

# Yoga and Bipolar Disorder – Evidence and the Way Ahead

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Yoga is an ancient system of exercises that include postures (asana), breathing exercises (pranayama), and meditation (dhyana). Multiple mechanisms explaining the mental effect of yoga have been put forward, including reduction in the sympathetic and increase in the parasympathetic tone, which leads to emotional regulation, empathic response, and is associated with decreased levels of cortisol. Vagal activity also calms body's stress response system. In addition, an increase in melatonin, which has its own beneficial effects, has been observed (1). Increased EEG synchrony and coherence, increased heart rate variability, and respiratory sinus arrhythmia were also considered as possible effects (2).

Out of all psychiatric disorders, depression has been the best documented with regard to the role of yoga with multiple trials showing benefit in mild to severe depression (3). Many studies also emphasize rhythmic breathing as an essential component of yoga. Although yoga has been found effective, it fails to achieve high remission rates by itself, and results from monotherapy are worse than the current pharmacotherapy and electroconvulsive therapy (4). However, findings of Sharma et al confirm the effectiveness of yoga when used in addition to prescribed antidepressants (5). In fact, yoga is better than many other non-pharmacological adjuncts being used today, such as group therapy and psychoeducation (6).

Many of these studies, however, lack numerous basic details of trial methodology, and differences in yoga techniques used in the investigation prevent a general analysis. Still, seven out of nine randomized, controlled trials, demonstrate positive outcomes of yoga intervention (3). Multiple authors stress the fact that more standardized research is required in this field before yoga is accepted as a clear clinical adjunct. Some side effects have been noted in patients undergoing yoga with comorbidities like diabetes (7). Additionally, individuals who want to practice yoga must

make sure that the technique they use is adequate for their physical profile. Same can be said for prenatal women. Yoga's impact on mental health is also being considered, with studies focusing on psychiatric diseases currently being conducted in various parts of the world. For instance, authors of an ongoing study at the RML hospital in New Delhi, India, have demonstrated a positive effect of

yoga on patients with schizophrenia (8).

While there have been nine studies for Depressive disorder there is a distinct lack of clinical studies devoted to the investigation of beneficial effects of yoga on bipolar disorder. Similar findings were reported by Andreescu et al (9), when they were looking for alternative treatments for bipolar disorders. They found yoga to be better than other alternate treatments like herbs, which can cause serious pharmacological side effects (9). However, the lack of evidence hampered them from actively suggesting yoga therapy as a viable option. Nanda et al (10) found reduction in anxiety and depressive symptoms, as well as increased quality of life in yoga-practicing patients, but also mentioned the need for further research in this field. Another study found positive results in people with bipolar disorder, who followed a regular exercise regimen like yoga (11), but a few participants found the cost of practicing it high.

The difference between yoga's effects on depression and bipolar disorder must be understood. This is especially critical when it comes to certain types of yoga. For instance, Sudarshan Kriya Yoga, a subtype of yoga recognized as very effective in depression by three studies (4, 12 -13), was found to trigger mania in individuals affected with bipolar disorder, when they were practicing a Bhastrika breathing technique (2). Another case study cited instances of mania induced by meditation (14).



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As a result, more research is needed on yoga, not only to identify it as a potential treatment adjunct but also to test its efficacy. Since many patients are likely to pursue this exercise regimen on their own, in addition to pharmacotherapy, we, as treating doctors, should be able to provide them with proper advice.

While there are many different forms of yoga, it is safe and relatively well-tolerated, resulting in very few side effects when practiced appropriately (15). In addition, yoga is gaining popularity and is widely accepted as a low intensity exercise course with 6.1% of the population of US practicing it in 2007 (16). Being a low intensity regimen, long term compliance is more likely; this is important, since bipolar disease

is often life-long. The effects of yoga on diseases, such as hypertension, hyperglycemia and hypercholesterolemia, can counter the side effects caused by the drugs being given for bipolar disorder or prove helpful for patients with bipolar disorder and associated chronic conditions (17). A number of questions regarding the type of yoga to be used, the length and intensity of yoga treatment, and the psychiatric disorder it is most effective against remain unanswered. A concerted, focused research is needed to develop an effective program to integrate yoga with pharmacological treatment in order to harness its full benefits.

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