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## Food and Mood: Investigating the Correlation Between Vitamin B12 Intake and Depression

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## SWACSM Abstract

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### Food and Mood: Investigating the Correlation Between Vitamin B12 Intake and Depression

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#### ABSTRACT

Vitamin B12 is an essential nutrient that metabolizes homocysteine, which is a potentially neurotoxic molecule when in excess. Studies show that a deficiency in vitamin B12, as well as folate, may be associated with mental health conditions. Additionally, the prevalence of depression is higher in college students than other demographic populations. **PURPOSE:** The purpose of this study was to investigate a correlation between vitamin B12 and folate intake with signs and symptoms of depression in college students. **METHODS:** This study was conducted by first providing participants with the Beck Depression Inventory (BDI) to measure signs and symptoms of depression. Next, each participant documented their dietary intake in a 3-day diet record. The 3-day diet records were analyzed using Food Processor to determine nutritional values. For this study, the vitamin B12 and folate data sets were evaluated for relationships with the BDI data. **RESULTS:** This study showed no correlation between vitamin B12 intake and the BDI ( $r = -0.114$ ,  $p = 0.257$ ,  $n = 101$ ). There was also no correlation between vitamin B12 and the Beck somatic subscale ( $r = -0.100$ ,  $p = 0.452$ ,  $n = 59$ ), nor with the Beck affective subscale ( $r = -0.085$ ,  $p = 0.399$ ,  $n = 101$ ). Correlations between folate intake and BDI showed no relationship ( $r = -0.078$ ,  $p = 0.439$ ,  $n = 101$ ). There was a lack of association between folate intake and the Beck somatic subscale ( $r = 0.014$ ,  $p = 0.914$ ,  $n = 101$ ) and the Beck affective subscale ( $r = -0.095$ ,  $p = 0.344$ ,  $n = 101$ ). **CONCLUSION:** Though no correlations were found, participants' had incredibly varied folate and vitamin B12 intakes, yielding high standard deviations, which may have prevented detection of relationships. The results of this study still suggest that many college students are not consuming the recommended daily values for vitamin B12 and folate.