

Anthropometric Procedures Video: Height

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The standing height or stature measurement is an assessment of maximal vertical size.

This measure is for persons who are able to stand unassisted.

The analogous measure for children less than three years of age is recumbent length.

Standing height is measured with a fixed stadiometer with a vertical backboard, a fixed floorboard, and movable headboard.

Hair ornaments, jewelery, buns, braids and cornrows should be moved or removed from the top of the head in order to measure stature properly.

The person stands on the floorboard with the heels of both feet together, touching the base of the vertical board.

The toes are pointed slightly outward at approximately a 60 degree angle.

Body weight is evenly distributed with both feet flat on the floor.

The technician checks the position of several points of body contact with the vertical board.

The first contact point is the heels, followed by the buttocks, the scapula or shoulder blades, and finally the back of the head.

Depending on the overall body conformation of the individual, all points may not touch.

In such case, the trunk of the body should be positioned vertically above the waist with the arms and shoulders relaxed.

The head should be aligned in the Frankfort horizontal plane.

The head is in the Frankfort Plane when the horizontal line from the ear canal to the lower border orbit of the eye is parallel to the floor and perpendicular to the vertical backboard.

Many people will assume this position naturally, but for some it may be necessary to make a minor adjustment.

If required the technician may gently tilt the head up or down until proper alignment is achieved with the eyes looking straight ahead.

Once correctly positioned the headboard is lowered.

The person is instructed to take a deep breath and stand as tall as possible.

A deep breath allows the spine to straighten yielding a more consistent and reproducible stature measurement.

The headboard is positioned firmly on top of the head with sufficient pressure to compress the hair.

The measurement is read in centimeters and recorded to the nearest millimeter.

The person then relaxes and steps away from the stadiometer.

Some people may have conditions that will interfere with the specific procedures for measuring stature.

One of the more common conditions encountered is kyphosis.

Kyphosis is a forward curvature of the spine that appears as a humped or crooked back condition.

Kyphosis most frequently occurs in the elderly where the condition is referred to as Dowager's Hump in women.

In these cases it is important to get the best measure possible according to the protocol.

It's also important to make a notation of the person's condition.

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A recumbent length measurement is taken on children ages three years and younger.

The equipment used for this measure is a device with a fixed head piece, a horizontal back piece, and movable foot piece.

Placing infants and small children in a recumbent position frequently generates a sense of insecurity and, consequently, invokes a crying response.

When measuring recumbent length, the parent or other caretaker of the child is placed in the middle between the technician and the assistant.

The parent encourages and comforts the child by making eye contact, talking to, and, if necessary, holding the hands of a restless child.

The assistant supports the child's head.

Similar to the procedure for standing height, the child's head is placed in the Frankfort Plane.

Gentle traction is applied to bring the top of the head into contact with the fixed head piece.

The child's head must be firmly held in this position by gently cupping the palms of the hands over the ears and holding the head in proper alignment.

Simultaneously, the technician aligns the child's legs by placing one hand gently but firmly over the knees.

The toes point directly upward with the soles of the feet perpendicular to the horizontal backpiece of the measuring device.

Gentle pressure is applied at the knees to keep the legs straight.

The technician then slides the movable footpiece to rest firmly against the child's heels.

As quickly as possible, the measurement is recorded in centimeters on the measuring indicator to the nearest millimeter.

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Sitting height is a measure of the trunk of the body from the buttocks to the top of the head when the subject is sitting upright.

To record this measure, the stadiometer and a specially constructed box of a known height are used.

The subject sits on the box with a posterior aspect of the buttocks, the shoulder blades, and the back of the head touching the vertical backboard of the stadiometer.

Similar to the procedure for standing height the head is positioned in the Frankfort Plane.

The subject is instructed to take in a deep breath and sit up as tall as possible.

The head piece of the stadiometer is lowered to the top of the head and the hair is compressed.

The reading is taken to the nearest millimeter.