

The need of the lactic acid beverage in space foods

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Purpose

The long-term space stay makes it possible to perform many studies. We think that the development of space foods will develop more in future. The meal management to maintain the health of an astronaut working busily is important. With lactic acid bacterium beverage, we thought that we want to perform the health care of the astronaut. Therefore we decided to check the effect on bowel movement of the lactic acid bacterium beverage.

Method

We assumed twenty adult women (average age 20.5 years old) as subjects. Before experiment start, during two weeks, we took the bowel movement record. Twenty students participated in an experiment. We divided it into two groups of ten students of the constipation and ten students of the non-constipation. We boiled Y Company lactic acid bacterium beverage (40% of calorie off) at 100 degrees during three minutes. During two weeks, we let the ten constipation consume the lactic acid bacterium beverage which we boiled and recorded the state of the bowel movement. Another two weeks, we let them consume the lactic acid bacterium beverage which we did not boil and recorded the situation of the bowel movement afterwards. Ten students of the non-constipation tested it in order to reverse-turn with ten students of the constipation. After the experiment end, we recorded the situation of the bowel movement during two weeks. The record contents were the stool frequency, smell, shape and number of times of the gas.

Result

Stool frequency was improved in the constipation group by the lactic acid bacterium intake. In the case of the non-constipation group, the big change was not seen in stool frequency. However, in both groups, the degree of smell was improved clearly.

Discussion

In constipation group, stool frequency was increased after drinking of the lactic acid beverage. A bowel movement state might be improved by an oligosaccharide and the lactic acid included in the lactic acid bacterium drink. However, when constipation group stopped the intake of the lactic acid beverage, their stool frequency was not good as before. It is necessary to consume the lactic acid bacterium drink continuously

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