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Randomized Controlled Trial

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# Dronabinol in severe, enduring anorexia nervosa: a randomized controlled trial

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## Abstract

**Objective:** The evidence for pharmacological treatment of severe, longstanding anorexia nervosa (AN) is sparse and the few controlled pharmacologic studies have focused on a narrow range of drugs. The aim of the present study was to investigate the effects of treatment with a synthetic cannabinoid agonist on body weight and eating disorder-related psychopathological personality traits in women with severe, enduring AN.

**Method:** This add-on, prospective, randomized, double blind, controlled crossover study was conducted between 2008 and 2011 at a specialized care center for eating disorders. Twenty-five women over 18 years with AN of at least 5 years duration were randomized to treatment with either dronabinol-placebo or placebo-dronabinol. In addition to the standardized baseline therapeutic regime, the participants received dronabinol, 2.5 mg twice daily for 4 weeks and matching placebo for 4 weeks, separated by a 4-week wash-out period. Primary outcome was the mean change in body weight. Secondary outcome was score changes on the Eating Disorder Inventory-2 (EDI-2). Data were analyzed for the 24 patients who completed the trial.

**Results:** During dronabinol treatment, participants gained 0.73 kg ( $t = 2.86$ ,  $df = 22$ ,  $p < 0.01$ ) above placebo without significant psychotropic adverse events. Dronabinol significantly predicted weight gain in a multiple linear regression including EDI-2 body dissatisfaction score and leptin. EDI-2 subscale scores showed no significant changes over time.

**Discussion:** Dronabinol therapy was well tolerated. During four weeks of exposure it induced a small but significant weight gain in the absence of severe adverse events.

**Keywords:** anorexia nervosa; cannabinoid; dronabinol; eating disorder inventory; leptin; weight.