therapy in more severe depression, may enhance response. A nutrient approach to depression therapy offers the advantage of a lower side effect profile. The comprehensive nature of EnLyte[®] targets several key nutrient deficiencies implicated in the etiology of depression. I believe that such an inclusive approach may result in much better response rates in patients who have this devastating disease.

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