

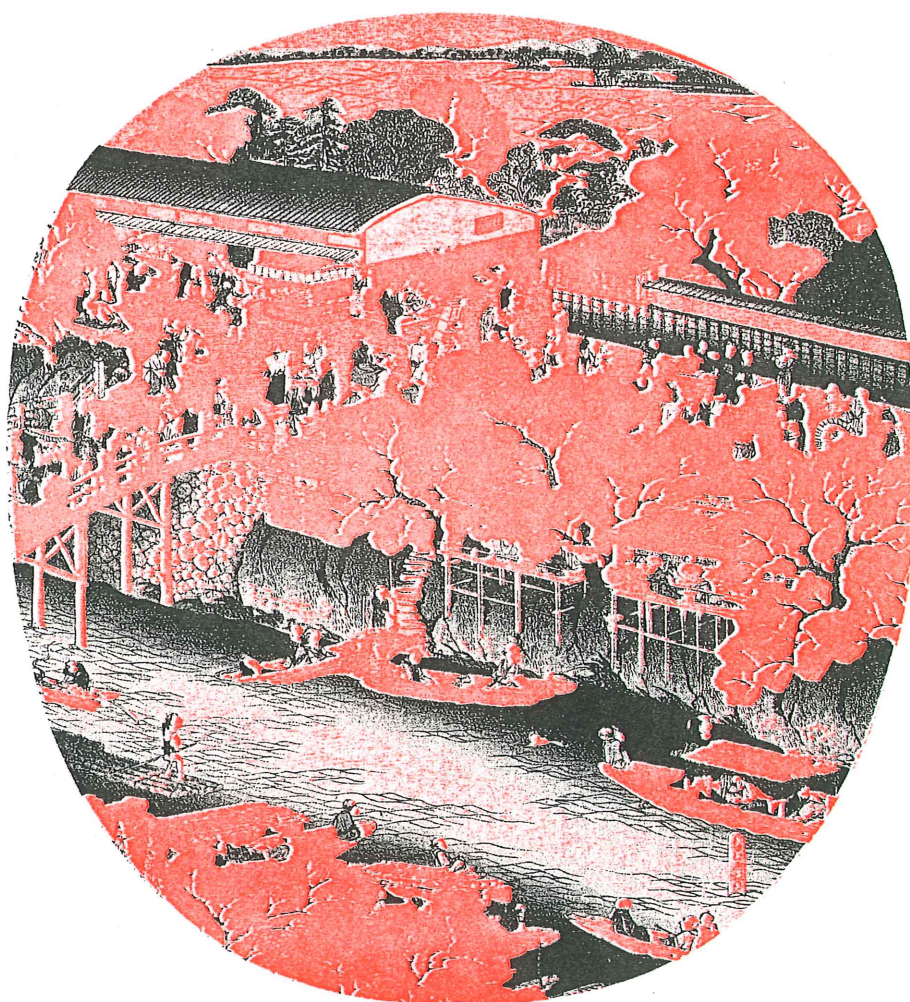
# The XIV International Scientific Meeting of the International Epidemiological Association

*GLOBAL HEALTH IN A CHANGING ENVIRONMENT*

August 27 (Tuesday) – 30 (Friday), 1996

Nagoya Congress Center, Nagoya, JAPAN

**PROGRAM & ABSTRACTS**



**30PM  
PS825****RELATIONSHIPS BETWEEN SERUM LIPID PEROXIDES, PHYSICAL CHARACTERISTICS AND NUTRIENTS INTAKE**

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**Purpose:** To investigate the relationships between serum lipid peroxides, physical characteristics and nutrients intake.

**Methods:** Data were obtained from 365 subjects (163 men and 162 women), aged 20–59 years. The methods of random selection of participants and physical characteristics followed highly standardized methods used in the INTERSALT study. The nutritional survey was conducted by 24 hour–recall method. Serum lipid peroxides was analyzed by TBA method using high pressure liquid chromatography.

**Results:** Serum lipid peroxides were significantly correlated to total cholesterol, HDL cholesterol and LDL cholesterol in both sexes. Serum lipid peroxides were also correlated to nutrients intake such as total energy intake, protein intake, lipids intake etc. in women. For men no relationships between serum lipid peroxides and nutrients intake were found.

**Conclusion:** The results suggested that serum lipid peroxides are associated with serum lipids and some nutrients intake.

**30PM  
PS826****A COHORT STUDY ON THE RELATIONSHIP OF LIFE STYLE AND MAJOR CAUSES OF DEATH**

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**Purpose:** To estimate the risks of life style, especially food intake, in relation to major causes of death by a cohort study.

