



Designation: **D5219—09 D5219 – 09<sup>ε1</sup>**

## Standard Terminology Relating to Body Dimensions for Apparel Sizing<sup>1</sup>

This standard is issued under the fixed designation D5219; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

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<sup>ε1</sup> NOTE—Editorial corrections were made to some of the Figure references in August 2014.

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### 1. Scope

- 1.1 This standard is a compilation of terminology related to the body dimensions for necessary apparel sizing.
- 1.2 For definitions of other textile terms, refer to Terminology [D123](#).
- 1.3 The terms are listed in alphabetical order regardless of whether they are horizontal or vertical measurements. The three dimensional Avatars were created by Alvanon Inc. See [Figs. 1-18](#).

### 2. Referenced Documents

- 2.1 *ASTM Standards*:<sup>2</sup>  
[D123 Terminology Relating to Textiles](#)
- 2.2 *ISO Standards*:<sup>3</sup>  
[ISO 3635 Size Designation of Clothes, Definitions and Body Measurement Procedures](#)  
[ISO 8559 Garment Construction and Anthropometric Surveys—Body Dimensions](#)

### 3. Terminology

#### 3.1 *Anatomy*:

- acromion**, *n*—that part of the shoulder blade located at the end of the spine, which articulates with the collarbone. (See also **shoulder joint**.) (See [Fig. 2](#).)
- ankle**, *n*—the joint between the foot and the lower leg. (See [Fig. 1](#).)
- apex**, *n*—the greatest protrusion of the breast as seen from the side.
- armpit**, *n*—the hollow under the junction of the arm and the shoulder. (See [Fig. 1](#).)
- back-break point**, *n*—the location on the back of the torso where the arm separates from the body (See [Fig. 2](#).)
- cervicale**, *n*—the prominent point of the seventh or lowest neck vertebra at the back of the torso.

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<sup>1</sup> This terminology is under the jurisdiction of ASTM Committee [D13](#) on Textiles and is the direct responsibility of Subcommittee [D13.55](#) on Body Measurement for Apparel Sizing.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036.

#### DISCUSSION—

The cervicale is identified by being more prominent when the head is bent forward; however, cervicale height measurements are made only when the head is erect. (See [Fig. 2](#).)

- crotch**, *n*—the lowest point of the torso where the legs separate. (See [Fig. 1](#).)
- crown**, *n*—the top of the head. (See [Fig. 1](#).)
- elbow**, *n*—the joint that articulates between the upper arm and the lower arm. (See [Fig. 1](#).)
- front-break point**, *n*—the location on the front of the torso where the arm separates from the torso. (See [Fig. 1](#).)

