Effect of synbiotics on intestinal microflora and digestive enzyme activities in rats.

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Abstract

AIM: To investigate the effect of synbiotics, i.e. probiotics and prebiotics mixture, on the gut microbial ecology and digestive enzyme activities in rats. METHODS: Forty-eight SD rats weighing about 280 g were used in this study. Rats were divided into three groups according to the contents of probiotics and prebiotics mixture in the feed as control, low and high dose groups. The duration of the experiment was 8 wk. RESULTS: Compared with the control group, the fecal Lactobacillus and Bifidobacterium counts were significantly increased and the fecal Coliform organism counts were markedly reduced in the low and high dose groups. Concerning the digestive enzyme activity of jejunum, only lactase activity increased in low dose group. However, significant increase of lipase, lactase, sucrase, and isomaltase activities were observed in high dose group. CONCLUSION: Intake of low and high dosages of probiotics and prebiotics mixture significantly improved the ecosystem of the intestinal tract by increasing the probiotics population and digestive enzyme activities in rats.