

**Survey: Children’s exposure to ionising radiation in Switzerland**

HOW TO COMPLETE THIS QUESTIONNAIRE

This questionnaire should be filled by a person responsible for the child (parent or guardian). You will find questions about diet, medical exams (x-rays and CT scans), flight travels, previous addresses, location, building materials of your dwelling and outdoor activities. These are all relevant for identifying sources of radiation exposure. We ask you to:

- Write your answers as clearly as possible.
- Tick only one answer per question, unless it is clearly indicated that more than one can be ticked.
- Complete the questionnaire in the given order and do not skip any question unless you are asked to do so. In some cases and depending on your answer you can skip questions and go directly to next section.
- If you need more space to answer a question, please use a separate paper sheet and send it to us with the questionnaire.

There are no right or wrong answers. However, it is very important for us that you answer all the questions. Sometimes, it can be hard to remember past events, but we ask you for **your best estimate**.

Indicate who is completing this questionnaire:  Mother of the child  Father of the child  Other

Date of completion: \_\_\_\_ . \_\_\_\_ . \_\_\_\_ (dd.mm.yyyy)

**I. DIET**

**Q1** How frequently does your child consume the following food?

	<b>Never</b>	<b>Rarely</b> (less than once a month)	<b>Occasionally</b> (1 to 2 times per month)	<b>Regularly</b> (3 or more times per month)
Seafood (shellfish, crustaceans or fish)	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
Self-collected wild mushrooms	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
Purchased wild mushrooms	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
Wild boar	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>

**Q2** What type of water does your child typically drink?

<sub>1</sub> Tap water <sub>2</sub> Bottled water <sub>3</sub> Both

**→If tap water only, go to section “MEDICAL EXAMINATIONS”**

**Q3** Please indicate the brands of bottled water you buy the most:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

## II. MEDICAL EXAMINATIONS

**Q4** Did your child ever visit a dentist? <sub>1</sub> Yes <sub>2</sub> No  
 → If no, continue to question Q6

**Q5** The table below presents three different types of X-ray examinations one may pass at the dentist. Considering all the times your child has visited the dentist, how many of such tests has she/he ever taken? Please complete the table as shown in the example.

Types of X-ray examinations at the dentist	Example	Total number of tests:
X-ray examination that uses a small device near the head and a film is placed in the mouth	0	
X-ray examination with a big device that turns around the child's head (no film is placed in the mouth)	3	
X-ray examination with a device that is far away from the child's head	3	

**Q6** Apart from dentist visits, did your child ever have **X-ray** examinations?  
 See explanation below before answering.

<sub>1</sub> Yes <sub>2</sub> No

**Q7** Did your child ever have a **CT-Scan** examination?  
 See explanation below before answering.

<sub>1</sub> Yes <sub>2</sub> No

→ If you answer "No" in questions 6 and 7, please go to next section "PREGNANCY".

**X-ray:** we ask for conventional X-rays done in any part of the body (except those taken at the dentist), which do not require patients to prepare for the exam. X-ray should not be confused with CT-Scans, MRIs and ultrasound examinations (when the examiner uses a gel, also called "echography").

**CT-Scan:** the child is placed for examination in a kind of ring (see picture on the right). Often, a contrast agent is injected which triggers a strong feeling of heat in the body. If parents stay with the child during the examination, they must wear heavy protective clothing. The examination itself usually takes only a few minutes and is noiseless. CT-scans should not be confused with MRI examinations, which require the person to lie motionless in a very narrow tube for a long time. In addition, the MRI machine is very noisy, there are repeatedly loud knocking noise, and patients are sometimes given headphones.



**Q8** For each X-ray and CT-Scan examination that your child had at any point of his/her life, please specify the following details. Do not include examinations at the dentist.

Examination		Place where the procedure was performed (name of health service provider, e.g. hospital, clinic, doctor's office)	Part of the body examined	Year
X-ray	CT-Scan			
	x	Hôpital Neuchâtelois	chest	2016

→ If more space required, please continue in a separate paper sheet and attach it to the questionnaire.

### III. PREGNANCY

**Q9** What was the address of the mother of the child during pregnancy?  
(if more than one, indicate the place in which the mother lived most of the time)

Street, N°, NPA: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Outside Switzerland

**Q10** During pregnancy, did the mother have a...

...X-ray examination? (do not confuse with ultrasound)

<sub>1</sub> Yes <sub>2</sub> No

...CT scan examination?

<sub>1</sub> Yes <sub>2</sub> No

→ If you answer “No” for both examinations in question 10, please go to next section “FLIGHT TRAVELS”.