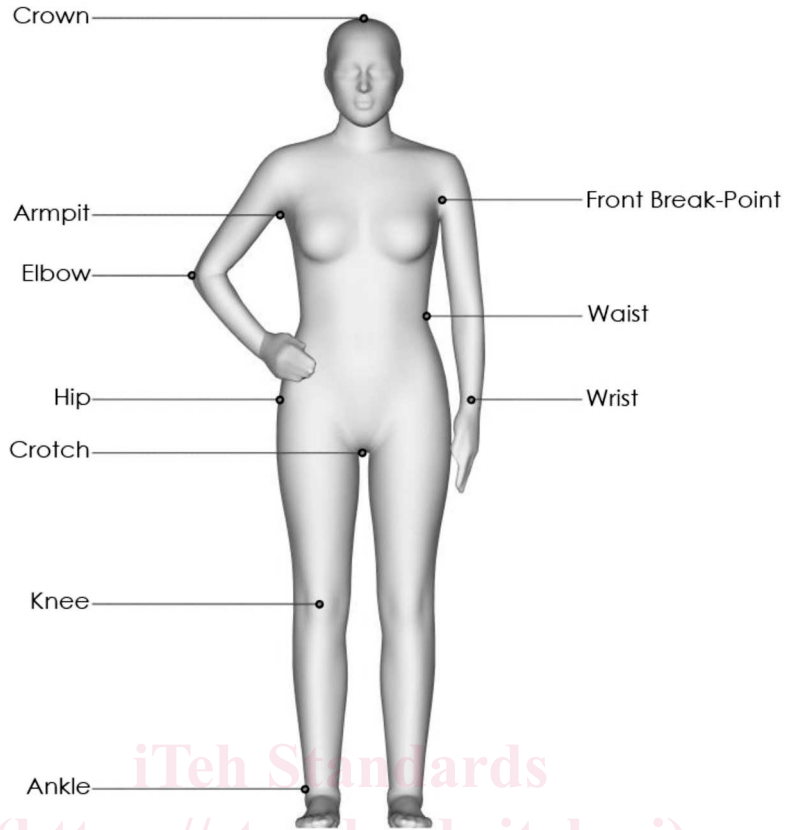


FIG. 1 Body Measurements

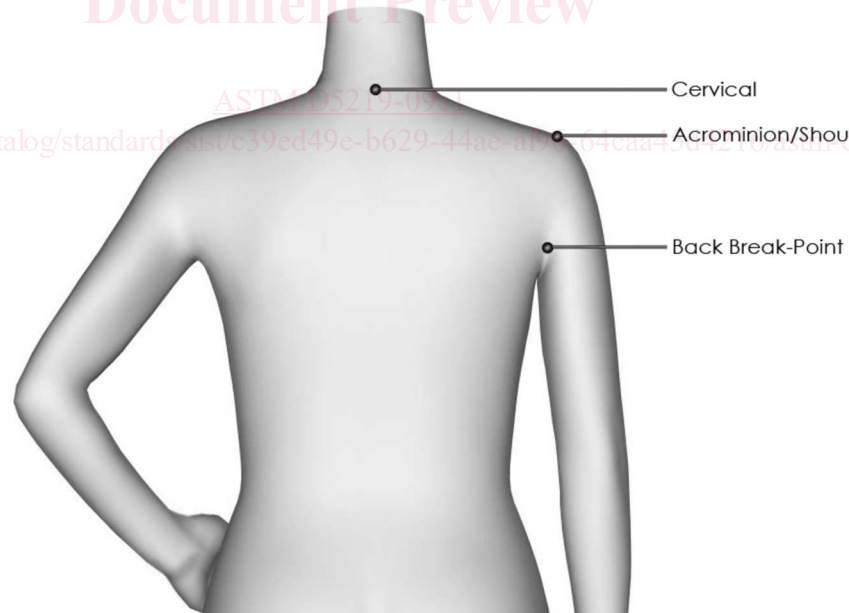


FIG. 2 Upper Back Measurements

**hip, *n***—the laterally projecting region formed by the lateral parts of the pelvis and the upper part of the femur together with the flesh covering them. (See Fig. 1.)

