

Outbreak Toolkit (<https://outbreaktools.ca/>)

Binomial probability calculation tool for food exposures

Download the binomial probability tool:

Toolkit-binomial-probability-calculation-tool-2.0 (<https://outbreaktools.ca/wp-content/uploads/2024/11/Toolkit-binomial-probability-calculation-tool-2.0.xlsx>)

(Excel format, 10 sheets, 476KB)

HOW THIS TOOL WORKS:

This Excel document calculates binomial probabilities using Foodbook 1 and Foodbook 2.0 values as a reference population and flags exposures of interest (alert) for further follow-up. There are over 300 pre-filled food items with the ability to add more items as needed. When adding additional exposures, do not insert rows. Simply add them to the bottom of the current list in order to maintain formulas and formatting.

When possible, values from Foodbook 2.0 are presented and replace the data from Foodbook 1. However, if the variable was included in Foodbook 1 only, it is presented here, marked in the table with an *

HOW TO USE THIS TOOL:

Tool A

Select your province/territory of interest in cell P1. Enter the total number of cases that reported Yes (Y), Probably (P), No (N) or Don't Know (DK) to each of the food exposures listed and the tool will do everything else! The formulas used in Tool A for each calculated cell are as follows:

- Column J calculates the percentage of cases who reported Yes (Y) and Probably (P) by dividing the sum of column C (Yes) and column D (Probably) by the sum of columns C (Yes), D (Probably), and E (No), and multiplying it by 100 to obtain a percentage.
- Column G calculates the sum of column C (Yes) and column D (Probably)
- Column H calculates the sum of columns C (Yes), D (Probably), and E (No)
- Column K is the data from the Public Health Agency of Canada's Foodbook 2.0 study.
- Column L calculates the binomial probability of each food item using the reference data.
- Column M determines whether each exposure of interest is significant: if the p-value is less than, or equal to 0.05 AND the proportion of individuals who reported consuming a food item is greater than the Reference, OR, if no reference value exists, then if the value is greater than or equal to 60%

Tool B

Enter your variable names and values for "Yes", "Probably", "No" and "Don't know" into the sheet "Values-Valeurs". Ensure that all of your variable names and labels are included in the "Variables" sheet. If the variable is not in Foodbook, then make sure that the value in Column B is equal to "381".

TO NOTE:

- The characters "#DIV/0!" appear in the table below when a number is divided by zero (0). It happens when you enter a formula like =21/0, or when a formula refers to a cell that has 0 or is blank.

Exposures of Interest are:

- those with p-values ≤ 0.05 and where the observed proportion is greater than the expected (reference) population [i.e. %Y+P > %Reference],
- OR, if there is no expected or reference value, then when the observed proportion (%Y+P) is greater than or equal to 60%

Control Data Reference:

- Public Health Agency of Canada Infectious Disease and Vaccination Programs Branch. Foodbook 2.0 Report; 2024. Retrieved from: <https://www.canada.ca/en/public-health/services/publications/food-nutrition/foodbook-report-2.html> (<https://www.canada.ca/en/public-health/services/publications/food-nutrition/foodbook-report.html>)

BINOMIAL PROBABILITY CALCULATION TABLE:

	Binomial probability calculation tool for food, animal and water exposures											
	<i>Microsoft Excel Column designation</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>	<i>H</i>	<i>I</i>	<i>J</i>	<i>K</i>	<i>L</i>	M
#	Food item	Confirmed cases				Sums		Percentage (%)		Foodbook Canada (n=20320)	Binomial probability	
		Yes	Prob	No	DK	Y+P	Y+P+N	Y/(Y+N)	(Y+P)/(Y+P+N)		p-value	Exposure of interest ¹
2	VEGETABLES											
3	Any tomatoes					0	0	0%	0%	76.1		
4	Cherry or grape tomatoes					0	0	0%	0%	46.1		
5	Tomatoes on a sandwich, burger or taco at restaurant or fast food establishment*					0	0	0%	0%	20.4		
6	Roma/plum tomatoes*					0	0	0%	0%	25.7		
7	Hothouse tomatoes*					0	0	0%	0%	38.3		
8	Beefsteak tomatoes*					0	0	0%	0%	12.2		
9	Any lettuce or leafy greens					0	0	0%	0%	83.2		
10	Iceberg lettuce					0	0	0%	0%	42.0		
11	Romaine lettuce					0	0	0%	0%	56.8		

