

Data Collection Worksheet

Please Note: The Data Collection Worksheet (DCW) is a tool to aid investigators to integrate the collection of PhenX measures in your study. The PhenX measures that you selected and added to your Cart are presented in the DCW in alphabetical order. The DCW includes worksheets for data collection. Variables derived from the collected data are shown in the Data Dictionary (DD) with variable names and unique PhenX variable identifiers. The collection of DCWs produced by the Toolkit is not designed as a data collection instrument. Each investigator will decide how to integrate PhenX measures into data collection for their study.

The following is a summary version of the full National Health and Nutrition Examination Survey 2007-2008 protocol.

The full National Health and Nutrition Examination Survey 2007-2008 Fasting Plasma Glucose Test Procedures are part of the Oral Glucose Tolerance Test Procedure and can be found here: [2007-2008 NHANES Oral Glucose Tolerance Test Manual](#).

Exclusion Criteria:

Persons will be **excluded** from this component if they:

- Report that they are taking oral medications for diabetes;
- Report that they are taking insulin;
- Report that they are pregnant;
- Report that they have hemophilia;
- Report that they have received cancer chemotherapy in the last 3 weeks; and
- Report that they have not fasted at least 9 hours.

SP = Sample Person.

1. Did you eat or drink anything other than plain water after [insert time 9 hours prior here] last night?

Yes -> Exclude (Reason: 9-hour fast is not met).

No -> Continue

Refused -> Continue

Don't Know -> Continue

ALTERNATIVE:

When did you last have anything except water to eat or drink?

Date: __/__/__ Time: __:__ AM or PM

Confirmation Question:

Have you had any of the following since {insert time from 1 here}?

2.1. Coffee or tea with cream and sugar? [Include milk or non-dairy creamers.]

Yes If Yes, record time and date_____

No

2.2. Alcohol, such as beer, wine, or liquor?

Yes If Yes, record time and date_____

No

2.3. Gum, breath mints, lozenges, or cough drops, or other cough or cold remedies?

Yes If Yes, record time and date_____

No

2.4. Antacids, laxatives, or anti-diarrheals?

Yes If Yes, record time and date_____

No

2.5. Dietary Supplements such as vitamins and minerals? [Include multivitamins and single nutrient supplements.]

Yes If Yes, record time and date_____

No

If any of the above are Yes ->Exclude (Reason: 9-hour fast is not met).

3. Are you currently pregnant?

1 Yes ->Exclude (Reason: Pregnant)

2 No -> Continue

3 Don't Know -> Continue

4. {Is SP/Are you} now taking insulin?

1 Yes ->Exclude (Reason: Insulin)

2 No -> Continue

7 Refused -> Continue

9 Don't Know -> Continue

5. {Is SP/Are you} now taking diabetic pills to lower {his/her}/your} blood sugar? These are sometimes called oral agents or oral hypoglycemic agents?

1 Yes ->Exclude (Reason: Diabetic Pills)

2 No -> Continue

7 Refused -> Continue

9 Don't Know -> Continue

6. Do you have hemophilia? (exclusion from Phlebotomy)

1 Yes ->Exclude (Reason: Hemophilia)

2 No -> Continue

7 [] Refused -> Continue

9 [] Don't Know -> Continue

7. Have you received cancer chemotherapy in the past four weeks or do you anticipate such therapy in the next four weeks? (exclusion from Phlebotomy)

1 [] Yes ->Exclude (Reason: Chemotherapy)

2 [] No -> Continue

7 [] Refused -> Continue

9 [] Don't Know -> Continue

If the SP answers, "Yes," the SP is excluded from the Fasting Plasma Glucose test. If SP answer "No" or "Don't Know," the SP completes Fasting Plasma Glucose test.

Venipuncture

Venipuncture should generally be performed using the median cubital, cephalic, or basilic veins in the left arm unless this arm is unsuitable. If the veins in the left arm are unsuitable, look for suitable veins on the right arm. If the veins in the antecubital space on both arms are not suitable, then look for veins in the forearm or dorsal side of the hand on the left arm/hand and then the right arm/hand.

Editor's Note: Please review chapter 4 of the Laboratory Procedures Manual from the National Health and Nutrition Examination Survey 2007-2008 for a full description of Phlebotomy procedures: [2007-2008 NHANES Lab Manual](#).

Recording the Results of the Venipuncture Procedure

Immediately after completing the venipuncture, record the results of the blood draw, the reasons for a tube not being drawn according to the protocol, and any comments about the venipuncture.

Process the Sample for the Fasting Plasma Glucose Test

Editor's Note: Please review chapter 8 of the Laboratory Procedures Manual from the National Health and Nutrition Examination Survey 2007-2008 for a full description of Blood Processing procedures: [2007-2008 NHANES Lab Manual](#).

Centrifuge and separate the plasma from the 10 mL tube as soon as possible. Process the specimen even if the contents of the tube clot.

- Separate the plasma by centrifugation.
- Use a calibrated plastic transfer pipette to transfer at least 0.5 mL plasma.

- Determine if the plasma is hemolyzed, turbid, lipemic, or icteric. If so, enter a comment to describe the plasma.
- Close all vessels secured to prevent leakage and evaporation.

Lab Assay for Fasting Plasma Glucose

The Diabetes Working Group recommends that glucose concentration be determined according to a hexokinase-mediated reaction such as the one developed by the University of Minnesota for use in the National Health and Nutrition Examination Survey: [2007-2008 NHANES Fasting Glucose Lab Assay](#).

Reference Ranges:

Fasting plasma glucose concentration normally ranges between 60-100 mg/dL Non-fasting glucose concentration normally ranges between 60-139 mg/dL

Note from the Diabetes Working Group: The investigator should record the reason(s) a sample person is excluded from the test.

8. Exclusion Criteria:

Please mark reason for exclusion

- Taking oral medications for diabetes
- Taking insulin
- Pregnant
- Hemophilia
- Received cancer chemotherapy in the last 3 weeks
- Has not fasted at least 9 hours.
- None - proceed with blood draw

9. Was blood drawn?

- Yes
- No - Record reason below

9.1 Was full amount obtained?

Yes

No - Record reason below

9.2 Record any comments about the blood draw, including any reasons for the tube not being drawn according to the protocol.

10. Record any comments about the sample during processing.

11. Make and manufacturer of the equipment used to perform the hexokinase-mediated reaction

12. Repeatability of the assay: _____

13. Coefficient of variation for the assay: _____

14. Glucose concentration: _____ (mg/dL)

15. Was the participant fasting?

Yes

No

Protocol source: <https://www.phenxtoolkit.org/protocols/view/140801#Source>