**knee, *n***—the joint between the lower and upper leg. (See Fig. 1.)

**shoulder joint, *n***—the juncture of the collarbone and the shoulder blade.

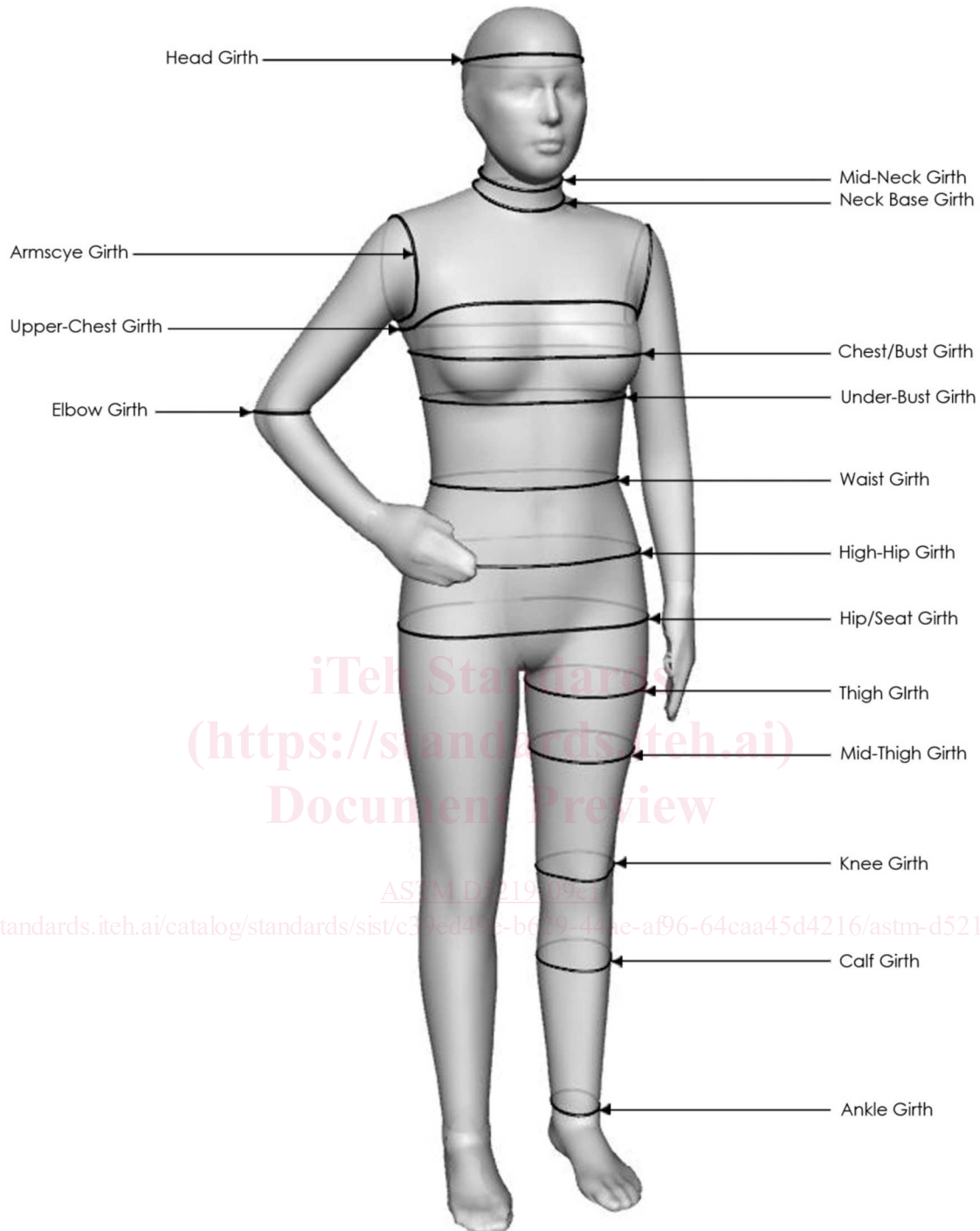


FIG. 3 Body Measurements

DISCUSSION—

The outer end of the collarbone or clavicle pivots against the acromion which in turn pivots against the humerus or upper arm bone in the arm. These bones form the shoulder girdle. (See also **acromion**.) (See Fig. 2.)

**waist, n**—the part of the torso at the location between the lowest rib and hip identified by bending the torso to the side. (See Fig. 1.)