12	Spinach					0	0	0%	0%	38.7		
13	Mesclun greens					0	0	0%	0%	23.2		
14	Kale					0	0	0%	0%	18.1		
15	Arugula					0	0	0%	0%	16.7		
16	Other leafy greens					0	0	0%	0%	15.6		
17	Lettuce or leafy greens on a sandwich, burger or taco at restaurant or fast food establishment*					0	0	0%	0%	24.3		
18	Pre-packaged lettuce or leafy greens					0	0	0%	0%	30.2		
19	Commercially pre-packaged salad kits					0	0	0%	0%	24.7		
20	Any store-bought or ready to eat green salad					0	0	0%	0%	18.1		
21	Cabbage (includes coleslaw)					0	0	0%	0%	37.9		
22	Any coleslaw					0	0	0%	0%	20.6		
23	Any microgreens or sprouts					0	0	0%	0%	13.5		
24	Microgreens					0	0	0%	0%	5.9		
25	Alfalfa sprouts					0	0	0%	0%	2.9		
26	Bean sprouts					0	0	0%	0%	5.4		
27	Other sprouts					0	0	0%	0%	3.0		
28	Cucumbers					0	0	0%	0%	72.1		

29	Bell peppers					0	0	0%	0%	65.6		
30	Hot peppers					0	0	0%	0%	19.8		
31	Peas (shelled or in pods)*					0	0	0%	0%	28.8		
32	Sugar snap peas					0	0	0%	0%	14.0		
33	Green or yellow beans*					0	0	0%	0%	36.6		
34	Any carrots*					0	0	0%	0%	81.4		
35	Carrots (not mini)*					0	0	0%	0%	68.9		
36	Mini/baby carrots					0	0	0%	0%	34.1		
37	Mushrooms					0	0	0%	0%	43.0		
38	Any onions					0	0	0%	0%	71.6		
39	Green onions					0	0	0%	0%	41.2		
40	Red onions					0	0	0%	0%	40.4		
41	Other onions					0	0	0%	0%	47.2		
42	White/yellow onions*					0	0	0%	0%	73.5		
43	Celery*					0	0	0%	0%	47.6		
44	Broccoli*					0	0	0%	0%	55.5		
45	Cauliflower*					0	0	0%	0%	33.0		
46	Leeks*					0	0	0%	0%	9.2		
47	Fresh garlic*					0	0	0%	0%	48.9		
48	Zucchini*					0	0	0%	0%	21.1		

49	Any vegetable juices*					0	0	0%	0%	18.2		
50	Frozen vegetables*					0	0	0%	0%	38.7		
51	HERBS & SPICES											
52	Any fresh herbs					0	0	0%	0%	49.1		
53	Fresh basil					0	0	0%	0%	23.6		
54	Fresh Thai basil*					0	0	0%	0%	9.2		
55	Fresh cilantro/coriander					0	0	0%	0%	24.3		
56	Fresh parsley					0	0	0%	0%	25.3		
57	Other fresh herbs					0	0	0%	0%	20.1		
58	Fresh tarragon*					0	0	0%	0%	3.2		
59	Any spices*					0	0	0%	0%	90.7		
60	Pepper (whole/ground, white, black, blended)*					0	0	0%	0%	84.8		
61	Curry powder*					0	0	0%	0%	17.6		
62	Paprika*					0	0	0%	0%	22.2		
63	Turmeric*					0	0	0%	0%	15.4		
64	Other spices*					0	0	0%	0%	48.8		
65	STORE-BOUGHT PREPARED SALADS											
66	Any store-bought prepared salads?*					0	0	0%	0%	14.5		

