

ABSTRACT

There are currently limited options to treat obesity and type 2 diabetes. In order to address this gap, the current study set out to investigate the effect of the drug dimethyl fumarate (DMF) on body composition and insulin sensitivity in C57BL/6J male mice. Mice were fed a high fat diet (HFD) or a low fat diet (LFD), one of the two cohorts of mice eating a HFD was treated with DMF. Pre and posttreatment body composition data were collected. Additionally, two separate insulin tolerance tests were conducted. The first was completed after four weeks of treatment at a dose of 0.125 g/mL DMF and again after three additional weeks at a higher dose of 0.25 g/mL DMF. A HFD significantly increased body weight, fat mass, percent body fat, lean body mass, and free body fluid, and also significantly decreased insulin sensitivity. However, DMF treatment had no effect on these variables. Our findings do not suggest that DMF is efficacious in improving body composition or insulin sensitivity in C57BL/6J mice.