Improvement Factor of the Diet in Emergency Shelters after The Great East Japan Earthquake

Moeka Harada1,2, Nobuyo Tsuboyama-Kasaoka1, Asuka Takizawa2, Jun Oka2, Hidemi Takimoto1

1Department of Nutritional Epidemiology, National Institute of Health and Nutrition, Tokyo, Japan
2Tokyo Kasei University, Tokyo, Japan

Introduction: The Great East Japan Earthquake that occurred on March 11, 2011 caused damages in wide areas. Therefore, the deterioration of dietary condition was serious. The purpose of this study is to clarify the dietary condition in the emergency shelters and to examine the improvement factor of the diet.

Methods: To examine the provision amount of dietary energy and nutrients (n=133), the diet providing system (the frequency of meals per day, the frequency of mass feeding per day and menu creators) and menus (n=260), we reanalyzed the data obtained from the survey at the emergency shelters by Miyagi prefectural government about one month after the earthquake. We classified menus into five groups: staple foods, main dishes, side dishes, dairy products and fruits, and then counted the providing frequency.

Results: The average amount of provided diet was 1658kcal (energy), 47.8g (protein), 0.72mg (vitamin B1), 0.82mg (vitamin B2) and 32.0mg (vitamin C), respectively. The “Nutritional Reference Values for Dietary Assessments and Planning for the Provision of Meals to Emergency Shelter” weren’t filled at many shelters. When the provision frequency of meals increased, the provision frequency of the 5 groups (staple foods, main dishes, side dishes, dairy products and fruits) didn’t markedly increase; however, the average provision amount of dietary energy and all nutrients significantly increased. When the frequency of mass feeding increased, the provision frequency of the 3 groups (staple foods, side dishes and fruits) significantly increased. Considering nutrients, the average provision amount of vitamin C significantly increased. Furthermore, in the emergency shelters where registered dietitians and general dietitians created menus, the provision frequency of the 2 groups (dairy products and fruits) significantly increased; however, considering nutrients, significant difference wasn’t detected.

Discussion: To improve the dietary condition, it’s desirable that the frequency of mass feeding increases and nutrition professionals create menus.