

### **"We will promote the health of pregnant women in Fukushima Prefecture."**

Many pregnant women intending to give birth and raise children in Fukushima Prefecture have been forced to live as refugees due to the Great East Japan Earthquake and the accident at Tokyo Electric Power Company (TEPCO)'s Fukushima Daiichi NPS, and have stresses from changes in their lifestyles and worries concerning radiation.

Therefore, Fukushima Prefecture has been conducting the Pregnancy and Birth Survey with the aim of properly ascertaining those pregnant women's current status, mental and physical health conditions, as well as opinions and wishes in order to alleviate their worries, provide necessary care and ensure peace of mind and, to utilize the obtained data for improving obstetric and perinatal care in Fukushima Prefecture.

Prepared based on the material for the 22nd Prefectural Oversight Committee Meeting for Fukushima Health Management Survey

Worries, anxieties and stresses caused by the accident at TEPCO's Fukushima Daiichi NPS have been obstacles for women who intend to give birth and raise children in Fukushima Prefecture.

In light of such circumstances, Fukushima Prefecture has been conducting the Pregnancy and Birth Survey in order to ascertain pregnant women's mental and physical health conditions with the aim of providing care to those considered to be in need of support such as an opportunity to have consultations with midwives or public health nurses. At the same time, the survey also aims to obtain data to be utilized for improving obstetric and perinatal care in Fukushima Prefecture.

Included in this reference material on March 31, 2013

Updated on March 31, 2016

# Pregnancy and Birth Survey: Outline (1/2)

## [Coverage]

Pregnant women who obtained a maternity handbook within Fukushima Prefecture and those who obtained a maternity handbook somewhere else but gave birth in the prefecture during the survey period for every fiscal year

Fiscal year	Coverage	Responses from	
FY2011	16,001 people	9,316 people (58.2%)	<p>Conducted a follow-up survey in approx. 4 years after delivery</p> <p>Coverage: 7,252 people (44.7%)</p> <p>Responses from: 2,554 people (35.2%)</p>
FY2012	14,516 people	7,181 people (49.5%)	
FY2013	15,218 people	7,260 people (47.7%)	
FY2014	15,125 people	7,132 people (47.2%)	
FY2015	14,569 people	6,866 people (47.1%)	
FY2016*	14,138 people	6,069 people (42.9%)	<p>Coverage: 5,602 people (39.6%)</p> <p>Responses from: 2,021 people (36.1%)</p>

\* Provisional values (as of April 30, 2017)

## [Survey method]

Inquiry sheets are sent to the targeted pregnant women, asking them to fill in the sheets and send them back.

(From the FY2016 survey, responses are accepted by post or online.)

Major survey items are as follows:

- Pregnant women's mental health conditions
- Present living conditions (circumstances of a refugee life or forced separation from family members)
- Situations during delivery and pregnant women's physical health conditions
- Confidence in raising children
- Attitude toward the next pregnancy

Prepared based on the website of the Radiation Medical Science Center for the Fukushima Health Management Survey, Fukushima Medical University and the materials for the 27th and 28th Prefectural Oversight Committee Meetings for Fukushima Health Management Survey

The Pregnancy and Birth Survey covers pregnant women who newly obtained a maternity handbook every fiscal year.

Not only those who obtained a maternity handbook in Fukushima Prefecture but also those who obtained a maternity handbook somewhere else but gave birth in the prefecture are covered.

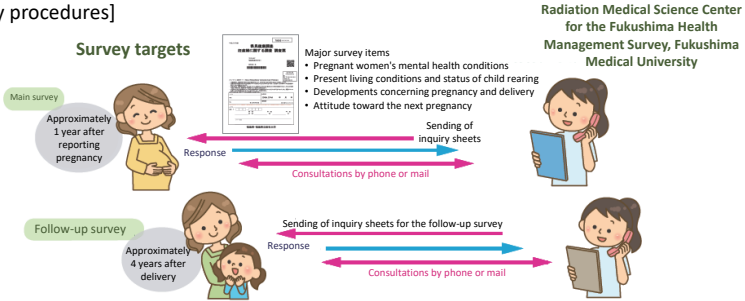
For the former, inquiry sheets are sent based on information provided by each municipality in the prefecture. The latter may use inquiry sheets available at obstetric institutions in the prefecture or ask the Radiation Medical Science Center for the Fukushima Health Management Survey to send them inquiry sheets.

