# Cannabidiol Arrests Onset of Autoimmune Diabetes in NOD Mice

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## Abstract

We have previously reported that cannabidiol (CBD) lowers the incidence of diabetes in young nonobese diabetes-prone (NOD) female mice. In the present study we show that administration of CBD to 11–14 week old female NOD mice, which are either in a latent diabetes stage or with initial symptoms of diabetes, ameliorates the manifestations of the disease. Diabetes was diagnosed in only 32% of the mice in the CBD-treated group, compared to 86% and 100% in the emulsifier-treated and untreated groups, respectively. In addition, the level of the proinflammatory cytokine IL-12 produced by splenocytes was significantly reduced, whereas the level of the anti-inflammatory IL-10 was significantly elevated following CBD-treatment. Histological examination of the pancreata of CBDtreated mice revealed more intact islets than in the controls. Our data strengthen our previous assumption that CBD, known to be safe in man, can possibly be used as a therapeutic agent for treatment of type 1 diabetes.