

Eating disorder prevention program reduces brain reward region response to supermodels

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Change your attitude. Change your behavior. Change your brain.
Discussing the costs of pursuing the unrealistic thin beauty ideal reduces valuation of this idea.

Scientists at Oregon Research Institute (ORI) have published unique research results indicating that a brief dissonance-based [eating disorder](#) prevention program (Body Project) alters how [young women](#)'s brains respond to images of thin supermodels. Previous results from Body Project studies showed that the intervention reduces pursuit of the unrealistic thin ideal espoused in the mass media. The current study provides the first evidence that it fundamentally alters how young women's brains response to supermodels, which play a vital role in perpetuating this unattainable beauty idea. Whole brain imaging before and after the intervention revealed significant changes in brain responsivity when participants viewed images of supermodels. This is the first study to use objective brain imaging to detect the neural effects of a behavioral prevention program.

In a recent issue of [PLOS ONE](#), Drs. Stice, Yokum, and Waters provide novel evidence that a dissonance-based prevention program reduces brain reward region response to thin models. The neural responses correlated strongly with reductions in body dissatisfaction, a finding that is consistent with the theory that valuation of thin images plays a key role in body image concerns.

At baseline, when young women at risk for eating disorders viewed

images of supermodels while undergoing fMRI, a reward valuation region of their brains was activated. After the intervention, this reward valuation was more activated by exposure to images of healthy, normal weight women than by exposure to thin models. Participants in the control condition did not show this change.

The Body Project is a group-based eating disorder prevention program in which young women discuss costs of pursuing the thin ideal through Socratic questions and other activities in a group format. Randomized trials have confirmed that the Body Project produced greater reductions in eating disorder risk factors (e.g., thin-ideal internalization, body dissatisfaction), eating disorder symptoms, and eating disorder onset over 3-year follow-up than control conditions and alternate prevention programs. Dove (Unilever) is disseminating a variant of this prevention program, Free Being Me, to over 2 million girls in 116 countries.

"These results are very exciting," said Stice, "because they provide objective evidence that a group-based behavioral [prevention program](#) reduced responsivity of reward valuation regions to images of thin models, which are thought to play a vital role in the development of body image and eating disturbances. These results suggest that after completing the Body Project young women show an increased valuation of normal weight women and a reduced valuation of very thin models. This is the first trial to use objective brain imaging to confirm that a behavioral intervention can alter how the brain response to stimuli thought to contribute to the development of a key mental health problem that disproportionally affects young women."

Provided by Oregon Research Institute

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