Survey targets are asked to fill in inquiry sheets and send them back. From the FY2016 survey, responses can also be submitted online.

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Updated on December 1, 2017

[Survey procedures]



- Coverage of the FY2017 main survey
  - (i) Pregnant women who obtained a maternity handbook in any municipality in Fukushima Prefecture from August 1, 2016, to July 31, 2017
  - (ii) Pregnant women who obtained a maternity handbook outside Fukushima Prefecture during the period mentioned above but gave birth in Fukushima Prefecture
- Coverage of the FY2017 follow-up survey
 

Respondents of the FY2013 survey who gave birth from August 1, 2012, to April 8, 2014

→ Since the FY2016 survey, responses can also be submitted online.

**On the website of the Radiation Medical Science Center for the Fukushima Health Management Survey, responses can be made using personal computers or smartphones.**

Prepared based on the leaflet on the Pregnancy and Birth Survey, and the website of the Radiation Medical Science Center for the Fukushima Health Management Survey, Fukushima Medical University

Details of the responses are compiled by the Radiation Medical Science Center for the Fukushima Health Management Survey to detect people considered to be in need of support. \* If there are any people who are considered to be in need of support, midwives, public health nurses, doctors or other specialized staff members offer consultations or other support to such people by mail or by other means.

\* Respondents who replied that they tend to feel depressed and that they are not interested in things, or respondents who are considered to be in need of support based on the content of their free remarks (such as those who are in need of help, who are severely depressed, who need support for child rearing, who are worried about radiation doses, or who directly made requests or are requiring concrete answers)

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# Pregnancy and Birth Survey: Achievement and Content of Support

## [Changes in coverage]

Out of all respondents, for those who were judged to be in need of support from the content of their responses, support has been offered by full-time midwives, etc. by phone or mail.

Fiscal year	Number of people who received support by phone	Percentage of those who received support among all respondents		Number of people who received support by phone	Percentage of those who received support among all respondents
FY2011	1,401 people	15.0%	Survey following up the FY2011 survey	375 people	14.7 %
FY2012	1,104 people	15.4%	Survey following up the FY2011 survey	255 people	12.7 %
FY2013	1,101 people	15.2%			
FY2014	830 people	11.6%			
FY2015	913 people	13.0%			
FY2016*	782 people	12.9%			

\* Provisional values (as of April 30, 2017)

## [Topics of the consultations by phone]

	FY2011	FY2012	FY2013	FY2014 to FY2015 (the same ranking for both years)	Survey following up the FY2011 survey
1st	Worries over radiation and its effects	Mothers' mental and physical health	Mothers' mental and physical health	Mothers' mental and physical health	Mothers' mental and physical health
2nd	Mothers' mental and physical health	Matters concerning child rearing	Matters concerning child rearing	Matters concerning child rearing	Worries over radiation and its effects
3rd	Matters concerning child rearing	Worries over radiation and its effects	Children's mental and physical health	Matters concerning family life	Matters concerning child rearing

Matters concerning child rearing include concerns about baby food, night crying, constipation, vaccination, etc.

Prepared based on the material for the 27th Prefectural Oversight Committee Meeting for Fukushima Health Management Survey

Immediately after the earthquake, the most frequent topic was worries over radiation and its effects, but the percentage of such consultations is declining over time. Since FY2012, consultations on mothers' mental and physical health and matters concerning child rearing have increased and now rank high.

Regarding the survey following up the FY2012 survey, those who required support accounted for 12.7% of all respondents, showing a decrease from the percentage at the time of the survey following up on the FY2011 survey (14.7%). The most frequent topic was mothers' mental and physical health (44.9%). Consultations concerning worries over radiation and its effects accounted for 13.3%, considerably lower than at the time of the survey following up on the FY2011 survey (25.6%).

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## [Percentages of premature births, low birth-weight babies, and congenital abnormalities or anomalies]

Percentages of premature births, low birth-weight babies, and congenital abnormalities or anomalies obtained through the Pregnancy and Birth Survey were almost the same as the general level and those obtained through nationwide surveys.

