

## **Title: Diabulimia and Eating Disorders: A Risky Trend among Type 1 Diabetes Patients**

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**Introduction/background:** Insulin adherence is essential to optimize glycemic control in Type 1 Diabetes (T1DM) patients. Poor adherence is associated with worse glycemic control and increased complications. Insulin therapy is known to cause weight gain in patients. Diabulimia is a term used to characterize T1DM patients who skip insulin for the purpose of weight loss.

### **Study Objective(s):**

To determine the prevalence of diabulimia or an eating disorder among T1DM patients.

**Primary Outcome (s):** Prevalence of diabulimia or an eating disorder among T1DM patients.

**Secondary Outcome (s):** Identify factors that increase the risk of diabulimia or an eating disorder among T1DM patients.

**Methodology:** Between June 19 to August 3, 2020, a 40-item, web-based survey was administered on 20 T1DM discussion boards and listservs. It assessed the following: diabetes history, insulin management/skipping insulin, glucose monitoring, lifestyle behaviors, and mental health among adults with T1DM. Individuals who reported intentionally skipping or using less insulin than directed for the purpose of weight loss (or to prevent weight gain) in the past 12 months were classified as having diabulimia. The modified SCOFF (mSCOFF), a 5-item validated questionnaire, was used to screen for an eating disorder. Regression analyses were used to determine factors associated with screening for diabulimia or an eating disorder.

**Results:** A total of 166 out of 185 T1DM patients completed the survey (response rate 89.8%). Diabulimia was identified in 9.0% of T1DM patients while 24.1% screened for an eating disorder. Predictors of diabulimia included younger age [OR 0.88, 95% CI (0.79-0.97),  $p=0.009$ ] and a diagnosis of major depressive disorder [OR 12.13, 95% CI (1.42-103.82),  $p=0.023$ ]. Predictors of screening for an eating disorder included younger age [OR 0.95, 95% CI (0.01-0.99),  $p=0.027$ ] and a higher BMI (body mass index) [OR 1.06; 95% CI (1.0-1.11),  $p=0.035$ ].

**Conclusion:** This study confirms diabulimia and eating disorders are common among adult T1DM patients. Younger age and major depressive disorder predicted diabulimia while younger age and a higher BMI predicted screening for an eating disorder. The information presented may help healthcare professionals identify and treat T1DM patients with diabulimia and/or an eating disorder.