



## Data Collection Worksheet

**Please Note:** The Data Collection Worksheet (DCW) is a tool to aid integration of a PhenX protocol into a study. The PhenX DCW is not designed to be a data collection instrument. Investigators will need to decide the best way to collect data for the PhenX protocol in their study. Variables captured in the DCW, along with variable names and unique PhenX variable identifiers, are included in the PhenX Data Dictionary (DD) files.

These questions are about the different kinds of foods you ate or drank during the PAST MONTH, that is, the past 30 days. When answering, please include meals and snacks eaten at home, at work or school, in restaurants, and anyplace else. \*Read text if the respondent needs further clarification about the information requested.

1. During the past month, how often did you drink 100% FRUIT JUICE, such as orange, mango, apple, and grape juices? Do NOT count fruit drinks. \*Read if necessary: INCLUDE only 100% pure juices. Do NOT include fruit drinks with added sugar, like Kool-Aid®, Hi-C®, lemonade, cranberry cocktail, Gatorade®, Tampico®, and Sunny Delight®.

00 [ ] Never

01 [ ] 1-3 times last month

02 [ ] 1-2 times per week

03 [ ] 3-4 times per week

04 [ ] 5-6 times per week

05 [ ] 1 time per day

06 [ ] 2 times per day

07 [ ] 3 times per day

08 [ ] 4 times per day

09 [ ] 5 or more times per day

97 [ ] Refused

99 [ ] Don't know

2. During the past month . . . How often did you eat FRUIT? COUNT fresh, frozen,

or canned fruit. Do NOT count juices. \*Read if necessary: Include fruits such as apples, bananas, applesauce, melon, berries, fruit salad, mangos, papayas, oranges, and grapes.

00 [ ] Never

01 [ ] 1-3 times last month

02 [ ] 1-2 times per week

03 [ ] 3-4 times per week

04 [ ] 5-6 times per week

05 [ ] 1 time per day

06 [ ] 2 times per day

07 [ ] 3 times per day

08 [ ] 4 times per day

09 [ ] 5 or more times per day

97 [ ] Refused

99 [ ] Don't know

3. During the past month, how often did you eat a green leafy or lettuce SALAD, with or without other vegetables? \*Read if necessary: INCLUDE spinach salads

00 [ ] Never

01 [ ] 1-3 times last month

02 [ ] 1-2 times per week

03 [ ] 3-4 times per week

04 [ ] 5-6 times per week

05 [ ] 1 time per day

06 [ ] 2 times per day

07 [ ] 3 times per day

08 [ ] 4 times per day

09 [ ] 5 or more times per day

97 [ ] Refused

99 [ ] Don't know

4. During the past month . . . How often did you eat FRENCH FRIES, home fries, or hash brown potatoes?

00 [ ] Never

01 [ ] 1-3 times last month

02 [ ] 1-2 times per week

03 [ ] 3-4 times per week

04 [ ] 5-6 times per week

05 [ ] 1 time per day

06 [ ] 2 times per day

07 [ ] 3 times per day

08 [ ] 4 times per day

09 [ ] 5 or more times per day

97 [ ] Refused

99 [ ] Don't know

5. During the past month . . . How often did you eat other WHITE POTATOES? COUNT baked potatoes, boiled potatoes, mashed potatoes and potato salad. \*Read if necessary: Do NOT include yams or sweet potatoes. INCLUDE red-skinned and Yukon Gold potatoes.

00 [ ] Never

01 [ ] 1-3 times last month

02 [ ] 1-2 times per week

03 [ ] 3-4 times per week

04 [ ] 5-6 times per week

05 [ ] 1 time per day

- 06 [ ] 2 times per day
- 07 [ ] 3 times per day
- 08 [ ] 4 times per day
- 09 [ ] 5 or more times per day
- 97 [ ] Refused
- 99 [ ] Don't know

6. During the past month . . . How often did you eat COOKED DRIED BEANS, such as refried beans, baked beans, bean soup, and pork and beans? Do NOT include green beans.

- 00 [ ] Never
- 01 [ ] 1-3 times last month
- 02 [ ] 1-2 times per week
- 03 [ ] 3-4 times per week
- 04 [ ] 5-6 times per week
- 05 [ ] 1 time per day
- 06 [ ] 2 times per day
- 07 [ ] 3 times per day
- 08 [ ] 4 times per day
- 09 [ ] 5 or more times per day
- 97 [ ] Refused
- 99 [ ] Don't know

7. During the past month . . . Not counting what you just told me about (lettuce salads, white potatoes, cooked dried beans), and not counting rice, how often did you eat OTHER VEGETABLES? \*Read if necessary: Examples of other vegetables include tomatoes, string beans, carrots, corn, sweet potatoes, cabbage, bean sprouts, collard greens, and broccoli.