**Q11** For each X-ray and CT-Scan procedure that the mother had during pregnancy, please indicate:

Procedure		Place where the procedure was performed (name of health service provider, e.g. hospital, clinic, doctor's office)	Part of the body examined
X-ray	CT-Scan		
x		Institut de Radiologie Neuchâtel	chest

→ If more space required, please continue in a separate paper sheet and attach it to the questionnaire.

### IV. FLIGHT TRAVELS

**Q12** How many flight travels has your child had during the **last 12 months**? Each round trip counts as one flight.

Number of Flights: \_\_\_\_\_

→ If ZERO, continue to next section “DWELLING”.

**Q13** For each flight that your child took during the **last 12 months**, please indicate the following details as shown in the example (note that each round trip counts as one flight):

	Example	Flight 1	Flight 2	Flight 3	Flight 4
<b>Outbound</b>					
Departure airport	Geneva				
Date (dd.mm.yy)	13.04.18				
Destination airport	John F. Kennedy, NY				
Stop airports	Frankfurt				
Company	SWISS/Lufthansa				
<b>Return</b>					
Departure airport	John F. Kennedy, NY				
Date (dd.mm.yy)	02.05.18				
Destination airport	Geneva				
Stop airport	Frankfurt				
Company	Lufthansa				

→ If more space required, please continue in a separate paper sheet and attach it to the questionnaire.

## V. DWELLING

**Q14** Please indicate the type of dwelling in which you currently live:

<sub>1</sub> Apartment in building      <sub>2</sub> Independent house

**Q15** What was the year of construction of the house/building? (*Approximate year if uncertain*)

\_\_\_\_\_

**Q16** How many rooms are there in your dwelling? Please consider only living room and bedrooms.

Number of rooms: \_\_\_\_\_

**Q17** In your building/house, which floors does your dwelling occupies? (*can be more than one*)

<sub>-1</sub> -1   <sub>0</sub> Ground floor   <sub>1</sub> 1   <sub>2</sub> 2   <sub>3</sub> 3   <sub>4</sub> 4   <sub>5</sub> 5   <sub>8</sub> Other \_\_\_\_\_

**Q18** For the building/house in which you live, please indicate the building materials of the outside walls (*more than one answer is possible*):

<sub>1</sub> Concrete   <sub>2</sub> Wood   <sub>3</sub> Bricks   <sub>4</sub> Sand stone   <sub>5</sub> Other Stones   <sub>9</sub> I do not know

**Q19** Does the building/house in which you live have a cellar?

<sub>1</sub> Yes   <sub>2</sub> No   → **If No, please go to next section "RESIDENTIAL ADDRESS"**

**Q20** Please indicate the type of floor and ventilation of the cellar (you can select more than one option):

**Floor:**      <sub>1</sub> Concrete   <sub>2</sub> Bricks   <sub>3</sub> Bare soil

**Ventilation:**   <sub>1</sub> Constant ventilation (ex. windows always open)   <sub>2</sub> Sporadic ventilation   <sub>3</sub> No ventilation

## VI. RESIDENTIAL ADDRESS

**Q21** Please indicate all the addresses that your child ever lived at, starting from the day of birth.

	Municipality	NPA	Street, number	Period mm.yy-mm.yy
Example	Bern	3012	Finkenhubelweg, 11	01.2014 - 11.2018
Address 1				
Address 2				
Address 3				
Address 4				
Address 5				

→ *If more space required, please continue in a separate paper sheet and attach it to the questionnaire.*

**Q22** At what other addresses, away from home, does your child spend regularly a significant amount of time? Please indicate the addresses at which your child spends at least 4 hours per week (examples: school, day care, relatives, etc.).

	Municipality	NPA	Street, number	Type of location	Approximate total of hours per week (or per two weeks if biweekly)
<i>Example 1</i>	Bern	3012	Finkenhubelweg, 11	School	28 hours every week
<i>Example 2</i>	Steffisburg	3612	Weieneggstrasse 62	Relatives	48 h every 2 weeks
Address 1					
Address 2					
Address 3					
Address 4					

➔ If more space required, please continue in a separate paper sheet and attach it to the questionnaire.

## VII. OUTDOOR ACTIVITIES AND SUN EXPOSURE

**Q23** Where did your child spend most of his/her time yesterday?

<sub>1</sub> School/Daycare/Nursery    <sub>2</sub> At home    <sub>3</sub> Other: \_\_\_\_\_

