



Anthropometry

Exam 7 Central Training

Anthropometry

Measurements in the MESA-MIND Ancillary Study:

1. Standing Body Height
2. Body Weight
3. Girth Measurements:
 - a) Abdominal Girth
 - b) Hip Girth

Equipment

Height

- Stadiometer with movable head piece

Weight

- Detecto Platform Balance beam scale

Girth

- Flexible measuring tape, Gulick II 150/250 cm
- Wall-mounted mirror

Equipment Calibration

- Four 50-pound weights

Stadiometer and Balance Beam Scale



Preparation of Participant

- Preferably before venipuncture
- Light clothing should be worn
- Remove shoes
- Remove excessive jewelry

Height Measurement

Eligible: All participants except those who have difficulties standing steady

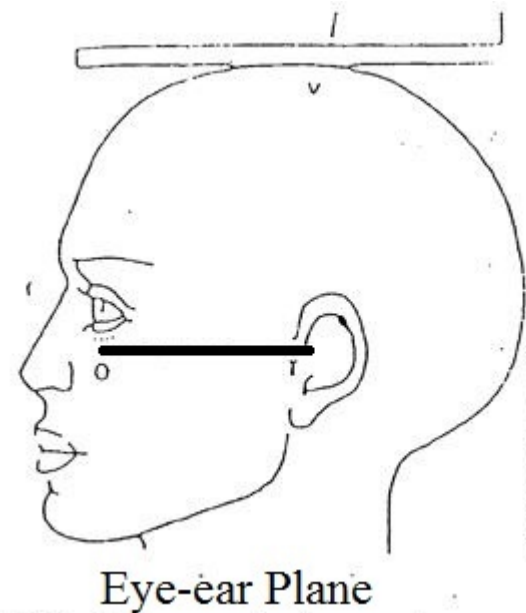
Procedure:

1. Check the level bubble of the stadiometer
2. Have participant stand straight against the wall and feet together
3. Place the headboard over the crown of the head.
4. Record the result to the nearest 0.1 cm