- 00 [ ] Never
- 01 [ ] 1-3 times last month

- 02 [ ] 1-2 times per week
- 03 [ ] 3-4 times per week
- 04 [ ] 5-6 times per week
- 05 [ ] 1 time per day
- 06 [ ] 2 times per day
- 07 [ ] 3 times per day
- 08 [ ] 4 times per day
- 09 [ ] 5 or more times per day
- 97 [ ] Refused
- 99 [ ] Don't know

8. During the past month . . . How often did you have TOMATO SAUCES such as spaghetti sauce or pizza with tomato sauce?

- 00 [ ] Never
- 01 [ ] 1-3 times last month
- 02 [ ] 1-2 times per week
- 03 [ ] 3-4 times per week
- 04 [ ] 5-6 times per week
- 05 [ ] 1 time per day
- 06 [ ] 2 times per day
- 07 [ ] 3 times per day
- 08 [ ] 4 times per day
- 09 [ ] 5 or more times per day
- 97 [ ] Refused
- 99 [ ] Don't know

9. During the past month . . . How often did you have SALSA?

- 00 [ ] Never
- 01 [ ] 1-3 times last month
- 02 [ ] 1-2 times per week
- 03 [ ] 3-4 times per week
- 04 [ ] 5-6 times per week
- 05 [ ] 1 time per day
- 06 [ ] 2 times per day
- 07 [ ] 3 times per day
- 08 [ ] 4 times per day
- 09 [ ] 5 or more times per day
- 97 [ ] Refused
- 99 [ ] Don't know

### Scoring Procedures

For fruits and vegetables, a Pyramid serving was defined by the U.S. Department of Agriculture (USDA) in the 1992 Dietary Guidelines Food Guide Pyramid as:

Vegetables: 1 cup raw leafy, 1/2 cup of other vegetables, or 3/4 cup vegetable juice; and

Fruits: 1 whole fruit, 1/2 cup of cut-up fruit, or 3/4 cup fruit juice.

More recently, the 2005 Dietary Guidelines measure fruits and vegetables in cup equivalents. Scoring using both metrics is provided.

The following procedures are used to convert an individual's responses to an estimate of that individual's daily intake of servings of fruits and vegetables.

1. The frequency reported categorically on the questionnaire is converted to the number of times consumed per day, as shown in Table 1. In general, the midpoint of the frequency range was used.

<b>Table 1. Conversion of Frequency Response to Times per Day</b>
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Men							
100% fruit juice (P <sub>1</sub> )	2.000000	1.667500	1.335000	1.335000	1.334000	1.001000	1.001000
Fruit (P <sub>2</sub> )	1.301000	1.301000	1.229571	1.227333	1.168000	1.168000	1.052333
Salad (P <sub>3</sub> )	0.545000	0.708000	0.754500	0.750000	0.833500	0.750000	0.822500
Fried potatoes (P <sub>4</sub> )	2.000000	2.000000	1.773000	1.710000	1.400000	1.250000	1.250000
Other potatoes (P <sub>5</sub> )	2.000000	2.000000	1.999000	1.999000	1.914000	1.544000	1.508000
Dried beans (P <sub>6</sub> )	1.374000	1.047000	1.065000	1.227000	1.000000	1.000000	1.114000
Other Vegetables (P <sub>7</sub> )	0.750000	0.906000	0.974500	1.000000	1.000000	0.880000	0.833333
Tomato sauce (P <sub>8</sub> )	0.500000	0.541000	0.541000	0.812000	0.541000	0.541000	0.541000
Salsa (P <sub>9</sub> )	0.533000	0.533000	0.421500	0.386500	0.137000	0.266000	0.266000
Women							
100% fruit juice (P <sub>1</sub> )	1.500500	1.334000	1.334000	1.251250	1.019500	1.000500	1.000500
Fruit (P <sub>2</sub> )	1.168000	1.168000	1.168000	1.168000	1.150500	1.083833	1.000000



Salad (P <sub>3</sub> )	0.613500	0.572500	0.833333	1.000000	0.795500	0.625000	0.750000
Fried potatoes (P <sub>4</sub> )	1.481000	1.365500	1.272000	1.400000	1.000000	1.026000	1.000000
Other white potatoes (P <sub>5</sub> )	1.544000	1.544000	1.528000	1.544000	1.499000	1.516000	1.272000
Dried beans (P <sub>6</sub> )	0.964000	0.684000	0.800000	0.687000	0.822000	0.807000	1.000000
Other Vegetables (P <sub>7</sub> )	0.702200	0.779333	0.792500	0.788500	0.774000	0.833000	0.856750
Tomato sauce (P <sub>8</sub> )	0.541000	0.541000	0.273000	0.541000	0.500000	0.500000	0.500000
Salsa (P <sub>9</sub> )	0.274000	0.266000	0.322500	0.238250	0.266000	0.137000	0.137000

**Table 2b. Median Portion Size (P<sub>k</sub>) in Cup Servings\*\* per Mention by Gender and Age for Fruits and Vegetables**

Food Group	Age Group						
	18-27	28-37	38-47	48-57	58-67	68-77	78-99
<b>Men</b>							
100% fruit juice (P <sub>1</sub> )	1.499160	1.250580	1.000980	1.000980	1.000176	0.750735	0.750735
Fruit (P <sub>2</sub> )	0.999580	0.933450	0.867300	0.867300	0.867300	0.774916	0.657060

