

Obese females who are most unlikely to lose weight are most in need of losing it

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In obese females, a close relationship may exist between their disinhibition (detrimental eating and behavioral characteristics) that limits successful weight loss, and impaired metabolism, new research shows. The results will be presented Thursday, March 5, at ENDO 2015, the annual meeting of the Endocrine Society in San Diego.

"Obese females those who are particularly unlikely to lose weight are also those who need to lose weight the most," said lead study author Julia Passyn Dunn, MD, instructor in the Department of Medicine of Vanderbilt University School of Medicine in Nashville, Tennessee. "Those with an eating/behavioral characteristic that especially limits their weight loss also have the most derangement of their metabolism from their elevated weight."

In people with obesity, a broad range of behavioral and metabolic characteristics influences their ability to [lose weight](#). Disinhibition is an eating characteristic common in obesity that occurs with poor response to [weight loss](#) interventions.

"When comparing females with obesity and similar body weight and composition, high disinhibition occurs with more severe insulin resistance and more symptoms of depression," said Dunn. "In patients with type 2 diabetes mellitus, those with increased disinhibition scores have longer disease duration and poorer quality of life compared to patients with lower disinhibition."

To explore whether people with obesity who have increased disinhibition would also have a more detrimental metabolic phenotype, Dunn and her colleagues studied 17 non-diabetic, weight-stable females with obesity whose average age was in the upper 30s. Eight women had low disinhibition and 9 had high disinhibition. Both groups were similar in body mass index, total body [weight](#), body fat mass and muscle mass.

The study participants completed the Three Factor Eating Questionnaire (TFEQ) to measure the eating characteristics of disinhibition, restraint, and hunger; had their binge eating behavior measured according to the Binge Eating Scale (BES); and completed the Beck Depression Inventory-II (BDI-II) and those with clinically relevant depression were excluded from the study.

The women underwent a five-hour, 75-gram oral glucose tolerance test to estimate insulin sensitivity; their fasting insulin, leptin, and acyl ghrelin levels were measured; and their insulin sensitivity index (SI) for glucose disposal was estimated.

The TFEQ restraint scores were similar overall, while the hunger scores tended to be higher in women with high disinhibition scores. The BES scores were similar in both groups, and the BDI-II scores were higher in the high-disinhibition group.

Despite the similarities in [body weight](#) and composition, the participants with high disinhibition scores were twice as insulin resistant as those with low disinhibition. Fasting insulin, leptin, and acyl ghrelin levels were comparable in both groups.

The authors suggest that the poorer outcomes in the women with high disinhibition may be due to poorer [insulin](#) signaling, and that the mechanism driving the association of detrimental behavioral and metabolic characteristic may lead to future treatments.

Provided by The Endocrine Society

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