

The use 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 ten adult women (average age 20.5 years old) as subjects.

Before experiment start, during two weeks, we took the bowel movement record. We boiled Y Company lactic acid bacterium beverage (40% of calorie off) at 100 degrees during three minutes. During two weeks, we let them 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. 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

Before experiment start, we understood that there was not a bowel movement in five of ten people from a 2-week bowel movement record. In particular, three subjects were in a week only 2~3 times bowel movement. As a result of having consumed the lactic acid bacterium beverage which we boiled for two weeks, three subjects were in a week only 2~3 times bowel movement. Seven subjects were bowel movement every day in a week. Every day, eight subjects who consumed the lactic acid bacterium beverage which we did not boil had bowel movement. Another two subjects had 5 to 6 bowel movement a week. After period of this study, during two weeks, we investigated of 10 subjects bowel movement. After stop the examination, the bowel movement has returned as same as before.

Discussion

The oligosaccharide included in the lactic acid bacterium beverage helps an enterobacterial increase. The lactic acid in the lactic acid bacterium beverage helps enteric work lively. However, the action of the lactic acid bacterium is not more active if we do not consume lactic acid bacterium beverage continuously. It is necessary to utilize lactic acid bacterium beverage to let intestinal bacteria act more actively.

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