**wrist, n**—the joint that articulates between the end of the lower arm and the hand. (See Fig. 1.)

3.2 Anthropometry:

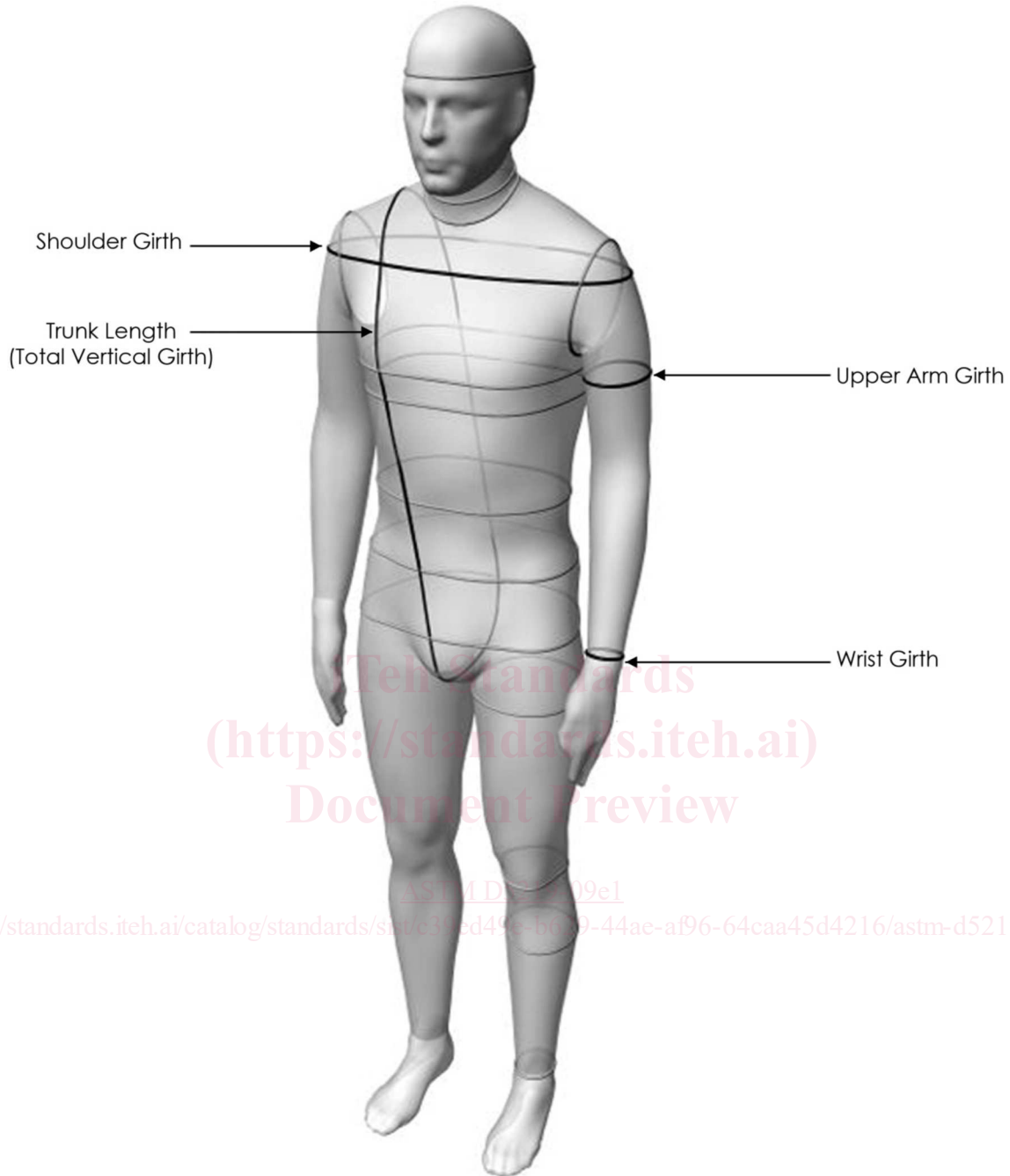


FIG. 4 Upper Body Measurements

**body measurements,  $n$** —a standardized distance between two specified points on the human anatomy.

DISCUSSION—

Body measurements generally are based on standardized values from statistical studies of large populations.

3.3 *Body Measurements:*

**across back shoulder width,  $n$** —the horizontal distance across the back from the top of one shoulder joint to the top of the other shoulder joint, taken with the arms down. (See Fig. 10.)