67	Potato salad (store-bought prepared)*					0	0	0%	0%	2.6		
68	Pasta salad (store-bought prepared)*					0	0	0%	0%	1.8		
69	Fruit salad/pre-cut fruit/fruit platter (store-bought prepared)*					0	0	0%	0%	3.1		
70	Store-bought salsa*					0	0	0%	0%	21.7		
71	FRUITS											
72	Mangoes					0	0	0%	0%	25.6		
73	Fresh mango					0	0	0%	0%	18.1		
74	Frozen mango					0	0	0%	0%	7.6		
75	Dried mango					0	0	0%	0%	3.9		
76	Papayas					0	0	0%	0%	3.9		
77	Fresh papaya					0	0	0%	0%	3.1		
78	Frozen papaya					0	0	0%	0%	0.4		
79	Dried papaya					0	0	0%	0%	0.2		
80	Pomegranate					0	0	0%	0%	7.1		
81	Fresh pomegranate (including seeds)					0	0	0%	0%	5.4		
82	Frozen pomegranate					0	0	0%	0%	0.8		
83	Avocado (including guacamole)					0	0	0%	0%	43.6		
84	Fresh avocado					0	0	0%	0%	40.1		

85	Frozen avocado					0	0	0%	0%	1.8		
86	Any melon					0	0	0%	0%	40.2		
87	Cantaloupe					0	0	0%	0%	22.4		
88	Fresh cantaloupe					0	0	0%	0%	20.8		
89	Frozen cantaloupe					0	0	0%	0%	0.7		
90	Honeydew melon					0	0	0%	0%	12.5		
91	Fresh honeydew melon					0	0	0%	0%	3.7		
92	Frozen honeydew melon					0	0	0%	0%	0.2		
93	Watermelon					0	0	0%	0%	27.1		
94	Fresh watermelon					0	0	0%	0%	25.6		
95	Frozen watermelon					0	0	0%	0%	1.0		
96	Peaches					0	0	0%	0%	17.4		
97	Fresh peaches					0	0	0%	0%	12.7		
98	Frozen peaches					0	0	0%	0%	3.9		
99	Nectarines					0	0	0%	0%	12.4		
100	Fresh nectarines					0	0	0%	0%	11.2		
101	Frozen nectarines					0	0	0%	0%	0.5		
102	Any berries					0	0	0%	0%	77.5		
103	Strawberries					0	0	0%	0%	60.2		
104	Fresh strawberries					0	0	0%	0%	52.4		

105	Frozen strawberries					0	0	0%	0%	17.9		
106	Dried strawberries					0	0	0%	0%	2.0		
107	Raspberries					0	0	0%	0%	37.8		
108	Fresh raspberries					0	0	0%	0%	30.8		
109	Frozen raspberries					0	0	0%	0%	10.5		
110	Dried raspberries					0	0	0%	0%	0.8		
111	Blueberries					0	0	0%	0%	51.8		
112	Fresh blueberries					0	0	0%	0%	38.6		
113	Frozen blueberries					0	0	0%	0%	22.1		
114	Dried blueberries					0	0	0%	0%	1.7		
115	Blackberries					0	0	0%	0%	17.7		
116	Fresh blackberries					0	0	0%	0%	13.1		
117	Frozen blackberries					0	0	0%	0%	5.3		
118	Dried blackberries					0	0	0%	0%	0.2		
119	Coconut					0	0	0%	0%	8.1		
120	Fresh coconut					0	0	0%	0%	2.6		
121	Frozen coconut					0	0	0%	0%	1.0		
122	Dried/shredded coconut					0	0	0%	0%	5.3		
123	Apples*					0	0	0%	0%	72.3		
124	Pears*					0	0	0%	0%	23.9		

125	Apricots*					0	0	0%	0%	4.6		
126	Plums*					0	0	0%	0%	12.7		
127	Citrus fruits*					0	0	0%	0%	65.0		
128	Cherries*					0	0	0%	0%	14.7		
129	Grapes*					0	0	0%	0%	52.3		
130	Bananas*					0	0	0%	0%	76.7		
131	Pineapple*					0	0	0%	0%	30.0		
132	Olives*					0	0	0%	0%	27.2		
133	Kiwi*					0	0	0%	0%	12.3		
134	Bag of mixed frozen fruit or berries					0	0	0%	0%	19.9		
135	Any frozen fruit*					0	0	0%	0%	24.2		
136	Frozen berries*					0	0	0%	0%	21.3		
137	Frozen fruit (not including berries)*					0	0	0%	0%	9.4		
138	Dried fruit*					0	0	0%	0%	33.2		
139	Fruit smoothies (at home or store-bought)					0	0	0%	0%	28.0		
140	Unpasteurized apple cider or fruit juice					0	0	0%	0%	16.5		
141	Unpasteurized fruit juice*					0	0	0%	0%	7.8		
142	NUTS & SEEDS											
143	Any nuts					0	0	0%	0%	74.1		

