

Curcumin for the treatment of major depression: A randomised, double-blind, placebo controlled study

Student Researcher: Adrian Lopresti

Supervisors: Professor Peter Drummond, Dr Garth Maker, Professor Sean Hood

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Major depression is associated with multiple disturbed biological pathways which are influenced by several lifestyle, psychological, environmental and biological factors. Curcumin, derived from the Indian spice turmeric, positively influences several of these biological pathways and therefore has the potential to be an effective antidepressant. In animal-based studies it has been confirmed that curcumin has antidepressant effects. However, human-based studies are lacking.

In a randomised, double-blind, placebo-controlled study, 56 individuals with major depressive disorder were treated with a patented curcumin extract (500mg twice daily) or placebo for 8 weeks. Changes in depression and anxiety symptoms were examined using the Inventory of Depressive Symptomatology- Self Report (IDS-SR₃₀) and Spielberger State-Trait Anxiety Inventory. Changes in a number of biomarkers were also examined over time. The following results were found:

1. From baseline to week 4, both curcumin and placebo were associated with improvements in depressive symptoms. However, from weeks 4 to 8, curcumin was significantly more effective than placebo in improving several depressive and mood-related symptoms.
2. Curcumin had greater antidepressant effects in a subgroup of participants with atypical depression.
3. Increases in the urinary biomarkers thromboxane B2 and substance P were greater after 8 weeks of curcumin supplementation than placebo; while placebo supplementation was associated with reductions in urinary aldosterone and cortisol. In curcumin-treated participants, higher plasma levels of endothelin-1 and leptin at baseline were associated with greater reductions in depressive symptoms after 8 weeks of treatment.

Further investigations using larger samples sizes and varying curcumin dosages are required help clarify the antidepressant effects of curcumin.