**across front shoulder width,  $n$** —the horizontal distance across the front from the top of one shoulder joint to the top of the other shoulder joint, taken with the arms down. (See Fig. 11.)

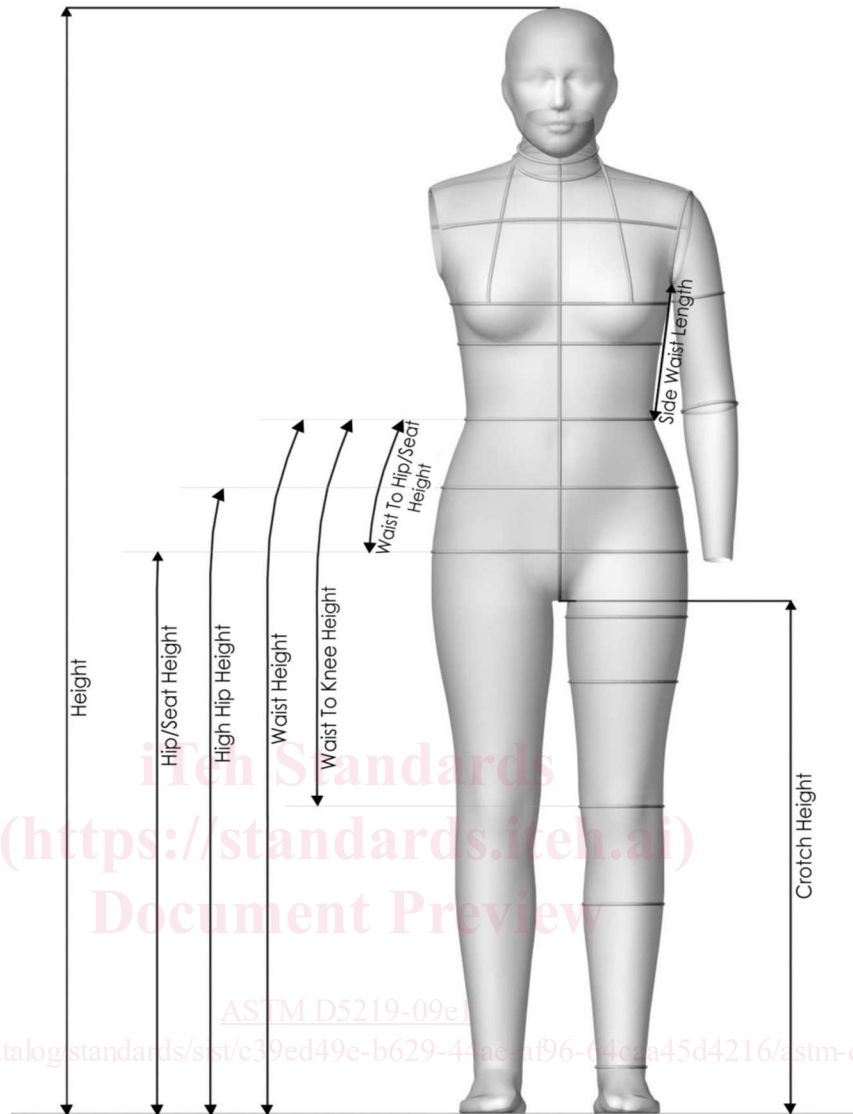


FIG. 5 Upper Body Measurements

**ankle girth**, *n*—the maximum horizontal circumference of the ankle, taken over the greatest prominence of the anklebones. (See Fig. 3.)

**ankle height**, *n*—the vertical distance from the prominence of the outer ankle bone to the floor, taken with subject standing and without shoes. (See Fig. 6.)

*ankle height (infant special case)*, *n*— the straight distance from the prominence of the outer ankle bone to the soles of the feet, taken with subject lying down flat with legs extended and the foot positioned at 1.57 rad (90°) to the leg.

