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Author(s)	Ohto, Hitoshi; Yasumura, Seiji
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FUKUSHIMA RADIATION SYMPOSIUM 2014 : SHARING THE ACHIEVEMENT FROM THE FUKUSHIMA HEALTH MANAGEMENT SURVEY

HITOSHI OHTO[1)] and SEIJI YASUMURA[2)]

[1)]*Vice President, Fukushima Medical University, and Trustee for the Fukushima Health Management Survey,* [2)]*Senior Director, Radiation Medical Science Center for the Fukushima Health Management Survey, Fukushima Medical University*

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The Fukushima Medical Association hosted a symposium on October 4, 2014, to present the largely accumulated data from the Fukushima Health Management Survey in Fukushima 3 years after the Tokyo Electric Power Company (TEPCO) Fukushima Daiichi nuclear power plant accident. The symposium aimed to promote the health of the residents physically and mentally, as a series of radiation symposia held at 2011[1)] and 2013[2)] after the disaster.

Following the Great East Japan Earthquake, which occurred on March 11, 2011, the TEPCO Fukushima Daiichi nuclear power plant accident occurred. As evacuation measures, the government designated the area within 20 km from the nuclear power plant as evacuation zone and proceeded with the evacuation recommendation. In addition to transferring the municipal offices, approximately 166,000 residents were evacuated, consisting of approximately 146,000 residents who were forced to evacuate and other voluntary evacuees.

In Fukushima prefecture, 1,603 people were killed by the earthquake and tsunami, while 204 people went missing. Although no deaths were directly caused by radiation exposure, 1,758 people (as of September 21, 2014), mostly elderly, died due to earthquake-related causes effectuated by the nuclear power plant accident.

Based on the effects of the nuclear radiation, the Fukushima Health Management Survey[3)] was initiated from July 2011 in order to oversee the future health of the residents of the Fukushima prefecture. Fukushima Medical University was entrusted with its implementation. The surveys conducted were as follows : the basic survey to assess individual external exposure dose[4)] and a detailed survey including thyroid ultrasound examination, comprehensive health check, Mental health and lifestyle survey[5)], and Pregnancy and Birth Survey[6)].

The results from the basic survey were obtained from the answers of 420,000 respondents among the 2.05 million residents of the Fukushima prefecture. Of the respondents, 99.8% had an exposure dose less than 5 mSv in the first 4 months, suggesting an extremely low individual exposure dose.

Health risks such as mental health problems, increased obesity, and lack of exercise were observed in children[7)]. All of 360,000 residents aged 0-18 years were subjects who were requested to undergo thyroid ultrasound examination at the time of the earthquake. A preceding study, which aimed to elucidate who among the residents had latent thyroid cancer from before the earthquake, found some residents to have thyroid cancer[7)].

In evacuated adults, the prevalence of obesity, dyslipidemia, abnormal glucose metabolism, hypertension, and renal dysfunction have increased along with aging[8)]. The number of excessive drinkers among evacuees has increased in conjunction with stress. Depressive status has been increasingly found in more women than men. In addition, the need for long-term care services has increased in the elderly[9)].

However, the incidences of abnormal pregnancy, miscarriage, and abortion did not increase after the earthquake. The pregnancy number and birth rates in Fukushima were reduced in 2012 but recovered in 2013[10)]. The number of women who required postpartum support also remained the same.

As mentioned earlier, because the need for support to prevent physical and mental health risks has increased, efforts for health improvement have been

Corresponding author : Hitoshi Ohto E-mail : hit-ohto@fmu.ac.jp
https://www.jstage.jst.go.jp/browse/fms http://www.fmu.ac.jp/home/lib/F-igaku/

made by conducting interventions among residents in cooperation with the Fukushima prefecture and municipalities. Having knowledge in health science and disease control, Fukushima Medical University has to play the pivotal role of a think tank toward these efforts.

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