Salad (P <sub>3</sub> )	0.272700	0.353970	0.377235	0.374963	0.416640	0.375000	0.411323
Fried potatoes (P <sub>4</sub> )	0.721125	0.727700	0.641000	0.641000	0.548055	0.480750	0.499980
Other potatoes (P <sub>5</sub> )	1.000400	1.140030	0.999600	0.999600	0.999490	0.833175	0.754400
Dried beans (P <sub>6</sub> )	0.717550	0.551540	0.566720	0.612360	0.500250	0.502285	0.575360
Other Vegetables (P <sub>7</sub> )	0.387675	0.473920	0.499840	0.500240	0.499905	0.460585	0.416899
Tomato sauce (P <sub>8</sub> )	0.249900	0.271250	0.271250	0.406875	0.271250	0.271250	0.271250
Salsa (P <sub>9</sub> )	0.266430	0.266430	0.210897	0.195683	0.068480	0.133236	0.133236

### Women

100% fruit juice (P <sub>1</sub> )	1.124370	1.000960	1.000176	0.938130	0.764776	0.750728	0.750434
Fruit (P <sub>2</sub> )	0.749235	0.867300	0.844838	0.789970	0.742350	0.712640	0.620475
Salad (P <sub>3</sub> )	0.306788	0.286335	0.416625	0.499950	0.397688	0.312469	0.374963
Fried potatoes (P <sub>4</sub> )	0.509595	0.455110	0.448700	0.448700	0.394856	0.444260	0.444260

Other white potatoes (P <sub>5</sub> )	0.782020	0.876945	0.771260	0.771260	0.749700	0.771260	0.644235
Dried beans (P <sub>6</sub> )	0.492150	0.341550	0.430530	0.345763	0.430685	0.430530	0.500400
Other Vegetables (P <sub>7</sub> )	0.364468	0.395882	0.404303	0.408330	0.416913	0.436560	0.452214
Tomato sauce (P <sub>8</sub> )	0.271250	0.271250	0.136710	0.271250	0.249900	0.249900	0.249900
Salsa (P <sub>9</sub> )	0.136960	0.133236	0.163080	0.119187	0.133236	0.068480	0.068480

3. For Pyramid servings of fruits and vegetables, including and excluding French fries, for each gender, the estimated regression coefficients are listed in Table 3a.

<b>Table 3a. Estimated Regression Coefficients for Sum of Foods Predicting Servings of Total Fruits and Vegetables and Fruits and Vegetables Excluding French Fries, by Gender</b>		
<b>Parameter</b>	<b>Men</b>	<b>Women</b>
<b>Summary Variable with French fries</b>		
Intercept (b <sub>0</sub> )	0.704319	0.658819
b <sub>1</sub>	0.835532	0.796243
<b>Summary Variable excluding French fries</b>		
Intercept (b <sub>0</sub> )	0.729653	0.639540

b <sub>1</sub>	0.822694	0.804796
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For cups of fruits and vegetables (2005 MyPyramid definition), including and excluding French fries, for each gender, the estimated regression coefficients are listed in Table 3b.

<b>Table 3b. Estimated Regression Coefficients for Sum of Foods Predicting Cups of Total Fruits and Vegetables and Fruits and Vegetables Excluding French Fries, by Gender</b>		
<b>Parameter</b>	<b>Men</b>	<b>Women</b>
<b>Summary Variable with French fries</b>		
Intercept (b <sub>0</sub> )	0.529258	0.502480
b <sub>1</sub>	0.839721	0.792683
<b>Summary Variable excluding French fries</b>		
Intercept (b <sub>0</sub> )	0.559458	0.495205
b <sub>1</sub>	0.819797	0.794978

For both metrics, these regression coefficients are applied according to the following equation:

$$E (\text{Fruits and Veg}^{1/2}) = b_0 + b_1 (N_{FG1}P_1 + N_{FG2}P_2 + \dots + N_{FG9}P_9)^{1/2}$$

For men: Cube root of daily cup equivalents of fruits and vegetables = 0.529258 + 0.839721 (cube root of (Daily Frequency \* Gender/Age Specific Portion Size per Mention for 100% fruit juice + Daily Frequency \* Gender/Age Specific Portion Size per Mention for Fruit + ... + Daily Frequency \* Gender/Age Specific Portion Size per Mention for salsa))

For women: Cube root of daily cup equivalents of fruits and vegetables = 0.502480 + 0.792683 (cube root of (Daily Frequency \* Gender/Age Specific Portion Size per

Mention for 100% fruit juice + Daily Frequency \* Gender/Age Specific Portion Size per Mention for Fruit + ... + Daily Frequency \* Gender/Age Specific Portion Size per Mention for salsa))

\*Using 1992 Food Guide Pyramid definitions of servings.

\*\*Using 2005 MyPyramid definitions of cups of fruits and vegetables.

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Protocol source: <https://www.phenxtoolkit.org/protocols/view/50701>