

TM & Serotonin: Model of Effects

Research indicates that the brain neurotransmitter, serotonin (5-HT), is increased from TM practice.[1] This is good news and bad news.

The good news is that those people who are experiencing abnormally low levels of serotonin may temporarily benefit from the increase. Chronically low levels of serotonin are associated with some forms of anxiety and depression, and have been successfully treated with a group of SSRI drugs designed to raise serotonin levels.[2]

The bad news is that too much serotonin has been shown to have a range of negative, sometimes devastating, effects.

The condition of elevated serotonin levels is referred to as "serotonin syndrome" or "hyperserotonemia." A significant number of negative TM side effects correspond to the negative effects of serotonin syndrome.[3]

Here are some of the reported negative effects of TM:

- Muscle twitches and convulsions

- Headaches
- Stomach and bowel complaints
- Fatigue
- Insomnia and other sleep disorders
- Inability to focus -- feeling "spacey"
- Anxiety and panic attacks
- Depression
- Dissociation and depersonalization
- Nervous breakdown and suicidal ideation

Below are excerpts from two different publications, citing symptoms of elevated levels of serotonin:

BOOK: Snyder, Solomon Halbert. Drugs and the Brain. W H Freeman & Co, 1996.

The author is chair of Neuroscience at Johns Hopkins University in Baltimore, Maryland and one of the top three most cited scientists in the life science. Excerpt:

"...serious long-term adverse physical and psychiatric side effects produced by elevated levels of serotonin ...reported after effects: withdrawal, memory loss, sleep disorders, panic and anxiety attacks

(adrenalin rushes), impaired concentration, bi-polar, diabetes, MS symptoms, mania, chronic fatigue, severe rebound depression, symptoms of Cushing's Syndrome - moon face, looking or feeling pregnant, inability to handle stress, mood swings, etc.
...depression, manic-depression, panic, anxiety, OCD, psychosis, schizophrenia, etc."

ARTICLE: "The Serotonin Syndrome". American Journal of Psychiatry. June 1991.

"The symptoms of the serotonin syndrome are: euphoria, drowsiness, sustained rapid eye movement, overreaction of the reflexes, rapid muscle contraction and relaxation in the ankle causing abnormal movements of the foot, clumsiness, restlessness, feeling drunk and dizzy, muscle contraction and relaxation in the jaw, sweating, intoxication, muscle twitching, rigidity, high body temperature, mental status changes were frequent..."

If the stimulated increase in serotonin, produced by TM, is compared with the serotonin increase produced by SSRI (Selective Serotonin Reuptake Inhibitor) drugs, these are the effects which may be seen:

"Unfortunately, SSRIs also affect other serotonin receptors, which account for their unwanted side effects. Stimulating the

serotonin receptor called 5HT2 could lead to agitation, akathisia (motor restlessness), anxiety, panic attacks, insomnia, sexual dysfunction. Stimulating the serotonin receptor called 5HT3 could lead to nausea, gastrointestinal distress, diarrhea, and headache." [4]

This evidence suggests that TM practice(s) may be implicated in hyperserotonemia.

Notes to Text:

[1] Reference: Serotonin, noradrenaline, dopamine metabolites in transcendental meditation-technique. Bujatti M, Riederer P J: Neural Transm 1976; 39(3):257-67

[2] Reference: Schloss P. Williams, DC, Biochemistry Department, University of Dublin, Trinity College, Ireland

Reference: Lopez JF, Vazquez DM, Chalmers DT, Watson SJ, Department of Psychiatry, University of Michigan Medical Center

Reference: Major Depression and the Neurotransmitter Serotonin, S. Anderton

[3] Reported negative effects appear to intensify with increased time spent in TM practice(s). See Research Demonstrating Harmful Effects From TM and Personal Stories.

[4] Reference: Psychopharmacology of Antidepressants by Stephen M. Stahl, M.D., Martin Dunitz, Ltd., London, UK, 1997.

From: http://www.behind-the-tm-facade.org/transcendental_meditation-tmresearch-serotonin.htm