

# 大学運動部所属選手に対する栄養分析・指導ツールとしてのインターネット食事指導システムの有効性に関する事例的検討

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## 【Abstract】

The purpose of this study was to evaluate the validity and reliability of the Nutritional Consultation System (Genki Syokutaku SPORTS) by using a digital camera with a mobile phone as a guidance tool for conditioning to athletes. Seven collegiate athletes who had required weight loss or improvement of iron-deficient anemia were targeted. After taking a photograph of all dishes and recording food memo for each meal by their own mobile phone, the athletes send these information to the Nutritional Consultation System.

Dietitians who registered in the system analyzed energy and different nutrients in one meal for athletes. The sports dietitians sent nutritional advice to the athletes according to the data analyzed. These trials performed 8 times at intervals of two weeks during the 4 months experimental period. Body composition was measured and serum iron concentration was analyzed, and dietary questionnaire was recorded before and after the test. Serum iron concentration was significantly increased after the test ( $p < 0.05$ ). In comparison with the first phase of the experiment, food intake pattern in terms of frequency of eating staple food alone for their each meal was improved by 5 of 7 athletes, and frequency of food intake was increased for all athletes at any item(s) of main dish, side dish, milk/milk products and fruits in the second phase. Based upon this case study, the Nutritional Consultation System for athletes who need any kinds of nutritional advice could be evaluated as follows; 1) user can send the meal data and receive nutritional advice easily and rapidly for improving their dietary lifestyle toward their better health condition, 2) dietitians can analyze energy and nutrients in one meal accurately and rapidly by looking the photo with memo of the meal. This proves that this nutritional consultation system by using a digital camera with a mobile phone as a guidance tool system can be useful for providing nutritional advice in collegiate athletes. However, it is necessary to make it to the system that can relate with body composition for the experiment period.

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