

## **Does Diet Self Efficacy and Stress Affect Body Composition in College Students?**

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### **ABSTRACT**

Body composition is influenced by many variables, including stress and nutrition, which in turn is affected by the person's belief in his or her ability to manage a diet even in the face of obstacles (Nastaskin, 2015). **PURPOSE:** This study examined the influence of college students' dietary self-efficacy and responses to stress on body weight and body fat percentage from their freshman to senior year. **METHODS:** Fourteen participants (11W/3M, 18.1 ± 0.4 yrs, 165.3 ± 7.7 cm, 64.9 ± 14.2 kg at Year 1) underwent whole-body dual x-ray absorptiometry (DEXA, Hologic W). They also completed 2 questionnaires: 1) Diet Self-Efficacy (Knäuper, 2013), which assesses three factors that could negatively impact diet: high caloric food temptation (HCF), social/internal factors (SIF), and negative emotional events (NEE) (0-100 range for each score) and 2) the Vanderbilt Responses to Stress - Peer Stress College, which is a 57-question survey measuring coping and involuntary stress responses to specific situations (0-50 range). All assessments were completed annually from the students' freshman to senior year. Data were analyzed using Pearson correlation. **RESULTS:** Overall, participants gained 5.1 ± 5.7 kg (6.6 ± 8.1%) of body weight and 0.5 ± 4.0% of body fat over the 4 years. At Year 1, diet self-efficacy scores were moderate (HCF 47.8 ± 22.1, SIF 56.7 ± 21.7, NEE 64.9 ± 22.0). Over four years, there was a strong negative correlation between NEE and body weight in 3 participants ( $r = -0.98$ ,  $r = -0.96$ ,  $r = -0.86$ ), indicating that when these participants were better able to resist eating temptation when faced with a negative emotional event, they had a lower body weight. Also, SIF was trending towards a significant inverse relationship with body fat percentage ( $p = 0.07$ ). Stress scores were inversely related with body fat percentage in the majority of the participants with the strongest correlation at ( $r = -0.96$ ). **CONCLUSION:** Nutritional self-efficacy could influence weight changes in college students. However, any influence is highly individualized. Based on the limited number of participants in our study, it is too early to make generalized statements.