

## 3.5 Clinic Examinations

### 3.5.1 Anthropometry

#### I. PURPOSE

Anthropometry was obtained in each of the previous MESA exams. The purpose is the same as for previous exams.

#### II. MATERIALS AND EQUIPMENT

- Stadiometer (Accu-Hite Measure Device with level bubble) (height ruler with triangle level is used at some centers)
- Detecto Platform Balance Scale in lbs/kg
- Gulick II 150 cm anthropometric tape
- Full length mirror
- Four 50-pound weights (certified prior to first MESA visit) to calibrate scale

#### III. METHODS

Methods for completing the Anthropometry portion of Exam 4 are the same as in Exam 3. Some important points are reiterated here.

##### General Instructions:

For all measurements, participants should wear light clothing but no shoes (thin socks or “pillow slippers” OK). Have participants completely empty their pockets and remove excessive amounts of jewelry that could affect the weight measurement. Provide lockers with locks for valuables.

Pregnant women should not be measured, regardless of gestational stage (check exclusion criteria for pregnancy). The Clinic Coordinator should ascertain pregnancy status, both for measurements and for subsequent coronary calcification measurement.

##### Specific Instructions:

1. Standing Body Height ~ procedure is the same as for Exams 1–3.
  - 1.1 Equipment
    - Stadiometer (Accu-Hite Measure Device with level bubble) (height ruler with triangle level used at some centers is adequate)
  - 1.2 Before measuring height, make sure the floor is level, the wall is at a 90 degree angle to the floor, the wall is straight, and the Stadiometer is mounted perpendicular to the floor.
  - 1.3 For accurate measurement of height, the participant must be standing in a vertical plane. Please refer to the Baseline Exam manual for details. *Record the results, to the nearest tenth (0.1) of a cm, in Box 1a on the Anthropometry Form.*
  - 1.4 If any modification was made to obtain height, *bubble in “yes” to the question, “**Was there a modification in protocol?**”*
2. Body Weight ~ procedure is the same as for previous exams.

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### 2.1 Equipment

- Detecto Platform Balance Scale in lbs/kg

2.2 Always balance the scale so that the indicator is at zero when no weight is on the scale. The scale should be on a firm, level surface. Instruct the participant to stand in the middle of the platform of the balance scale, with head erect and eyes looking straight ahead. Adjust the weight on the indicator until it is balanced. *Record the results, to the nearest 0.5lbs, in Box 2a.*

2.3 If any modification were made to obtain weight, *bubble in “yes” to the question, “Was there a modification in protocol?”*

2.4 For detailed instruction or questions, please see the “Baseline Exam MOP”.

### 3. Girth Measurements ~ procedure is the same as for Exam 1.

#### 3.1 Equipment

- Gulick II 150 cm anthropometric tape
- Full length mirror

#### 3.2 Technique

- Do *not* take abdominal and hip girth measurements over loose clothing. It is ok if taken over light well-fitted clothes.

#### 3.3 Abdominal Girth

Apply a Gulick II anthropometric tape horizontally at the level of the umbilicus and instruct the participant to breathe normally. Move to the participant’s right side to take the measurement; do not take this measurement from the front. Be sure to keep the tape horizontal while making the measurement; use the wall-mounted mirror to assure horizontal placement on all sides.

*Round abdominal girth measurement to the nearest 0.1cm and record in Box 3a.  
If the circumference exceeds 150 cm, record “yes” for the question, “Was there a modification in protocol?”*

#### 3.4 Hip Girth

Take the hip girth measurement from the participant’s right side; do not take this measurement from the front. Instruct the participant to stand with his/her feet together. Measure hip girth at the maximum circumference of the buttocks. Check to see that the tape is level in front and back.

*Round hip girth measurement to the nearest 0.1cm and record in Box 3b.  
If the circumference exceeds 150 cm, record “yes” for the question, “Was there a modification in protocol?”*

### 4. Comments/Modifications to the Protocol

*If you have comments or if there have been modifications to the protocol as described above, answer “yes” to question 4 on the Anthropometry Form and record comments in the space*

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*provided. If there are no comments or modifications, answer “no” to question 4.*

### 5. Completing the “For MESA Field Center Use Only” section

Make sure to record the Technician ID#, Reviewer ID#, and Data Entry ID# in these fields at the bottom of the form.

### 6. Quality Control ~ Calibration Check of Scales and Equipment Check

#### 6.1 Equipment:

- Four 50-pound weights (certified prior to first MESA visit) to calibrate scale
- Gulick II anthropometric tapes

#### 6.2 Check scales for accuracy on a monthly basis.

6.21 Place two weights on the scale and record the numeric value obtained in the “Light Poise” column of the “Scale Calibration Checklist.” Add two more weights and record the numeric value obtained in the “Heavy Poise” column.

6.22 The values obtained should be within  $\pm 1.0$  pound of the expected weight. If either value exceeds this limit, the scale must be calibrated by the manufacturer or by the appropriate institution personnel.

6.23 When the scale is not in use, keep it balanced at 300 pounds. This keeps the tension off the internal spring mechanism.

#### 6.3 Examine anthropometry tape measures on a weekly basis for sign of wear.