[Objectives]
We have already reported that Chlorella ingestion improves aerobic capacity (the 21th Annual Meeting of the Japan Society of Exercise and Sports Physiology; J Clin Biochem Nutr. 55[2]). The present study investigated the mechanism of the improvement in aerobic capacity.

[Methods]
Thirty-four male students were divided into Chlorella (17 subjects) and placebo (17 subjects) groups. Each subject ingested 30 tablets daily for 4 weeks. Both before and after 4-week ingestion, aerobic capacity was determined, and blood samples were collected. A survey of diet was also conducted through a questionnaire and interview by a registered dietitian before the start of ingestion.

[Results]
The results showed an increase in maximum oxygen uptake and a decrease in serum vitamin B₂ levels in the Chlorella group. The survey of diet revealed large individual variations in intake of nutrients even among students living in the same dormitory.

On the basis of these results, Chlorella ingestion might enhance aerobic energy metabolism to increase vitamin B₂ consumption, resulting in decreased blood vitamin B₂ levels (Figs. 1 and 2). In addition, Chlorella, a general nutritional supplement, was shown to have the potential to be helpful for nutritional support, considering that considerable individual variations in nutrient intake may exist among people.

Fig. 1  Changes in maximum oxygen uptake (aerobic capacity)
Fig. 2  Changes in serum vitamin B₂ levels

\[ P = 0.002 \]
\[ P = 0.02 \]
<<Details>>

| Academic meeting: The 26th Annual Meeting of the Japanese Society of Clinical Sports Medicine in 2015 |
| Title: Changes in Maximum Oxygen Uptake due to Ingestion of a Chlorella-Derived General Supplement, Dietary Habits, and Serum Vitamin B₂ Levels |
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