Yesterday's date (dd.mm.yy): \_\_\_\_ . \_\_\_\_ . \_\_\_\_

**Q24** Please, indicate the amount of time your child spent outdoors yesterday and the weather:

*If no time spent outdoors, please indicate "0".*

	<i>Example</i>	Time spent <u>outdoors</u> : in hours/min.	Weather (select only one option)
06:00h – 10:00h	0		<input type="checkbox"/> <sub>1</sub> sunny <input type="checkbox"/> <sub>2</sub> mostly sunny <input type="checkbox"/> <sub>3</sub> mostly cloudy <input type="checkbox"/> <sub>4</sub> cloudy
10:00h – 16:00h	1h20min		<input type="checkbox"/> <sub>1</sub> sunny <input type="checkbox"/> <sub>2</sub> mostly sunny <input type="checkbox"/> <sub>3</sub> mostly cloudy <input type="checkbox"/> <sub>4</sub> cloudy
16:00h – 19:00h	35min		<input type="checkbox"/> <sub>1</sub> sunny <input type="checkbox"/> <sub>2</sub> mostly sunny <input type="checkbox"/> <sub>3</sub> mostly cloudy <input type="checkbox"/> <sub>4</sub> cloudy
How typical were your child activities <u>yesterday</u> , for this time of the year?			<input type="checkbox"/> <sub>1</sub> Typical <input type="checkbox"/> <sub>2</sub> Unusual

**Q25** During the current season (winter), please indicate the amount of time per day your child usually spends outdoors.

		<i>Example</i>	Time in hours/min:
Monday to Friday	06:00h – 10:00h	0	
	10:00h – 16:00h	45min	
	16:00h – 19:00h	1h20min	
Weekend	06:00h – 10:00h	15min	
	10:00h – 16:00h	2h	
	16:00h – 19:00h	1h15min	



## IX. FAMILY

In the following columns, please enter information **corresponding to the parents or guardians of the child**, as shown in the example. If the child lives with only one responsible person, use only one column.

	Person responsible 1 (Person who is filling the questionnaire)	Person responsible 2
<b>Q33 Gender</b>	<input type="checkbox"/> <sub>1</sub> f <input type="checkbox"/> <sub>2</sub> m	<input type="checkbox"/> <sub>1</sub> f <input type="checkbox"/> <sub>2</sub> m
<b>Q34 Date of birth</b> (Format dd.mm.yyyy)	_____	_____
<b>Q35 What is the highest educational level completed?</b> <i>Only one possible answer.</i>		
none or up to 7 years of compulsory education	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>
compulsory education (lower secondary school, middle education, special needs school), preliminary course or other bridging courses	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>2</sub>
basic vocational education and training (2-4 year apprenticeship or full-time vocational school, commercial diploma, technical college, national vocational qualifications NVO 1-3 or similar)	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>3</sub>
higher secondary general education (high school-leaving certificate giving access to universities, general or vocational baccalaureate, higher secondary general education or similar)	<input type="checkbox"/> <sub>4</sub>	<input type="checkbox"/> <sub>4</sub>
advanced technical and professional training (vocational associate's degree, national vocational qualifications (NVQ 4 or higher), higher technical, commercial college or similar)	<input type="checkbox"/> <sub>5</sub>	<input type="checkbox"/> <sub>5</sub>
university, ETH/EPFL, university of applied sciences	<input type="checkbox"/> <sub>6</sub>	<input type="checkbox"/> <sub>6</sub>
<b>Q36 What is the current employment situation?</b> <i>Only one possible answer.</i>		
in full-time employment	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>
in part-time employment → <i>Please indicate the average number of hours worked per week</i>	<input type="checkbox"/> <sub>2</sub> : _____ h	<input type="checkbox"/> <sub>2</sub> : _____ h
non-employed	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>3</sub>
<b>Q37 Total gross income in the household per month</b> <i>Please indicate the sum of all the incomes of all the members of the household <u>before</u> deductions.</i>		<input type="checkbox"/> <sub>1</sub> < 3'000 CHF <input type="checkbox"/> <sub>2</sub> 3'000 – 4'499 CHF <input type="checkbox"/> <sub>3</sub> 4'500 – 5'999 CHF <input type="checkbox"/> <sub>4</sub> 6'000 – 8'999 CHF <input type="checkbox"/> <sub>5</sub> 9'000 – 12'999 CHF <input type="checkbox"/> <sub>6</sub> > 13'000 CHF <input type="checkbox"/> <sub>9</sub> No answer
<b>Q38 Does any member of the household own a car? In case of leasing, indicate "yes".</b>		<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>2</sub> No

Do you accept to be contacted again in spring and summer to fill in a very short follow-up questionnaire on daily activities and sun exposure (5 minutes questionnaire)?

<sub>1</sub> Yes      <sub>2</sub> No

Phone number: \_\_\_\_\_

E-mail: \_\_\_\_\_

Knowing the exact radiation dose used during X-ray and CT-Scan examinations would allow us to better estimate the total radiation exposure of your child. Do you agree that we contact the health service provider that performed these medical examinations on your child, in order to obtain this information?

<sub>1</sub> Yes      <sub>2</sub> No

**We will be happy to read your comments about this survey:**

**We greatly appreciate your participation and kindly ask you to return this questionnaire in the provided envelope**