TEN-YEAR CAMPAIGN FOR EATING SOY AND SEA-FOOD RICH TRADITIONAL JAPANESE DIETS WITH LESS SALT REDUCED CARDIOVASCULAR RISKS IN HYOGO PREFECTURE, ONE TWENTIETH OF JAPANESE POPULATION

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Objective: To test the health effect of soy and seafood-rich Japanese diets, registered as UNESCO's intangible cultural heritage, with less salt by population approach.

Design and method: Ten-year health promotion campaign for eating well-balanced diets consisting of rice, soy, seafood and vegetables with less salt was intensively carried out by 2000 health promoters educated every year since 2001 in Hyogo Prefecture, where were living 5.6 million people, 1/20th of Japanese population. To the health examination for measuring body weight, height, blood pressure and collecting fasting blood and 24-hour urine samples were randomly recruited 700 to 1000 males (M) and females (F) aged 30th to 50th for the first 3 years and 500 in the 10th year.

Results: The distribution of daily urinary salt excretions sifted to the left with the significant reduction of the means, 12.0 -> 10.1g in the first 3 years. Concomitantly the prevalence of mild hypertensions with 140 to 160 mmHg in systolic significantly decreased from 23 to 17%. The effect of 10-year health promotion campaign was evaluated by the reduction of cardiovascular risks, among which hypertension (40.8 -> 23.2%**in M, 35.5 -> 11.7%*** in F) and diabetes (22.9 -> 9.1%**in M, 14.5 -> 3.1%***in F) decreased significantly (*, **, ***, $p<0.05, 0.01, 0.001$). Ten-year significant improvements were noted more in F as shown in the significant changes of the means in systolic/diastolic blood pressure (132.5 -> 123.7**/76.0 -> 70.7**mmHg), triglycerides (113.6 -> 100.0**mg/dl), HDL (62.8 -> 65.9*mg/dl), fasting blood glucoses (98.2 -> 93.2**mg/dl), urinary salt excretion (11.4 -> 10.1**g/day), urinary Na/K (3.6 -> 3.3**) and urinary isoflavones as the marker of soy intakes (13.8 -> 24.0**μmol/day).

Conclusion: Population approach to reduce cardiovascular risks was proven effective in M and F as shown in the reduced prevalence of hypertension and diabetes. Improvements of nutritional markers in 24-hour urine such as salt, Na/K and isoflavones were more marked in F and related with their significant risk reduction of hypertension, dyslipidemia and diabetes.