144	Peanuts (not including peanut butter)					0	0	0%	0%	34.1		
145	Peanut butter					0	0	0%	0%	52.5		
146	Almonds (excluding almond butter)					0	0	0%	0%	39.1		
147	Almond butter/spread					0	0	0%	0%	7.2		
148	Walnuts					0	0	0%	0%	24.0		
149	Hazelnuts (Filberts)					0	0	0%	0%	10.3		
150	Butter/spread containing hazelnuts					0	0	0%	0%	15.4		
151	Cashews					0	0	0%	0%	31.8		
152	Cashew butter/spread					0	0	0%	0%	1.7		
153	Pecans					0	0	0%	0%	17.1		
154	Other nuts					0	0	0%	0%	22.4		
155	Other nut paste, butter or spread*					0	0	0%	0%	18.3		
156	Any seeds					0	0	0%	0%	52.7		
157	Sunflower seeds					0	0	0%	0%	19.2		
158	Butter or paste containing sunflower seeds					0	0	0%	0%	4.1		
159	Sesame seeds					0	0	0%	0%	30.1		
160	Tahini, including home made hummus					0	0	0%	0%	14.3		

161	Tahini, halva or other products made from sesame seeds*					0	0	0%	0%	6.8		
162	Chia seeds/chia seed powder					0	0	0%	0%	16.4		
163	Flax seeds/flax seed powder					0	0	0%	0%	16.9		
164	Other seeds					0	0	0%	0%	20.1		
165	BEEF											
166	Any beef (not including deli-meat)					0	0	0%	0%	79.6		
167	Any ground beef					0	0	0%	0%	68.7		
168	Ground beef consumed raw or undercooked					0	0	0%	0%	2.8		
169	Any other ground beef*					0	0	0%	0%	44.3		
170	Any hamburgers					0	0	0%	0%	44.5		
171	Store-bought frozen beef patties					0	0	0%	0%	14.7		
172	Home-made hamburgers*					0	0	0%	0%	21.9		
173	Hamburgers from a restaurant or fast food establishment*					0	0	0%	0%	16.1		
174	Raw beef					0	0	0%	0%	4.3		
175	Steak					0	0	0%	0%	33.1		
176	Stewing beef					0	0	0%	0%	17.9		
177	Veal					0	0	0%	0%	6.1		
178	Beef sausage (excluding dried)					0	0	0%	0%	14.7		

179	Other whole-cut beef products					0	0	0%	0%	23.1		
180	PORK											
181	Any pork (not including deli-meat)					0	0	0%	0%	58.9		
182	Ground pork					0	0	0%	0%	15.3		
183	Pork sausage					0	0	0%	0%	29.3		
184	Pork pieces or parts					0	0	0%	0%	41.6		
185	Pork eaten raw or with pink still showing					0	0	0%	0%	3.5		
186	Ham (not including deli-meat)*					0	0	0%	0%	15.0		
187	Bacon*					0	0	0%	0%	27.2		
188	POULTRY											
189	Any chicken (not including deli-meat)					0	0	0%	0%	86.5		
190	Store-bought breaded chicken					0	0	0%	0%	33.1		
191	Store-bought breaded chicken purchased frozen					0	0	0%	0%	23.2		
192	Store-bought stuffed chicken products					0	0	0%	0%	7.1		
193	Store-bought stuffed chicken products purchased frozen					0	0	0%	0%	5.3		
194	Ground chicken					0	0	0%	0%	7.6		
195	Roasted whole chicken purchased from a store					0	0	0%	0%	24.8		

