

“What’s Off Doc?” Exploring Nutritional Deficiencies and Their Relationships to Depression

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Depression is one of the most well-known mental health disorders known to man. Five percent of the globe is diagnosed with depression [1]. It is an illness that can rob one of their abilities to function wholesomely within society. Symptoms can vary in severity ranging from having a lack of sleep, fatigue, poor concentration, impaired cognition, irritability, difficulty sleeping, and having body aches and pain [2]. As unpleasant as the symptoms of depression may be, the symptoms may be exacerbated by causes of nutritional deficits. While there are several nutritional deficits associated with depression, Vitamin B, Vitamin D, and iodine will be explored.

Mental health treatment can be sought in different healthcare settings. At times, medical physicians provide treatment. At other times, an actual trained professional who specializes in mental health provides treatment. Regardless of the type of provider that is overseeing care of the individual, it is important to ask questions seeking further knowledge about the disorder, its causes, risk factors and what can be done to alleviate the symptoms. Discuss medical conditions. Ask for lab testing to find potential culprits of some of the depressive symptoms being experienced. Provide a thorough medical background to the provider. Advocate for self if there is a notice some lab results are abnormal. When and if there are abnormal lab values discovered, seek healthy ways to eradicate the deficiency. Thus, potentially eliminating depressive symptoms.

Vitamin D

Vitamin D, a fat soluble, is also known as the almighty “sunshine” vitamin and is powerful in many ways. Vitamin D is a regulator

in the absorption and maintenance of calcium and phosphorus. It reduces inflammation and assists in the cessation of inflammation [3]. Brain development also regulates the production of neurotransmitters epinephrine norepinephrine and dopamine and protects against the depletion of dopamine and serotonin [4]. These neurotransmitters play a role in depression. If these neurotransmitters are low, depression may develop.

Several risk factors have been linked to Vitamin D deficiency. The risk factors include dark pigmentation, residing in localities that are sun deprived, obesity, and older age. Researchers have discovered nutritional deficits in Vitamin D have been proven to be associated with debilitating painful conditions. Statistics depict one in twenty-five, 50 million people worldwide have chronic pain and do not receive satisfaction from pain relieving medications [5]. The National Health and Nutrition Examination survey performed a study on approximately 8000 participants in the United States who were institutionalized from ages 15 to 39. Depending upon the blood serum levels of Vitamin D, the person was more likely to be depressed. Another study showed individuals with medical comorbidities showed a significant relationship between Vitamin D deficiency and late life depression in Northern hemispheres [6]. Black females were likely to be depressed. Pregnant women with Vitamin D deficits showed to be at substantial risk for post-partum depression.

Achieving adequate supplementation of Vitamin D is possible. Vitamin D levels can be increased by choosing the right foods and getting adequate amounts of sunlight on a regular basis. Oral supplements are available in the forms of tablets and within the food eaten. Food sources such as a wide variety of fish liver oils, dark chocolate, eggs, liver, fortified cereal, grains and beverages like orange juice provide sources of Vitamin D [7].

Vitamin B

There are several types of B vitamins each having their own special effects on the human body. Vitamin B is a water-soluble vitamin. The contents are excreted through the kidneys. There are several B vitamins spanning from Vitamin B1 to Vitamin B 12. Of these vitamins, several of them when there is a deficit, mimic or exacerbate depression symptoms. This group of B vitamins are associated with healthy brain development, the formation of healthy blood cells, and a healthy nervous system. This group of vitamins also impact the mood and cognitive status.

Vitamin B1 (Thiamin) deficiency symptoms may include the inability to think clearly, weight loss, short-term memory loss and muscle weakness [8]. Vitamin B6 (Pyridoxine), deficiency may result in symptoms of depression including irritability and confusion. Vitamin B9 (Folic Acid) deficits may result in depression, irritability, insomnia, fatigue, and psychosis [9]. Vitamin B12 (Folate) deficiency symptoms may include fatigue, depression, pain, muscle weakness, weight loss, irritability, and decreased appetite [10].

Maintaining a well-balanced diet is important to enhance this vitamin deficiency. Depending on which Vitamin B level deficit, there are a host of food options. Foods rich in Thiamin include enriched fortified cereal and other grains, fish, pork, and beans. Food selections that aid in the promotion of enhanced Vitamin B6 levels include tuna, bananas, oranges, salmon, and beef liver. Vitamin B9 sources of nutrition are found in whole grains, eggs, peanuts, and liver. Vitamin B12 nutritional sources include eating red meats, poultry, fortified breakfast cereal, fish, dairy and shellfish.

Iodine

Iodine is an essential element that is important in the development of healthy brain function, metabolism, and bone development. The body has a gland known as the thyroid gland that depends on healthy doses of iodine to carry out these proper functions. The thyroid gland is important because it aids in metabolism, healthy growth and the development and energy production.

An iodine deficiency can cause a disorder known as hypothyroidism. Hypothyroidism is a disorder of the thyroid gland. Symptoms of this disorder may include depression, joint and muscle pain, and fatigue. Many studies concluded that undiagnosed, untreated, undertreated patients with hypothyroidism are at higher risk of developing depression [11].

Risk factors for iodine insufficiency include pregnant women, individuals living in living in areas with little iodized salt, vegans and people who eat few or no dairy products, seafood, and eggs. Consuming goitrogen also impacts the function of the thyroid gland. Goitrogens are sources that impedes the normal function of the thyroid gland. Examples of goitrogens include sweet potatoes, lima beans, and cauliflower.

Incorporating iodine in the diet may reverse levels of iodine insufficiency. Iodine can be found in table salt. Seaweed (such as kelp, nori, kombu, and wakame) is one of the best food sources of iodine [12]. In dietary supplements, iodine is often present as potassium iodide. Other sources of iodine are found in seafoods.

Conclusion

Nutrition plays a vital role in how the human body performs. Consuming the right foods in adequate amounts may curtail illness. Illnesses such as pain, cognitive deficits, depression, fatigue, irritability, and promote healthier appetites. Paying attention to the symptoms, asking the health care provider to further investigate for the possibility of nutritional deficiencies and supplementing through nutrition and oral supplements, may lead to a more productive and wholesome life without the feelings of depression.

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