

- 217 Variance in ^{137}Cs body burdens due to changes in social situation
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Body burdens of ^{137}Cs were measured for a selected group of Japanese adults using a whole-body counter. All measurements were made between May 1990 and March 1994. This span was divided into 4 periods. The total number of measurements taken in each period was 89, 86, 85 and 100, respectively. The body burden was 16 Bq for the period beginning in May 1993. This measurement is significantly higher with a 95 % confidence level, when compared with for the period starting from May 1992. A shortage of food in 1993 due to bad weather in Japan caused us to import foodstuffs and to consume foodstuffs presumably produced and stocked during previous years. We estimate that the increase was caused by the greater increment of chance of ingesting fairly contaminated foodstuffs. For the long term prognosis of health risks due to the intake of radionuclides widely dispersed with an accident, it is required to introduce parameters that express changes in the food supply.

- 218 Cesium-137 concentration among children in Mogilev and Gomel
oblasts, Belarus
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Chernobyl Sasakawa Medical and Health Cooperation Project began in April, 1991 as a five year project. The project planned to examine from 0 to 10 years old children at the time of the Chernobyl accident in the fallout area of the accident. The cooperation placed five medical centers for examination. We report concerning the levels of radiation exposure in Belarus on the basis of whole body ^{137}Cs count. The subjects were 10,062 children in Mogilev and Gomel, Belarus who received the project's health examinations during the period from May 1991 to December 1992. The median levels of whole body ^{137}Cs count per body weight varied from 21-48 Bq kg^{-1} and from 28-126 Bq kg^{-1} in Mogilev oblast and Gomel oblast, respectively. Corresponding annual effective dose equivalents were all less than the public dose limit of 1 mSv y^{-1} . Soviet Union.

- 219 Usefulness of thyroid ultrasound and fine needle aspiration cytology to evaluate
the incidence of thyroid diseases in children around Chernobyl
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To show the reliability of screening by combination of ultrasound examination and fine-needle aspiration cytological biopsy (FNA) for thyroid abnormality in children exposed to fallout from Chernobyl, 197 subjects for FNA were randomly selected from 1,501 children showing echographic thyroid abnormalities. The prevalence of echographic thyroid abnormalities was 1.02%, 4.66%, 3.59%, 2.54% and 1.35% in Mogilev (non-contaminated control), Gomel, Bryansk, Kiev and Korosten respectively ($P < 0.05 - 0.01$ vs Mogilev). The incidence of thyroid diseases was: papillary carcinoma, 2.4%; follicular neoplasm, 7.1%; adenomatous goiter, 18.8%; chronic thyroiditis, 31.8%; and cyst, 24.1%, suggesting that a major cause of thyroid nodularity is non-neoplastic changes, mainly chronic thyroiditis and cysts. Papillary carcinoma and chronic thyroiditis were most frequently observed in the Gomel region (heavily contaminated area). These findings indicate that thyroid diseases, including both neoplasms and immunological disorders, are considered to be related to radioactive fallout.