Height Measurement

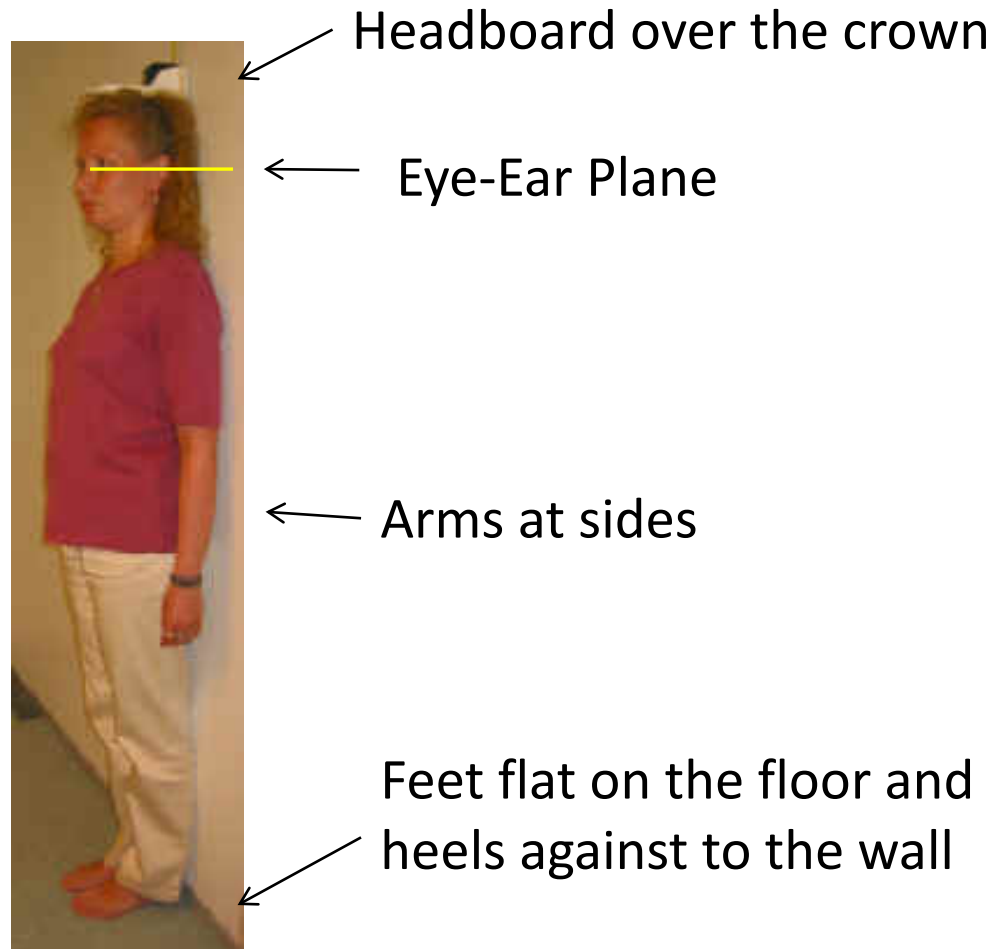
Frankfort Plane

A plane passing through the inferior margin of the orbit (the bony socket containing the eye) and the most forward point in the supratragal notch (upper margin of the hole in the ear)



Position for Height Measurement

Have participant stand with their back to the Stadiometer



Weight Measurement

Eligible: All participants except those who have difficulties standing steady

Procedure:

1. Balance the scale with the indicator at zero
2. Have participant stand in the middle of the platform of the balance
3. Adjust the weight on the indicator until it is balanced (arrows aligned)
4. Record the result to the nearest 0.5 pounds

Weight Measurement

Always have the indicator of the scale at zero when no weight is on the scale



Participant should stand in the middle of the platform

Height and Weight

Safety and Accurate Measuring

- Some participants may have balance issues. Be sure you are prepared to steady them as they step up and down from the scale.
- Participants can stand sideways on the scale if they are uncomfortable or unsafe facing forward.
- Weight measured with prosthetics on
- As participants move out from under the stadiometer, watch to be sure they don't bump the slider up as they step out.

Height and Weight Data Entry Screen

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Actions: [Download PDF of instrument\(s\)](#) [VIDEO: Basic data entry](#)

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Exam 7

Anthropometry

1. Height (to the nearest 0.1 cm)

a. cm
* must provide value

b. Was there a modification in protocol? Yes No reset
* must provide value

2. Weight (to the nearest 0.5 pound)

a. lbs
* must provide value

b. Was there a modification in protocol? Yes No reset
* must provide value

Girth Measurements



Gulick II anthropometric tape

Wall-mounted mirror



Waist and Hip Measurement

- Do not measure over loose-fitting clothing. Light, fitted clothing is fine.
- Check both the mirror and the part of the body facing you to ensure that the tape is horizontal all the way around.

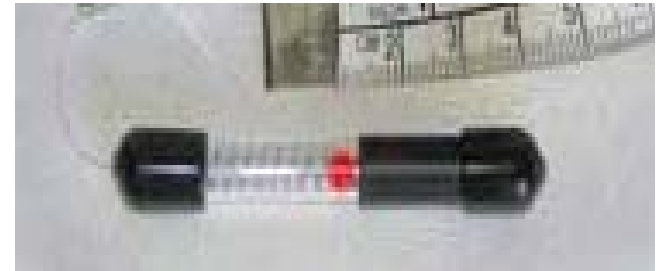
Measure

- Waist : at the level of the umbilicus
- Hip: at the maximum circumference of the buttocks
- Round girth measurement to the nearest 0.1cm



Measurement Issues

- For very large participants, it can be difficult to wrap the tape around the waist and hip. It is permissible to ask the participant to hold the end of the tape while you walk around him or her.
- If the 150 cm tape is not adequate to measure a large participant, be sure to have the 250 cm tape handy so you can be sensitive about using the larger tape.
- For consistency and standardization, be sure the spring casing of the tape shows just one red ball.



Girth Measurement Data Entry Screen

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Exam 7

Anthropometry

3. Girths (to the nearest 0.1 cm)

a. Waist: cm
* must provide value

b. Hip: cm
* must provide value

c. Was there a modification in protocol? Yes No
* must provide value

[reset](#)

Recording Values

- Enter values carefully – once the participant leaves, the numbers cannot be checked
- The software will check values for plausibility and alert you of questionable values
- To continue after an implausible value is detected, you can either confirm or correct the value
- Record any modifications to protocol

Calibration Check

1. Balance scales:
 - Monthly check using the 2 and 4 weights
2. Anthropometry tape measures:
 - Weekly check for sign of wear