

December 25, 2025

News Release

Yakult Honsha Co., Ltd.
Tokyo Metropolitan Institute for Geriatrics and Gerontology

Habitual consumption of dairy products containing *Lacticaseibacillus paracasei* strain Shirota showed a significant reduction in the risk of anemia onset in elderly individuals

Yakult Honsha Co., Ltd. (President: Hiroshi Narita) and the Tokyo Metropolitan Institute for Geriatrics and Gerontology (CEO: Masahiro Akishita) conducted an epidemiological investigation into the impact of habitual intake of dairy products containing *Lacticaseibacillus paracasei* strain Shirota*¹ (LcS) on anemia incidence among elderly residents of Nakanojo Town, Agatsuma District, Gunma Prefecture. The trial indicated the following:

Among those aged 65 to 94 years who consumed LcS-containing dairy products three or more days per week for the prior 10 years, the risk of developing anemia during this period was significantly lower than for those consuming them less than three days weekly.

The results of this research suggest that habitual consumption of dairy products containing LcS contribute to the suppression of the onset of anemia among elderly individuals.

These results were published online in *Beneficial Microbes* on November 10, 2025.

*1: This bacterium was previously called *Lactobacillus casei* strain Shirota.

1. Background

Among the elderly, the prevalence of anemia increases with age, with approximately one in five individuals falling below the hemoglobin threshold set by the World Health Organization (WHO). Furthermore, the onset of anemia in older adults is known to increase the risk of both cardiovascular disease and cognitive decline, making anemia prevention an important issue in efforts to extend healthy life expectancy.

Since 2014, Yakult Honsha Co., Ltd. and the Nakanojo Study Group at the Tokyo Metropolitan Institute for Geriatrics and Gerontology, led by Dr. Yukitoshi Aoyagi (Head of the Nakanojo Study), have been conducting epidemiological studies on the relationship between lactic acid bacteria intake and health among the elderly residents of Nakanojo Town. Previous findings from this project suggested that habitual consumption of dairy products containing *Lacticaseibacillus paracasei* strain Shirota (LcS) may contribute to reducing the risk of developing hypertension and infrequent bowel movements, as well as stabilizing the intestinal microbiota. These studies further indicate that habitual intake of LcS-containing dairy products may be beneficial for maintaining health in the elderly population.

In recent years, reports have suggested that probiotic intake may prevent or improve the onset of anemia. Clarifying this relationship in elderly populations is expected to provide important insights for future health support. Therefore, in this study, we examined the impact of consuming dairy products containing LcS on the onset of anemia.

2. Study Overview

(1) Methodology

We analyzed 1,424 elderly residents of Nakanojo Town aged 65 to 94 year (683 men and 741 women) who had not developed anemia within the prior 10 years. Information on medical history, frequency of consuming LcS-containing dairy products, and background factors such as smoking and drinking habits were collected through interviews conducted by physicians, public health nurses, or dietitians in Nakanojo Town. In this study, individuals who developed anemia for the first time within the prior 10 years were defined as “anemia cases.” Participants were divided into two groups based on their intake frequency of consuming LcS-containing dairy products during the same period: those consuming less than three days per week (1,186 individuals) and those consuming three or more days per week (238 individuals).

(2) Results

The incidence of anemia over the prior 10 years was 0.8% in the group consuming LcS-containing dairy products three or more days per week, compared with 4.0% in the group consuming the same products less than three days per week, which constitutes a statistically significant difference (Figure 1). Kaplan-Meier curves*² also showed that the risk of anemia onset was significantly lower in the high-frequency consumption group compared to the low-frequency group (Figure 2). Furthermore, multivariate analysis adjusting for major confounding factors (age, sex, BMI, smoking status, and alcohol intake) confirmed that the risk of anemia onset was significantly lower in the high-frequency group (hazard ratio: 0.219 [95% confidence interval: 0.053-0.902], P = 0.035).

These findings suggest that habitual consumption of dairy products containing LcS three or more days per

week may reduce the risk of developing anemia in elderly individuals.

*2: The Kaplan-Meier method is a statistical technique widely used in clinical and epidemiological trials to analyze the time until an event occurs, such as disease onset or recurrence. Results are typically presented as “event-free survival curves” or “survival curves.”

