



## The effect of probiotics supplementation on inflammatory markers in non-communicable disease subjects: A Preliminary report

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### Abstract

This research investigated the effects of probiotics on inflammatory markers in subjects with non-communicable disease. Ten adults with symptoms of chronic non-communicable diseases and abnormal intestinal permeability were involved in this experiment. After initial screening, the ten subjects were randomly divided into two groups as placebo and probiotic group (*Bifidobacterium breve* 50 x 10<sup>9</sup> CFU per day). Each group had received the respective supplementation once per day for 12 weeks. Their blood samples were collected at the baseline and after the treatment. The study was conducted upon the subjects to investigate the parameters associated with the inflammation markers such as inflammatory cytokines (IL-6 and IL-1 $\beta$ ) and anti-inflammatory cytokines (IL-10). All parameters were analyzed before and after taking the probiotics for 12 weeks. The inflammatory cytokines levels had significantly reduced, of which the levels of IL-6 and IL-1 $\beta$  had reduced from 10.78 and 6.32 to 8.60 and 5.96 pg/ml after the treatment in the probiotic group, comparing the placebo. The anti-inflammatory cytokine levels had significantly increased, of which the levels of IL-10 had increased from 1.26 to 9.21pg/ml, respectively, as compared to the control. This study recommended that probiotics play a vital role in inflammatory regulation in subjects with chronic non-communicable diseases.

**Keywords:** Probiotic, Chronic non-communicable diseases, Inflammation