**Methods:** In the three municipalities of Higashi Yamanashi county (rural area), about 9000 persons aged over 30 years responded to a questionnaire survey in January, 1989. The questionnaire consisted of about 200 items, including frequencies of food intake, alcohol drinking, smoking habit, health status, and so on. Vital statistics and death certificates were observed from 1989 to 1993. Relative risk was calculated by Mantel–Henzel method adjusting for sex, age, and municipality.

**Results:** Among less than 500 deaths, malignant neoplasms were highest (about 30%), followed by heart diseases (about 20%) and cerebrovascular diseases (about 10%). For all causes of death, smoking habit and yogurt intake were significant positive, and seaweed intake and drinking habit were significant negative risk factors. For malignant neoplasms, smoking was positive and seaweed was negative risk factors, for heart diseases only drinking was negative and for cerebrovascular diseases only yogurt was negative risk factors.

**Conclusion:** Because of shortage of observation periods, there were only a few statistically significant relative risks of life style. However, the results were suggestive for possible approaches for prevention of these chronic diseases.

**30PM  
PS827****RISKS OF FOOD INTAKE HABITS TO PRIMARY CAUSES OF DEATH IN A COHORT STUDY**

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**Purpose:** To estimate the risks of food intake habits to death from the primary causes, i.e., cancer, heart disease and cerebral vascular disease in the Higashi Yamanashi cohort.

**Methods:** We conduct a cohort study including 9068 persons aged over 30 years since January 1, 1989. Life habit questionnaire survey was carried out to collect the baseline data. Principal component analysis was used to obtain food consumption patterns for 34 food items. 8 principal component (PC) scores, gender, age, and smoking habit were used as the exploratory variables in the multiple logistic model with mortality events that we investigated until December 31, 1993.

**Results:** For cancer death, age and smoking habit have significantly positive risks by multiple logistic model. For the death from heart disease, age and smoking habit are positive risk factors as well as the highly salty food intake PC, while the alcohol drinking PC has a negative risk. For the death from cerebral vascular disease, only age is a positive risk factor with statistical significance.

**Conclusion:** Since our study is now on-going, the number of dead cases is not so large to obtain final results. Some findings above, however, support previous reports. Increasing cases with an event, results should clarify the risk factors about the primary causes.

**30PM  
PS828****RELATIVE ENERGY INTAKE AND MORTALITY IN A JAPANESE COMMUNITY - A 7 YEAR FOLLOW-UP STUDY -**

N. Tokui, S. Nishisaka, K. Utoguchi, T. Mizoue, T. Yoshimura

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**Purpose:** To clarify the associations between relative energy intake and mortality in a Japanese community.

**Methods:** Baseline survey was conducted in a Japanese community in 1987. The cohort was followed for seven years. Relative energy intake was evaluated by real energy intake using a food frequency questionnaire and recommended energy intake which was calculated by body size and physical activity.

**Results:** As for total mortality, the relative risk for the highest groups compared with the lowest groups was significantly elevated. The relative risk for cancer mortality was also significantly increased.

**Conclusion:** Relative energy intake is associated with not only total mortality but also cancer mortality.

**28PM  
PS909**

**DISTRIBUTION OF SERUM LIPIDS LEVELS AMONG SCHOOL CHILDREN IN A RURAL COMMUNITY, JAPAN**

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**Purpose:** To describe the nature of the distribution of serum lipids levels among school children in Wakayama Prefecture, Japan.

**Participants and Methods:** We conducted a community-based observational study during 1992 to 1994. 1) Study Community: Hidaka-gun County in the center of Wakayama 2) Participants: 9 years old elementary school children (4th grade) and 13 years old junior high school children (1st grade) 3) Lifestyle study: A standardized questionnaire with 30 items including past history, present illness, and daily living activities, was used. 4) Serum lipids levels: Fasting total cholesterol (TC), triglycerides and high-density lipoprotein cholesterol were measured.

**Results:** 3009 elementary school children from 3216 participants and 2976 junior high school children from 3179 participants were recruited for both lifestyle study and serum lipids survey. Mean values of TC levels for elementary school boys, girls, junior high school boys and girls during 3 years were 184 - 185mg/dl, 182 - 188, 170 - 173, 178 - 181, respectively. These levels were 10mg/dl significantly higher than those of Japanese average. And high TC children (>200mg/dl) had significantly higher eating habit of taking breakfast irregularly than children with normal TC levels, after adjusting sex and age (RR:1.2).

**29PM  
PS910**

**THE ASSOCIATION BETWEEN CHILDHOOD ASTHMA AND PARENTAL ATOPY IN ETHNIC GROUPS IN BRITAIN.**

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**Purpose:** To assess the level of association between parents' atopy and child's asthma and the extent to which this association is modified by parents' smoking, family size and ethnic origin.

