



## 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.

**Abdominal (Waist) Circumference (ages 2 years and older):** Follow the procedures below to obtain this measure: This measurement should be taken on bare skin.

1. Mark the measurement site: Stand on the participant's right side. Palpate the hip area to locate the right ilium of the pelvis. You may ask the participant to locate his/her ilium before palpation. With the cosmetic pencil, draw a horizontal line just above the uppermost lateral border of the right ilium. Cross this mark at the midaxillary line, which extends from the armpit down the side of the torso. Exhibit 1 shows the anatomical location of the abdominal waist at the ilium. Repeat the same process on the participant's left side.
2. Take the measurement: Make sure the participant does not inhale while his/her waist circumference is being measured and that the tape is not twisted. Wrap the tape measure around the individual's waist as you would a belt, making sure that the zero end of the measure is at the beginning of the circumference. A retractable, tension-controlled steel measuring tape is used. When measuring the waist, be sure to position the tape in a horizontal plane at the level of the measurement mark. A wall mirror is useful to view the tape to ensure the horizontal alignment of the tape. Another person positioned on the opposite side of the participant should check that the tape sits parallel to the floor and lies snug but does not compress the skin. If a mirror or other person is not available, check the horizontal alignment of the tape before taking the measurement. Always position the zero end of the tape below the section containing the measurement value. Exhibit 1 demonstrates the correct placement of the tape at the ilium. Take the measurement to the nearest 0.1 cm at the end of the participant's normal expiration.
3. Remove the tape measure and record the result.
4. Repeat the measurement.

Note: Tools are available that include a retractable tape with an anchoring pin that fits into the handle. These tools also assist the participant to lightly cinch the tape. If the investigator uses these tools, the protocol should be altered slightly to

comply with directions of the manufacturer. See protocol B for use of this tool when measuring a different waist circumference.

Note: Detailed videos illustrating this procedure can be found on the NHANES website at:

[http://www.cdc.gov/nchs/nhanes/nhanes3/anthropometric\\_videos.htm](http://www.cdc.gov/nchs/nhanes/nhanes3/anthropometric_videos.htm) Accessed January 10, 2015. Note: Hospital gown or correct underclothing should be worn by the participant before measurement.

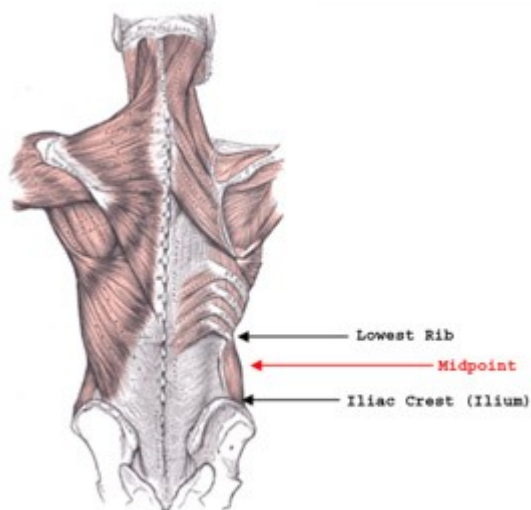


Exhibit 1. Location of Measurement Landmarks between the Lowest Rib and Iliac Crest (Ilium).

Note: Graphic from the "For Good Measure" Study. Personal Communication, M. Forman. Exhibit 1 displays the anatomical features that are referenced by the various waist circumference measurement protocols.

Protocol source: <https://www.phenxtoolkit.org/protocols/view/21601>