97B5 A STUDY ON TENDENCY OF SALT CONSUMPTION ACCORDING TO THE CHANGE IN COOKING METHOD AND USE OF PRE-COOKED FOODS

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In our previous studies we have revealed through our experiments the effects of different sizes of ingredients, processing and cooking types of foods sold at stores on the amount of salt contained in the foods. This year we aim to reveal the same effects at the level of actual daily eating habits. The following are the descriptions of the survey and experiments, method and the results we obtained.

1. The salt intakes by different ingredient sizes, cooking and processing types

The meals eaten in one day by the total of 60 women students in K-area (of which 42 students live in a single household) were categorized for each meal into four different sizes and five different cooking and processing types. The 60 students were sub-grouped according to these categories to which they most likely fitted for each meal.

1) Sizes: An average daily salt intake amount of the group who tend to eat the 'egg size' ($n=16$) was 9.0 ± 3.2 g. This amount was ($p<0.05$) less than the 11.8 ± 5.8 g of the 'one bite' size group ($n=23$), and ($p<0.2$) of the group who tend to eat the 'chopped' sizes ($n=12$).
2) Cooking and processed types: An average daily salt intake amount of the group who eat mostly meals prepared by a family member ($n=11$) was 8.9 ± 2.4 g, and it was ($p<0.2$) less than the 'take-out box meals' group ($n=5$) of 12.0 ± 4.8 g.

2. The relationship between the salt content of the box meals and dishes at the N convenience store and their nutrient compositions

In one month 73 varieties of box meals and dishes have been sold at the N convenience store where the subjects of the survey above 1 buy their foods. Since the numbers of main dishes and side dishes were rather small, all the dishes in the A box meals were added to make the total of 104 varieties which were then measured for each salt content using TOA-SAT2A salt analyzer.

1) The salt content in the box meals: An average salt content amount of 31 varietles of the box meals was 3.1 ± 1.3 g. Although about half of the box meals analyzed had the salt content less than 3 g, excessive or inadequate energy or imbalance in the nutrient composition was observed.
2) The salt contents in the staple foods, main dishes and side dishes: (1) The average salt content in the staple foods was 2.5 ± 1.4 g, in the main dishes was 1.3 ± 0.9 g, in the side dishes was 1.2 ± 0.5 g, respectively. (2) The salt contents generally correlate with the amount of energy, the higher the salt contents so is the amount of energy.

3. Salt and Sodium Content in Prepacked Commercially Marketed Japanese Box Meals

Commercial box meals are usually purchased from supermarkets, thus a representative sample of supermarket box meals were purchased for the purpose of this study.

Also, relatively high quality box meals are available at department stores so we analyzed these as well. The average amount of salt stated on the labels of the supermarket box meals was about 3 g, however when calculated on the basis of sodium content it was about 4 g. Therefore, on the basis of the stated salt content, it is difficult to accurately grasp the amount of sodium intake in the meal.

The salt content of department store box meals varied between 3-5 g.

Summary

We measured the NaCl comtent of 71 kinds of commercial ready-made food. The highest amount was 6.3%. Comparison of food type by manufacturer showed considerable differences in NaCl content, the greatest difference being 66% and the least being 17%. The moisture content across all foods was around 70%. There was no relationship between moisture and NaCl content.

With respect to a menu of commercial ready-made foods, it is surmised that per-meal intake of NaCl would be 6-9g.

Commercially Marketed Japanese Lunchboxes are generally heavily flavoured and considered to have a higher content of salt. Currently the number of people consuming this kind of lunchbox is inceasing, so it has become necessary to determine the salt content. Commercial lunchboxes are usually purchased for the purpose of this study.

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Vegetables containe high level potassium, on the other hand low level sodium. But commercially cut sweet pepper and cabbage were contained high level sodium by treatment with sodium hypochlorite.

The latest date, vegetables were cultured with diffrent methods.

The summer seeding spinaches cultured by usual method were contained low level sodium relatively shading mathod.

Five kinds of spinach which were very popular, cotent of sodium are in the region of 32mg/100g～106mg/100g.