# Preliminary Investigation of Smoking Cessation and Eating Disorders: Relapse Risk and Benefits of Integrated Treatment

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## Introduction

- Individuals with Eating Disorders (EDs) - Anorexia Nervosa (AN), Bulimia Nervosa (BN), and Binge Eating Disorder (BED) - often try to control their appetite and their weight by smoking.
- This maladaptive strategy for weight control carries significant physical and psychological health risks.

## Methods

- A literature review identified studies that examined the relationship between smoking behaviors and Eating Disorders (EDs).
- The present analysis summarized current findings and gaps in the literature from peer-reviewed studies published within the past two decades.
- The key search terms included Smoking Cessation AND Eating Disorders AND Nicotine Dependence AND Weight Control AND Integrated Treatment.
- Qualitative and quantitative findings were examined for emerging themes.
- Data were synthesized across four key areas of inquiry: (1) the prevalence of smoking among populations with eating disorders, (2) smoking as a method of weight control, (3) the psychological barriers to smoking cessation, and (4) integrated treatment approaches addressing both smoking cessation and ED recovery.

## Purpose

This literature review identified multiple challenges associated with the relationship between smoking and Eating Disorders. The research aimed to bridge the gap in understanding the relationship between smoking cessation and recovery from eating disorders and will be followed by surveying practitioners at the University of Rochester Medical Center (URMC) who have treated patients with these concerns. Survey results will shed light on current approaches, barriers to, and facilitators of effective clinical care and treatment outcomes.

## Key Findings

| Psychological Barriers to Smoking Cessation: | Smoking as a Method of Weight Control: |
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| ➢ Weight gain is common with smoking cessation (~1.7 kg) after one month (Bacha et al., 2016).<br>➢ Women more often have weight gain concerns, which hinder cessation (Clark et al., 2006). These concerns do not affect quit rates, but do impact short-term cessation (Kilmurray et al., 2023).<br>➢ Weight gain following smoking cessation is often linked to emotional eating. Weight gain is more prevalent among quitters compared to intermittent smokers (Hudmon et al., 1999). | ➢ Smoking is a maladaptive strategy for weight control, driven by societal and psychological pressures (e.g., body shape, eating behaviors)<br>➢ One study surveyed 107 women using the Eating Disorder Examination-Questionnaire (EDE-Q) and found that many smoked as a compensatory behavior to suppress hunger or counteract overeating (White, 2012).<br>➢ A study looked into the use of smoking as a method to control weight and prevent binge eating among teenage girls (Crisp et al., 1999). Many girls who smoked were often overweight. Increased body fat during puberty heightened their sensitivity to perceived body shape. |
| **Prevalence of Smoking Among Demographics with Eating Disorders:** | **Integrated Treatment Approaches Addressing Both Smoking Cessation and ED Recovery:** |
| ➢ Smoking rates were higher among women with AN and BN, especially in those with binge/purge subtypes. Smoking was associated with impulsive personality traits, suggesting that women with EDs may be at increased risk for nicotine dependence (Anzengruber et al., 2006).<br>➢ One study drew parallels between nicotine use and ED behaviors in college students, where vaping may contribute to or exacerbate ED symptoms (Ganson & Nagata, 2021).<br>➢ The prevalence of smoking and other substance use among ED inpatients uncovered high smoking rates, especially among individuals with BN (Haug, Heinberg, & Guarda, 2001).<br>➢ Solmi et al. (2016) examined the relationship between smoking and EDs across 31 studies. Their results revealed that individuals with BN and Binge Eating Disorder (BED) were more likely to be lifetime smokers than control subjects, while no significant difference was found among individuals with AN.<br>➢ A study that examined the link between tobacco use and unhealthy diet behaviors (UDBs) such as fasting and laxative use among adolescents found that tobacco use was highly associated with UDBs (Sutter et al., 2016). | ➢ Findings underscore the need for tailored and integrated treatment approaches (through comprehensive, individualized care) to address both smoking cessation and EDs, especially considering the unique psychological and behavioral challenges posed by co-occurring conditions.<br>➢ One exploration examines the feasibility and relevance of screening for EDs within outpatient smoking cessation (SC) programs, focusing on tobacco smokers (Simioni & Cottencin, 2016). Among the 203 participants, the study found an 8.9% prevalence of EDs, with women disproportionately affected at a rate of 18.1%. ED presence correlated with higher dropout rates from SC programs. Only 17% of individuals diagnosed with an ED accepted referrals to specialized treatment.<br>➢ Researchers explored the relationship between mindfulness and eating pathology in a sample of 112 female smokers (Adams et al., 2012). Findings suggested that mindfulness was associated with lower bulimic symptoms and reduced body dissatisfaction.<br>➢ Recent literature on the effectiveness of Cognitive Behavioral Therapy (CBT) and Mindfulness-Based Interventions (MBIs) for smoking cessation considers their efficacy in general populations and specific demographics (Vinci, 2020). Both CBT and MBIs were evaluated as effective strategies for smoking cessation, particularly when delivered via digital platforms. |

Table 1. Interconnections Between Smoking Cessation, Weight Concerns, and Eating Disorders: Psychological Barriers and Integrated Approaches

## References & Acknowledgments

Cited literature is available via the QR Code to the right.

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## Discussion

- **Individuals with eating disorders**, particularly those with Anorexia Nervosa (AN) and Bulimia Nervosa (BN) have a significantly higher smoking rate than the general population.
- Despite smoking being detrimental to health, it is used as a **weight control** strategy due to nicotine's appetite-suppressing effects.
- **Psychological challenges** act as major barriers to quitting, as fears of weight restoration may trigger ED relapses.
- Integrated **treatment approaches** (e.g., CBT, MBIs) show promise in addressing both ED behaviors and nicotine dependence, helping to manage weight-related fears while supporting smoking cessation and may reduce relapse rates.
- The literature identifies persistent challenges due to the **complex interplay** between physiological nicotine dependence and psychological factors associated with eating disorders.

## Conclusion

**Smoking cessation in individuals with EDs requires a nuanced, integrated approach that addresses the dual challenges of nicotine dependence and disordered eating behaviors.**

- Some studies included in this review had relatively small sample sizes and spanned more than 20 years, which may limit the generalizability of the findings to a wider population. It is crucial to follow-up on these results to assess the success of proposed treatments.
- There is diversity in the subtypes and associated characteristics of EDs, which could impact patient response to cessation interventions. Studies should thoroughly acknowledge and account for this variability.
- **Prospective studies should explore multi-faceted treatment strategies that support sustainable recovery and reduce the risk of relapse by addressing both psychological and physiological drivers.**