**Methods:** Children in the age range 5 to 11 years from 56 areas in England and Scotland were eligible. Three samples were included in the analysis: two representative samples from England and Scotland (10628 children) and an English inner city sample (7049 children). Excluding one parent families, approximately 12000 (67%) sets of children and their parents were available for analysis. Atopy in a parent was defined by a positive answer to at least one of the following symptoms: eczema, asthma, wheeze, hay fever or rhinitis.

**Results:** In a logistic analysis child's asthma was highly associated with parents' atopy, odds ratio for asthma in child if both parents atopic in relation to neither was 3.46 (95% CI 2.83 to 4.22). The association with atopy in each parent was similar. Parents' smoking had a slight effect on asthma symptoms in the child and the larger the number of children in the family the lower the risk of asthma symptoms. After adjustment for parents' atopy and smoking status and number of children in the family there was no difference in asthma symptoms between ethnic groups.

**Conclusions:** Both atopy in parents and family size are strongly associated with child's asthma. These associations are not modified by possible confounders.

**29PM  
PS911**

**RELATIONSHIPS BETWEEN PREVENTIVE HEALTH BEHAVIORS AND HEALTH LOCUS OF CONTROL AMONG ELEMENTARY SCHOOL CHILDREN - 3 YEAR FOLLOW UP STUDY**

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**Purpose:** To investigate relationships between daily preventive health behaviors and Health Locus of Control (HLC). HLC is one of the health attitudes related to beliefs about the causes of health and illness.

**Methods:** The subjects of this study were public elementary school children in their 3rd year (8-9 years old). 3 years later, we investigated the same children. 103 boys and 103 girls answered questionnaires in both studies. We used Parcel & Mayer's Children's HLC Scale. Daily preventive health behaviors were eating breakfast, brushing teeth, daily habits, and other factors.

**Results:** Internal HLC (IHLC) mean scores were significantly higher in the latter study than in the previous study. Powerful Others HLC and Chance HLC mean scores were significantly lower in the latter study than in the previous study. Boys with high IHLC scores had better daily habits than boys with low IHLC scores. Girls with high IHLC scores were more apt to rest when they felt tired than girls with low IHLC scores.

**Conclusion:** This study revealed some significant relationships between some daily preventive health behaviors and HLC scores.

**29PM  
PS912**

**MATERNAL FACTORS ASSOCIATED TO INFANT DEVELOPMENT IN GUADALAJARA, MEXICO.**  
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**Purpose:** To identify maternal factors associated with retards in neuromotor development during the first year of life in population covered by the Mexican Social Security Institute in the city of Guadalajara, Mexico, in 1992-93. **Methods:** A multistage probabilistic sample of live-born infants in this area was selected. The sample size was 831; mothers were interviewed, and the Denver Test was used to evaluate the infant neuromotor development. Logistic regression models were used to estimated odds ratios (OR), with 95% confidence intervals (CI); several regression models were constructed for the purpose of selecting the one best fitting the data. The statistical importance of the model was evaluated by the maximum likelihood ratio, and the Chi-square test, and the models were validated by means of the goodness of fit test of Hosmer and Lemeshow, estimating the statistics H\* and C\*.

**Results:** Almost 7% of the children presented retards in neuromotor development during the first year of life; in the multivariate analysis, four risk factors were associated statistically with this problem: social status -low- (OR= 1.97; CI= 1.2-3.3), delivery problems (OR= 1.99; CI= 1.2- 3.4), low birth weight (OR= 3.12; 1.3- 7.4) and that the mother had not been attended by physicians during the pregnancy (OR=4.75; CI= 1.7-13.1). In presence of all these risk factors, a child had a very high probability to present retard in its neuromotor development.

**Conclusions:** The results show the importance of reducing the effect of these risk factors to limit the retards in neuromotor development in the first year of life. In this aspect, the prenatal care has an essential role.



**28PM  
PS1201****THE NANSEI-CHO COHORT STUDY:  
I. DESIGN AND OBJECTIVES**

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H. Takagi<sup>2)</sup>, M. Kuniyoshi<sup>3)</sup>, H. Kakimoto<sup>4)</sup>, N. Isaka<sup>4)</sup>,  
K. Takase<sup>4)</sup>, T. Nakano<sup>4)</sup>

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2) The Institute of Statistical Mathematics, Tokyo, Japan

3) Nansei Choritu Hospital, Mie, Japan

4) Mie University School of Medicine, Mie, Japan

**Purpose:** The cardiovascular research community has long recognized the continuing need for prospective studies to identify factors that place people at risk for atherosclerotic diseases. The Nansei-Cho Cohort Study is a prospective study to investigate the relationship between atherosclerotic diseases and life styles as well as known risk factors.

**Study design:** Study subjects are 4,910 residents aged 40-65 years in Nansei-cho, Mie Pref., Japan. They are expected to participate in at least four examinations three years apart. The first of four cycles began in April 1993, and will be completed by the end of March 1996, at which time the second three-year cycle will begin.