196	Whole chicken purchased raw and cooked at home					0	0	0%	0%	29.9		
197	Chicken pieces or parts					0	0	0%	0%	70.8		
198	Chicken sausage (excluding dried sausage)					0	0	0%	0%	3.5		
199	Chicken from a restaurant or fast food establishment*					0	0	0%	0%	21.0		
200	Any turkey (not including deli-meat)					0	0	0%	0%	13.0		
201	Ground turkey					0	0	0%	0%	4.2		
202	Turkey sausage					0	0	0%	0%	1.4		
203	Whole turkey					0	0	0%	0%	5.2		
204	Turkey pieces and parts					0	0	0%	0%	6.3		
205	Turkey bacon*					0	0	0%	0%	0.5		
206	Other poultry (not including deli-meat)					0	0	0%	0%	3.9		
207	DELI-MEAT											
208	Any deli-meat/cold cuts					0	0	0%	0%	50.0		
209	Chicken deli-meat					0	0	0%	0%	9.2		
210	Turkey deli-meat					0	0	0%	0%	16.3		
211	Ham deli-meat					0	0	0%	0%	36.2		
212	Beef deli-meat					0	0	0%	0%	10.8		

213	Other deli-meat					0	0	0%	0%	12.0		
214	OTHER MEAT / ANIMAL PRODUCTS											
215	Hot dogs					0	0	0%	0%	28.9		
216	Pâté/meat spread					0	0	0%	0%	8.0		
217	Any organ meats					0	0	0%	0%	4.2		
218	Veal or calf liver					0	0	0%	0%	1.4		
219	Veal or calf liver consumed raw or undercooked					0	0	0%	0%	0.1		
220	Other organ meat					0	0	0%	0%	1.5		
221	Goat					0	0	0%	0%	2.0		
222	Lamb					0	0	0%	0%	7.7		
223	Horse					0	0	0%	0%	0.4		
224	Any dried/cured meat products					0	0	0%	0%	19.4		
225	Hunted or farmed deer ¹					0	0	0%	0%	3.2		
226	Other hunted meats ¹					0	0	0%	0%	3.4		
227	Bologna*					0	0	0%	0%	8.5		
228	Salami*					0	0	0%	0%	11.3		
229	Pepperoni*					0	0	0%	0%	9.7		
230	Kielbasa*					0	0	0%	0%	2.9		
231	Sausage*					0	0	0%	0%	30.8		

232	Shawarma or donair					0	0	0%	0%	3.4		
233	FISH & SEAFOOD											
234	Any seafood					0	0	0%	0%	59.4		
235	Any fish					0	0	0%	0%	49.0		
236	Smoked fish					0	0	0%	0%	12.1		
237	Raw fish					0	0	0%	0%	12.5		
238	Any shellfish					0	0	0%	0%	28.8		
239	Mussels					0	0	0%	0%	4.6		
240	Clams					0	0	0%	0%	3.1		
241	Shrimp/prawns					0	0	0%	0%	25.9		
242	Any oysters					0	0	0%	0%	3.4		
243	Raw oysters					0	0	0%	0%	1.5		
244	Scallops*					0	0	0%	0%	3.5		
245	Crab*					0	0	0%	0%	2.9		
246	Lobster*					0	0	0%	0%	2.4		
247	EGGS											
248	Any eggs					0	0	0%	0%	88.1		
249	Raw or undercooked eggs					0	0	0%	0%	26.3		
250	DAIRY											
251	Ice cream					0	0	0%	0%	56.8		

252	Desserts containing milk or cream					0	0	0%	0%	46.0		
253	Unpasteurized dairy milk (not including cheese)					0	0	0%	0%	4.4		
254	Yogurt					0	0	0%	0%	67.0		
255	Pasteurized dairy milk*					0	0	0%	0%	74.7		
256	Powdered milk product*					0	0	0%	0%	2.6		
257	Whipped/whipping cream*					0	0	0%	0%	15.0		
258	Sour cream*					0	0	0%	0%	23.4		
259	CHEESE											
260	Any cheese					0	0	0%	0%	89.7		
261	Gouda					0	0	0%	0%	13.7		
262	Feta					0	0	0%	0%	30.0		
263	Brie, camembert or other soft cheese					0	0	0%	0%	24.1		
264	Cheese made from goats milk					0	0	0%	0%	12.1		
265	Any cheese made with unpasteurized milk					0	0	0%	0%	5.4		
266	Cheddar*					0	0	0%	0%	72.6		
267	Mozzarella*					0	0	0%	0%	47.6		
268	Parmesan*					0	0	0%	0%	40.1		
269	Other cheeses sold as blocks/wheels*					0	0	0%	0%	25.5		

