

## Probiotic yogurt containing heat-treated *Lactobacillus plantarum* enhances immune function in the elderly

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The population of elderly people, who often suffer more serious complications of infection than younger people, is rapidly increasing in Korea. The objective of this study was to examine the effect of probiotic yogurt containing heat-treated *Lactobacillus plantarum* (*L. plantarum*), a dead form of *L. plantarum* which was derived from kimchi, on immune function in the elderly. In a randomized, open-label, placebo-controlled study, 200 non-diabetic subjects over 60 years old were divided into two groups to drink 120 ml milk or 120 ml probiotic yogurt containing heat-treated *L. plantarum* once per day over 12-week period. In this study, natural killer cell activity and serum cytokine and immunoglobulin concentrations were measured for

immune function. We found that the levels of natural killer cell activity, interleukin-12 and immunoglobulin G1 were significantly increased in the yogurt group at 12 weeks compared to baseline. Moreover, the yogurt group had significantly greater increase in natural killer cell activity, interferon- $\gamma$  and immunoglobulin G1 than the milk group. In conclusion, consumption of probiotic yogurt containing heat-treated *L. plantarum* could be beneficial and effective on enhancing immune function in the elderly.

### Biography

Ayoung Lee is pursuing her PhD at Yonsei University. She is in Department of Food and Nutrition, Nutrigenetics/Nutrigenomics laboratory, leading by Professor Jong Ho Lee. Her research focuses on Clinical Nutrition; and she is interested in interactions among nutrition, human metabolic profiles, and metabolic diseases. She is currently working with analysis of fatty acid composition in biological samples using GC-MS and GC-TOF-MS.

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