Examinations include serum lipids, lipoproteins; coagulation and platelet; fasting blood sugars and hemoglobin A<sub>1c</sub>; anthropometric measurements and blood pressure. Blood is stored in the laboratory at -70°C for future additional measurements.

Data on life styles and food intake are collected by the newly developed self-administered questionnaires.

**28PM  
PS1203****STATUS AND CHANGES IN HEALTH AND LIFE STYLES IN  
HIGASHI-YAMANASHI COHORT IN JAPAN.**

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Y. Inaba<sup>\*\*\*</sup>.

<sup>\*</sup>Jikei University School of Medicine, Tokyo, Japan.

<sup>\*\*</sup>Institute of Statistical Mathematics, Tokyo, Japan.

<sup>\*\*\*</sup>Juntendo University School of Medicine, Tokyo, Japan.

**Purpose:** To make clear the relationship between status and changes in health and life styles in Higashi-Yamanashi Cohort.

**Methods:** We made the cohort there in January 1989.

Participants of this study were 4,282 males and 4,786 females above 30 years old. Self-written questionnaires were done to these participants. The items of questionnaires were life styles, food habits, disease history, real health status at the survey and so on. We calculated scores of life styles and examined the association with the logistic multiple regression model.

**Results:** Mean age of the participants was 54.3 and SD was 14.7. The scores were 7(3%), 6(17%), 5(31%), 4(31%), 3(15%), 2(3%) and 1(0%). And we found 488 deceased cases in 5 years follow up. It was proved that good life styles contributed longevity and good health conditions of the participants with the logistic model examination considering the effects of age and sex.

**Conclusion:** Our results of this study were resembled the outcome of Breslow's. We are going to follow up this cohort for a long time carefully.

**28PM  
PS1202****THE NANSEI-CHO COHORT STUDY:  
II. BASELINE DATA**

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Matsumura<sup>3)</sup>, Y. Yoshitake<sup>3)</sup>, M. Nishimura<sup>3)</sup>, T. Sato<sup>4)</sup>, H. Takagi<sup>4)</sup>

<sup>1)</sup>Mie University school of medicine, Mie, Japan <sup>2)</sup>Nansei Choritu Hospital,  
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<sup>4)</sup>The Institute of Statistical Mathematics, Tokyo, Japan

**Purpose:** The prospective study to identify risk factors of atherosclerotic diseases was begun in Nansei-Cho, Japan. This report presents consequence of baseline survey of this study. **Methods:** We measured blood pressure (BP), platelet, fibrinogen, serum lipids, fasting blood sugar and hemoglobin A<sub>1c</sub>. Furthermore we obtained data on life styles and food intake collected by the self-administered questionnaire. **Results:** The subjects consisted of 1,323 persons, 400 males and 923 females aged 40-66 years. The mean value of age was 56±7 in males, 54±7 in females (mean±SD). The prevalence of ischemic heart disease, cerebrovascular disease and diabetes was low. Frequency of obesity, hypertension and hyperlipidemia was high. Positive correlation was observed between fibrinogen and age. Lipoprotein (a) had no relation to sex and age. Data on life styles such as exercise habits, smoking and alcohol intake had no relation to frequency of atherosclerotic diseases and risk factors. **Conclusion:** The prevalence of atherosclerotic diseases was low in Nansei-Cho. However high frequency of atherosclerotic risk factors was observed. It could not be determined the relationship between atherosclerotic disease and data on life styles.

**28PM  
PS1204****A MULTI-PURPOSE POPULATION-BASED  
PROSPECTIVE STUDY IN JAPAN (KOSEISHO  
MULTIPURPOSE COHORT STUDY)**

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**Purpose and Methods:** To find the risk and preventive factors for chronic diseases, a large-scale population-based prospective study for cancer and cardiovascular disease is carrying out. It covers 29 municipalities in 11 Health Center District from north to south in Japan, started in 1990 (5 Health Centers) and 1993 (6 Health Centers). At baseline, life-style was investigated by questionnaire and blood samples were collected and stored at -80°C for future use. Follow-up will be continued for at least 10 years in terms of death and incidence of cancer and cardiovascular diseases. Data from health-checkup will also be collected during this period. Interim survey was conducted in 1995 (5 Health Centers) and will be conducted in 1998 (6 Health Center).

**Results and Conclusion:** Out of 144,347 target population, 114,065 (79%) and 47,996 (33%) people responded to the questionnaire and blood sampling at baseline, respectively. The data accumulated in this study will provide valuable information for preventing cancer and cardiovascular disease in the future. The baseline data can be used for cross-sectional study, because of the different mortality rates in 11 health center districts. Some of the results from baseline survey and its correlation with pattern of cancer mortality will be presented.