

## Deficiency of Essential Vitamins and Affect on Psychological State

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**Abstract**

Deficiency of essential vitamins play a major role in the outset and severity of psychological disorders. The most prevailing mental disorder seen in a lot of countries are depression, OCD and schizophrenia. One of the underlying cause is deficiency of vitamins, minerals and omega-3 fatty acids. Deficiency of essential nutrients required in day to day life affects mental health of patients. Not many people are known of the fact how nutrients and its deficiency can affect mental health and physical health. This mini review is to spotlight on need of vitamins and its relation in maintaining psychological well-being.

**Keywords:** Essential Vitamins; Psychological State

**Introduction**

Vitamins are one of the most essential organic compounds required in appropriate quantities as per body need in order to sustain life. The need for vitamins differ in every individual. There are 13 classes known for vitamins and are categorized into water soluble and fat soluble vitamins. Body and liver are reservoirs of fat-soluble vitamins. There are four known lipid soluble vitamins i.e. A, D, E and K. These are easier to store than water-soluble vitamins and can stay in the body as reserves for days, and even months. Fat-soluble vitamins are absorbed via intestinal tract with the help of fats, or lipids. Whereas, water-soluble vitamins do not stay in the body for longer period and body cannot store them, and they are readily excreted in the urine. Hence, water-soluble vitamins need to be replaced more often than fat-soluble ones. The two main porous vitamins namely B and C are the ones which are not stored in the body and needs to be replaced.

The key role of vitamin B and its complex is to regulate correct functioning of the methylation cycle, production of monoamine, DNA synthesis, and conservation of phospholipids such as myelin. On the other hand, lipid soluble vitamins A, D and E play a crucial role in gene transcription, antioxidant recycling and inflammatory regulation in the brain [1,2].

In todays era people are more corpulent and undernourished on the same hand. Deficiency of nutrients has been linked with mental health and increasing risk of psychiatric illness. Deficiency of vitamins can affect patients with psychiatric illness in several ways such as:

1. Any sort of mental illness also devastates the nutrition.
2. Subclinical deficiency also known as vitamin insufficiency also declines the recovery of patient.
3. Deficiency of vitamins play a key role in psychiatric illness and exaggerates the symptoms.

People are unaware of the fact that nutritional deficiency is directly related to mental illness. Nutritional neuroscience is an evolving discipline that emphasizes on the particular that factors associated with nutrition are intertwined with human perception, conduct, and sentiments [3].

Vitamin B1 known as thiamine regulates the cognitive performance especially in the geriatric population. Supplements of vitamin B12 magnifies cerebral and cognitive functioning in the elderly population and also rapidly advances the functioning of factors related to the frontal lobe. All the teenagers who have a marginal

level of deficiency of vitamin B12 are most likely to develop signs of cognitive dysfunctioning. The role of folic acid in metabolic pathway of brain has been acknowledged by many investigators who have observed that symptoms related to depression are the most ordinary neuropsychiatric signs of folate deficiency.

Patients who are suffering with depression, obsessive-compulsive disorder (OCD), schizophrenia or develop alcohol abuse, or eating disorders, may fail to prioritize and look after themselves or adopt particular eating patterns. Deficiency of vitamins is observed to be more common among elderly patients and those who are medically ill and vulnerable population. Since, diet and vitamin intake pattern has been associated with the risk of psychiatric disorders and the changeable risk factors, such as intake of folic acid, cobalamin and vitamin D. Patient counselling on diet and nutrition helps physicians as an intervention by reducing the risk of side effects.

### Conclusion

Deficiency of vitamins and dietary insufficiency are common and changeable risk factors that can avert desirable outcomes in psychiatric patients by assessing the patients baseline vitamin levels and conducting a dietary assessment. Also, patients must be encouraged to opt healthy lifestyle and eat a nutrient-rich diet that may prevent psychopathology and increase effectiveness of treatment.

### Bibliography

1. Ramsey D and Muskin PR. "Vitamin deficiencies and mental health: How are they linked". *Current Psychiatry* 12.1 (2013): 37-43.
2. Clifford J and Curely J. "Water-soluble vitamins: B-complex and vitamin C". Fact sheet (Colorado State University Extension). Food and nutrition series; no. 9.312.
3. Rao TS., *et al.* "Understanding nutrition, depression and mental illnesses". *Indian Journal of Psychiatry* 50.2 (2008): 77-82.

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