(%)

	Percentage of premature births		Percentage of low birth-weight babies		Percentage of congenital abnormalities or anomalies	
	Main survey	Nationwide survey	Main survey	Nationwide survey	Main survey	General level
FY2011	4.8	5.7	8.9	9.6	2.85	
FY2012	5.7	5.7	9.6	9.6	2.39	
FY2013	5.4	5.8	9.9	9.6	2.35	3 to 5 (based on the 2014 Obstetric Care Guidelines)
FY2014	5.4	5.7	10.1	9.5	2.30	
FY2015	5.8	5.6	9.8	9.5	2.24	

Nationwide surveys: Percentages based on the Vital Statistics  
 Premature births: Babies born at a gestational age from 22 weeks to less than 37 weeks  
 Low birth-weight babies: Babies born smaller than 2500g

Prepared based on the material for the 26th Prefectural Oversight Committee Meeting for Fukushima Health Management Survey

The number of babies born in Fukushima Prefecture decreased temporarily after the earthquake, but the number increased in FY2013 and FY2014 compared with FY2012.

Radiation effects on newborn babies had been worried about, but percentages of premature births, low birth-weight babies, and congenital abnormalities or anomalies in Fukushima Prefecture after the earthquake were found to be almost the same as generally available data, including Vital Statistics collected nationally.

A report of a FY2013 Ministry of Health, Labour and Welfare (MHLW) Grant Research, "Research on the Incidence of Congenital Anomalies in Japan and Effect Factors (Including Effects of Radiation Exposure and Prenatal Diagnoses) through Monitoring Analysis," states that the incidence of congenital anomalies detected among 17,773 babies born at 36 maternity hospitals in Fukushima Prefecture after the earthquake shows similar outcomes to nationwide surveys, with no notably higher outlying events when compared with other prefectures.

Included in this reference material on March 31, 2015

Updated on December 1, 2017

## Pregnancy and Birth Survey: What Has Become Clear (2/2)

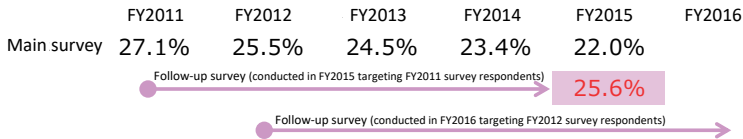
Latest Survey Results: <http://www.pref.fukushima.lg.jp/site/portal/kenkocoyosa-kentoiinkai.html> (in Japanese)

### [Changes in pregnant women's depressive tendencies]

The percentage of respondents who replied that they tend to feel depressed and/or that they are not interested in things



Pregnant women's depressive tendencies have been weakening gradually but are still strong.



### [Changes in percentage of respondents who answered "Yes" to the question "Are you considering another pregnancy?"]

Nationwide survey	Pregnancy and Birth Survey					
	FY2010	FY2012	FY2013	FY2014	FY2015	FY2016*
	51.0%	52.9%	52.8%	57.1%	53.3%	55.4%

Percentage of respondents who are married for less than 10 years and plan to have a child in the nationwide survey, "Fourteenth Japanese National Fertility Survey in 2010" (when having any children already)

\* The 2011 survey did not contain the relevant question.

\* Provisional values (as of March 31, 2017)

Prepared based on the material for the 27th Prefectural Oversight Committee Meeting for Fukushima Health Management Survey

For questions concerning pregnant women's depressive tendencies, respondents who replied that they tend to feel depressed and/or that they are not interested in things have been decreasing but such tendencies are still strong.

According to the "Healthy Parents and Children 21" (a national campaign to promote improvement of health standards of mothers and children), the percentage of postnatal depression evaluated using the Edinburgh Postnatal Depression Scale was 9.0% in 2013. On the other hand, that percentage using the same scale and calculated from the results of the FY2016 Pregnancy and Birth Survey (provisional values) was 11.2%, higher than the national average.

The FY2016 Pregnancy and Birth Survey (provisional values) also revealed that respondents considering another pregnancy accounted for 53.3%. Since the FY2012 survey, more than half of the respondents wish to have more children. For reference, according to the Fourteenth Japanese National Fertility Survey in 2010, respondents who are married for less than ten years and plan to have a child accounted for 58% (or 51% among those who already have any children).

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