

## BIPOLAR DISORDER, BDNF AND INFLAMMATORY MARKERS

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**Background:** Bipolar I Disorder (BD) has a poorer longer-term outcome than previously thought, with persistent cognitive impairment and functional decline. The neurobiological underpinnings that might underlie these changes remain unknown. Changes in BDNF levels and cytokines are potential candidates. **Objectives:** To examine both cytokines and BDNF levels and their relationship in BD patients in early and late stages of the disorder. **Methods:** We measured serum BDNF, TNF- C, IL-6 and IL-10 levels in a total of 60 patients with BD I and we compared those in early stages of illness with those in late stages of illness and also both groups with 60 matched healthy control group. **Results:** BDNF was decreased only in those patients in late stage of bipolar disorder. Also, BDNF levels were negatively correlated with length of illness. In contrast, all interleukins and TNF- C were increased in the early stages of BD, when compared to controls. While TNF- C and IL-6 continued to be significantly higher than controls at late stages of BD, IL-10 did not. When levels were compared between patients at early and late stages of illness, there was a significant decrease in BDNF and IL-6 in later stage of BD when compared to early stage. Inversely, TNF- C showed a significant increase at later stage. **Conclusion:** Failure of inflammatory defences in late stage of disorder may account for reduction in BDNF and continued elevations in cytokines; thus these may have the potential to serve as markers of illness progression in BD.