270	Processed cheese*					0	0	0%	0%	36.1		
271	Blue-veined cheese*					0	0	0%	0%	5.6		
272	Cottage, ricotta or other fresh cheese*					0	0	0%	0%	13.1		
273	Goat/sheep milk cheese*					0	0	0%	0%	8.6		
274	DAIRY SUBSTITUTES											
275	Non-dairy milk					0	0	0%	0%	21.8		
276	Other non-dairy products/substitutes					0	0	0%	0%	16.3		
277	DRIED/PROCESSED/OTHER											
278	Any wheat flour					0	0	0%	0%	68.7		
279	Eat, taste or lick any uncooked or unbaked dough made with wheat flour					0	0	0%	0%	15.3		
280	Other flours					0	0	0%	0%	9.2		
281	Any plant-based meat substitutes					0	0	0%	0%	18.1		
282	Tofu					0	0	0%	0%	14.4		
283	Other plant based meat substitutes					0	0	0%	0%	6.1		
284	Hummus (excluding home-made)					0	0	0%	0%	24.4		
285	Dietary or nutritional supplement					0	0	0%	0%	16.4		
286	Meal replacement beverages					0	0	0%	0%	4.1		

287	Protein powder					0	0	0%	0%	11.5		
288	Probiotics					0	0	0%	0%	4.2		
289	Food or drinks containing cannabis					0	0	0%	0%	6.0		
290	Frozen pizza*					0	0	0%	0%	20.1		
291	Frozen pot pies*					0	0	0%	0%	3.6		
292	Frozen meals in a bag or box*					0	0	0%	0%	9.9		
293	Frozen snack foods/appetizers*					0	0	0%	0%	6.1		
294	Granola bars, power bars, or other protein bars*					0	0	0%	0%	37.5		
295	Chips or pretzels*					0	0	0%	0%	53.9		
296	Chocolate or chocolate-containing candy*					0	0	0%	0%	63.9		
297	Cold breakfast cereal*					0	0	0%	0%	54.3		
298	Hot breakfast cereal*					0	0	0%	0%	28.5		
299	Asian style foods*					0	0	0%	0%	27.4		
300	Indian style foods*					0	0	0%	0%	13.5		
301	Mexican style foods*					0	0	0%	0%	16.7		
302	Meal from a fast food restaurant*					0	0	0%	0%	53.6		
303	BABY FOODS											
304	Any baby formula*					0	0	0%	0%	23.1		
305	Liquid*					0	0	0%	0%	10.9		

306	Powder*					0	0	0%	0%	18.5		
307	Store-bought pureed baby food*					0	0	0%	0%	20.5		
308	Infant/toddler cereal*					0	0	0%	0%	22.9		
309	FOOD SHOPPING PRACTICES											
310	Meat from a butcher shop					0	0	0%	0%	24.4		
311	Food from farmer's market or farm					0	0	0%	0%	18.0		
312	Produce from a farmer's market or farm					0	0	0%	0%	12.4		
313	Eggs from a farmer's market or farm					0	0	0%	0%	9.7		
314	Meat from a farmer's market or farm					0	0	0%	0%	7.6		
315	Cheese or dairy products from a farmer's market or farm					0	0	0%	0%	3.8		
316	Food from a meal kit					0	0	0%	0%	4.1		
317	DIETS											
318	Always or sometimes eats organic produce					0	0	0%	0%	76.8		
319	Vegan diet					0	0	0%	0%	1.5		
320	Vegetarian diet					0	0	0%	0%	4.7		
321	Kosher diet					0	0	0%	0%	0.4		
322	Halal diet					0	0	0%	0%	2.1		

