

Joint research by Kirin and Yahoo Japan

***Lactococcus lactis* strain Plasma is found to improve
a work performance indicator**

~The First food ingredient reported to improve
subjective work performance indicator ~

[Clinical trial methods]

A study was conducted with 226 employees aged 20 to 65 years who work in the Yahoo Japan head office from late November, 2017, to late February, 2018. The participants were randomly assigned to two groups: one that takes *Lactococcus lactis* strain Plasma for the first 4 weeks (*L. lactis* strain Plasma intake period) followed by 4 weeks of no intake period, and one that has no intake period for the first 4 weeks followed by 4 weeks of *L. lactis* strain Plasma intake period. Physical condition, mood, and work productivity were assessed during each 4-week period using questionnaires*1.

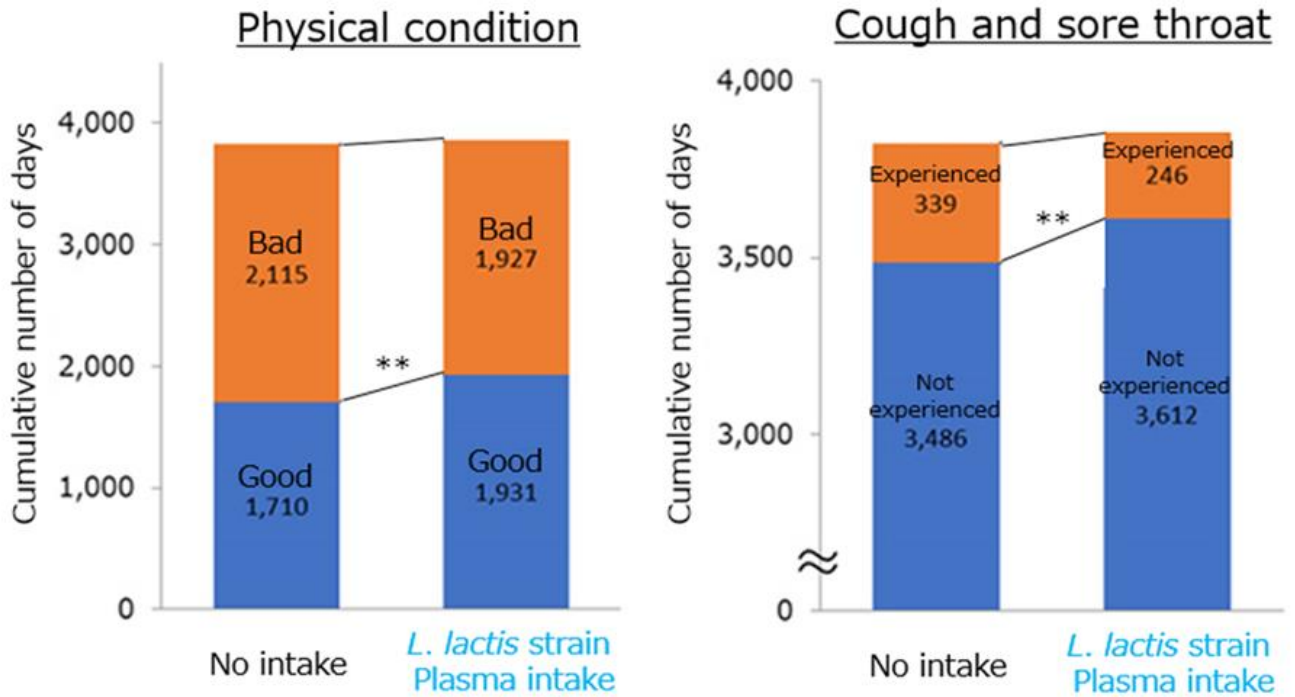
*1 A personal health diary, the Profile of Mood States (POMS) questionnaire, and the World Health Organization Health and Work Performance Questionnaire (WHO-HPQ) were used for the assessment of physical condition, mood, and work productivity, a respectively.

[Clinical trial results]

The following results were observed during the *L. lactis* strain Plasma intake period compared to the no intake period:

- 1) improvement in the physical condition and symptoms such as cough and sore throat, runny nose and stuffy nose, and fatigue (Figure 1),
- 2) improvement in the POMS “vigor” score (Figure 2),
- 3) improvement in the WHO-HPQ absolute presenteeism score by approximately 5% (Figure 3).

Figure 1.



**Statistically significant ($p < 0.01$)

Figure 2.

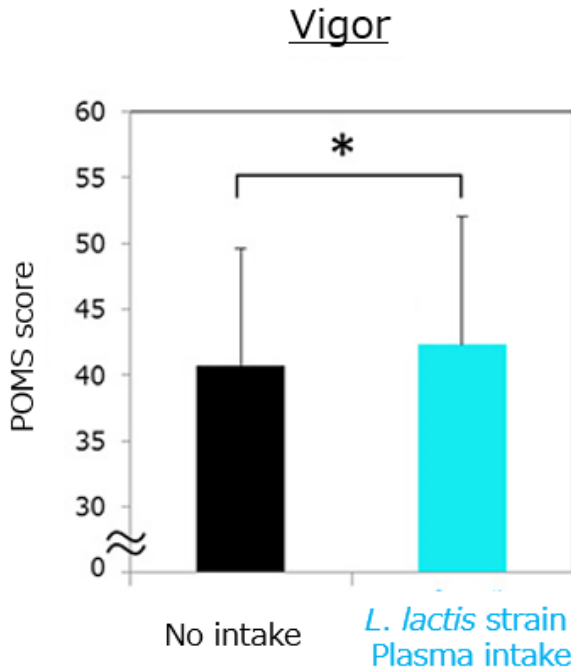
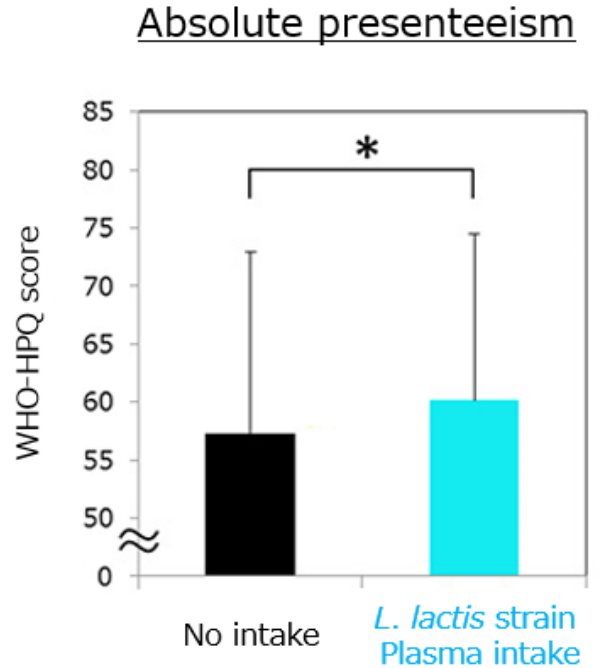


Figure 3.



*Statistically significant ($p < 0.05$)