DAILY DIETARY TAURINE INTAKE IN JAPAN

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INTRODUCTION

Although fish and shellfish intake has gradually decreased, the Japanese people still have the highest intake of fish and shellfish in the world. Japanese people have the lowest incidence of ischemic heart disease in the world, and the urinary taurine excretion was the highest in the world in the CARDIAC Study. In that study, there was a significant correlation between urinary taurine excretion and fish and shellfish intakes. Taurine can be biosynthesized from sulfur-containing amino acids such as methionine or cysteine, and these taurines are excreted in the urine. Thus, the urinary taurine excretion may not reflect dietary taurine intake. It is difficult to calculate dietary taurine intakes from dietary research, due to the lack of inclusion of taurine in standard tables of food composition in Japan.

The aim of this study was to develop taurine composition tables of foods, and to calculate according to these tables the daily dietary taurine intake using a 24-hour dietary recall method. The final aim was to evaluate the validity and reliability of the developed taurine composition tables of food.
SUBJECTS AND METHODS

Subjects

The subjects were 163 males and 161 females aged between 20-59 in Toyama, Japan. Japan is divided into 9 districts, Toyama City where the subjects are living is situated in the Hokuriku district. On the Japanese map, Toyama City is marked with a star (Fig 1). According to the Ministry of Health and Welfare in Japan, fish and shellfish intake in the Hokuriku district is the third highest among the 9 districts in Japan. The highest fish and shellfish intake is in the Hokkaido district, and the second highest is the Tohoku district. The bar graph shows the difference from average of dietary fish and shellfish intake and dietary meat intake in Japan. The centerline shows the average in Japan. The 3 districts with the highest fish and shellfish intake are just above the average. However, the dietary meat intakes of the highest 3 districts are below the average. On the other hand, in the Kyusyu district with the lowest fish and shellfish intake, dietary meat intake was the highest in Japan. However, fish and shellfish intake in this district was higher than meat intake.

![Figure 1. Dietary fish and shellfish intake for one day in Yoyama, Japan (Ministry of Health and Welfare, 1998)](image)

Dietary Survey Methods

The dietary data were collected from one 24-hour dietary recall. The dietary interviewers were dieticians.