323	WATER											
324	Drank water supplied to residence					0	0	0%	0%	89.6		
325	Water consumed					0	0	0%	0%	0.0		
326	Municipal water					0	0	0%	0%	83.8		
327	Private well					0	0	0%	0%	12.5		
328	Trucked-in water					0	0	0%	0%	1.4		
329	Store-bought bottled water					0	0	0%	0%	37.7		
330	Cistern					0	0	0%	0%	0.9		
331	Untreated lake, spring or river water					0	0	0%	0%	1.3		
332	Other water source					0	0	0%	0%	5.6		
333	Swam in, wade or entered lake, river, pond or stream					0	0	0%	0%	6.4		
334	Raw water consumption*					0	0	0%	0%	2.6		
335	Swim or go into any water*					0	0	0%	0%	13.1		
336	Swim or go into any natural water*					0	0	0%	0%	4.0		
337	Ocean*					0	0	0%	0%	1.2		
338	Lake*					0	0	0%	0%	2.6		
339	River*					0	0	0%	0%	0.8		
340	Natural hot spring*					0	0	0%	0%	0.3		
341	Pool*					0	0	0%	0%	#REF!		

342	Hot tub*					0	0	0%	0%	9.7		
343	Recreational waterpark*					0	0	0%	0%	1.6		
344	Swim or go into a swimming facility in the last 4 weeks*					0	0	0%	0%	19.3		
345	ANIMAL CONTACT											
346	Any contact with animals, animal waste, habitat or food*					0	0	0%	0%	63.4		
347	Companion animals present in the home					0	0	0%	0%	53.8		
348	Any contact with companion animals					0	0	0%	0%	62.9		
349	Dog					0	0	0%	0%	49.0		
350	Cat					0	0	0%	0%	33.7		
351	Reptile or amphibian					0	0	0%	0%	2.5		
352	Reptile*					0	0	0%	0%	1.6		
353	Amphibian*					0	0	0%	0%	1.2		
354	Rodent					0	0	0%	0%	2.6		
355	Rabbit					0	0	0%	0%	2.4		
356	Hedgehog					0	0	0%	0%	0.2		
357	Bird					0	0	0%	0%	2.6		
358	Fish or aquarium*					0	0	0%	0%	4.5		

359	Handle pet waste or clean litter box/pet enclosure					0	0	0%	0%	33.5		
360	Contact with pet with diarrhea					0	0	0%	0%	2.5		
361	Handled any pet food or treats					0	0	0%	0%	48.6		
362	Handled any dry pet food					0	0	0%	0%	45.0		
363	Handled any canned/wet pet food*					0	0	0%	0%	12.1		
364	Handled any raw pet food (store-bought or home-made)					0	0	0%	0%	6.1		
365	Handled any raw treats derived from animal parts					0	0	0%	0%	7.3		
366	Handled any processed animal treats					0	0	0%	0%	28.8		
367	Handled any rodents for reptiles					0	0	0%	0%	0.4		
368	Handled any rodents or insects for reptiles*					0	0	0%	0%	1.3		
369	Handled any farm animals/livestock or their waste					0	0	0%	0%	7.0		
370	Cattle					0	0	0%	0%	2.0		
371	Poultry					0	0	0%	0%	3.3		
372	Pig					0	0	0%	0%	0.8		
373	Sheep or goat					0	0	0%	0%	1.6		
374	Horse (contact with)*					0	0	0%	0%	0.0		
375	Live on farm or country property					0	0	0%	0%	9.5		

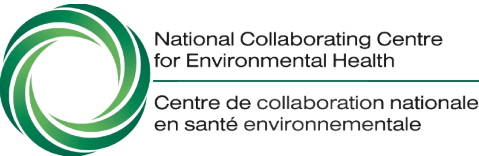
376	Visit or work on a farm, petting zoo or fair					0	0	0%	0%	5.3		
377	Visited any petting zoo*					0	0	0%	0%	1.1		
378	Visited any farm or barn*					0	0	0%	0%	6.9		
379	Visited any agricultural fair*					0	0	0%	0%	1.3		
380	Visited any pet store*					0	0	0%	0%	4.5		
381	0					0	0	0%	0%	no data		

*Foodbook 1 variable

1 Question only asked in provinces


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