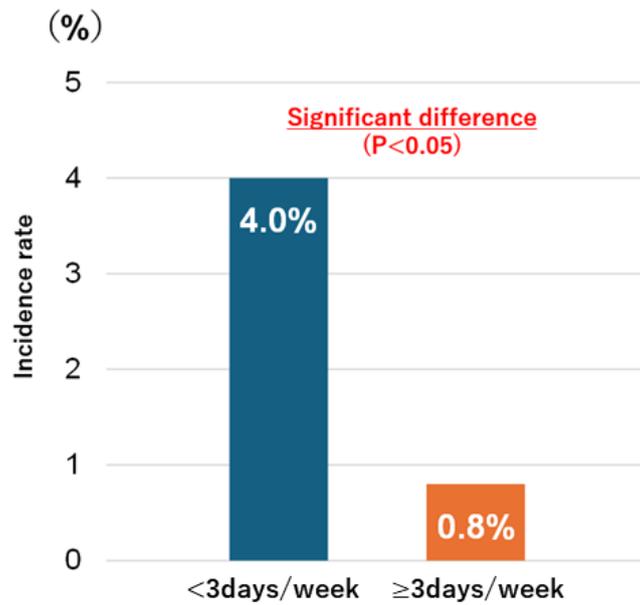


Figure 1: Incidence of anemia over the prior 10 years by frequency of consumption of dairy products containing LcS

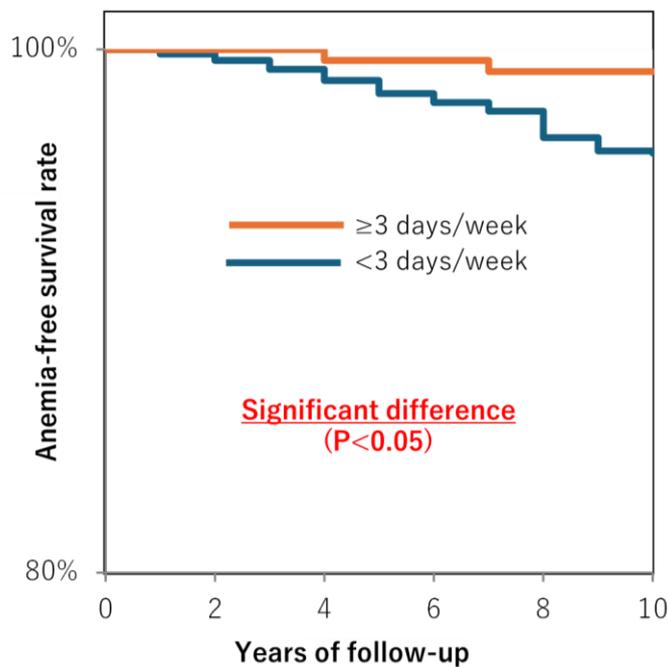


Figure 2: Ten-year anemia-free rate by frequency of consumption of dairy products containing LcS (Kaplan-Meier curve for anemia-free survival)

3. Future Outlook

This study demonstrated that habitual consumption of dairy products containing LcS may contribute to the prevention of anemia in elderly individuals.

As anemia becomes more prevalent with advancing age, and given its association with increased risks of cardiovascular disease, cognitive decline, and mortality in the elderly, anemia prevention is considered an important aspect of health management for the elderly.

The findings of this study provide evidence that continuous intake of dairy products containing LcS may contribute to health maintenance in the elderly population.

We will continue to explore novel potentials through ongoing investigations in Nakanojo Town regarding the long-term consumption of dairy products containing LcS.

4. Publication information

Name of the journal: *Beneficial Microbes*

(<https://brill.com/view/journals/bm/aop/article-10.1163-18762891-bja00106/article-10.1163-18762891-bja00106.xml>)

Title: Habitual consumption of fermented milk products containing *Lacticaseibacillus paracasei* strain Shirota and risk of anaemia in the elderly

Authors: Y. Aoyagi, T. Suwa, R. Amamoto, K. Shimamoto, S. Park, S. Matsubara, H. Makino