**arm length**, *n*—the distance from the top of the shoulder joint along the outside of the arm over the elbow to the prominent wrist bone, taken with the arm bent (1.57 rad or 90°) and the hand placed on the hip. (See Fig. 11.)

**armscye girth**, *n*—the circumference taken from the shoulder joint through the front break-point, the armpit, the back break-point and to the starting point, taken with the arms down. (See Fig. 3.)

**back width**, *n*—the horizontal distance across the back from back break-point to back break-point over the shoulder blades, taken with the arms down. (See Fig. 10.)

**body weight**, *n*—the weight as measured on a calibrated scale taken with the subject in undergarments.

**bust point to bust point (halter)**, *n*— the horizontal distance from bust apex around the back of the neck to bust apex, taken with the arms down. (See Fig. 9.)

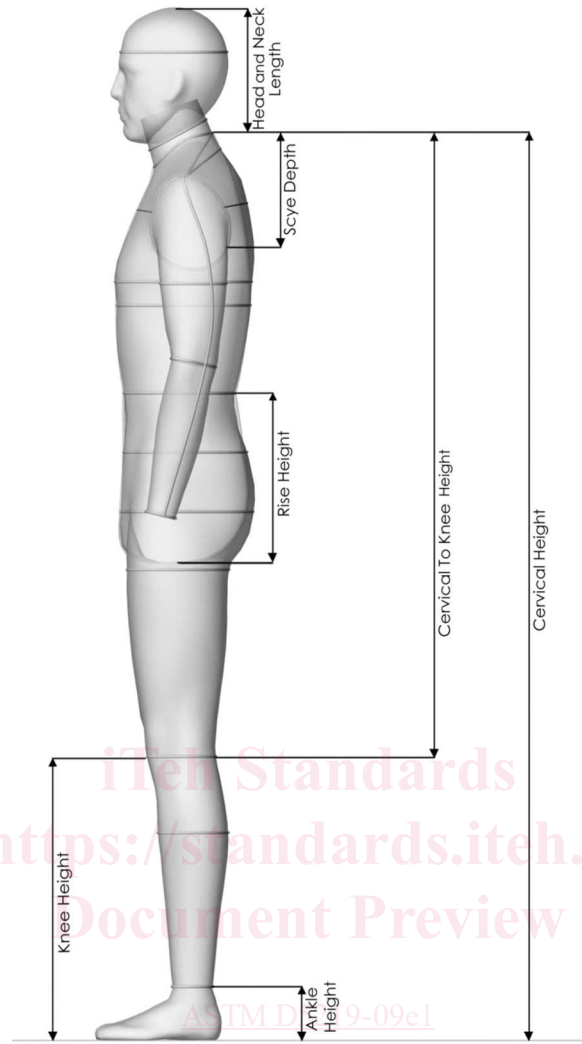


FIG. 6 Upper Body Measurements

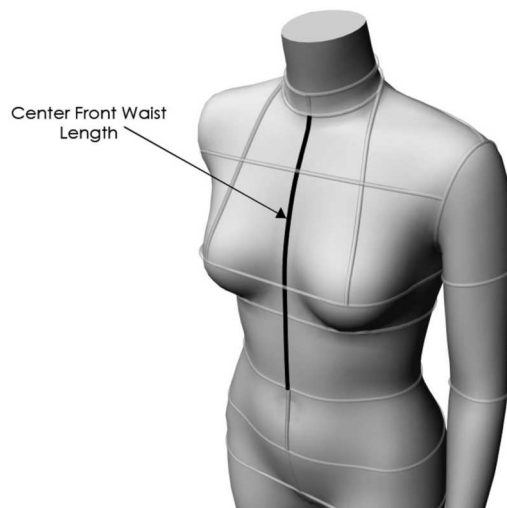


FIG. 7 Center Front Waist Length

**bust point to bust point,  $n$** —the horizontal distance from bust apex to bust apex, taken with the arms down. (See Fig. 9.)  
**calf girth,  $n$** —the maximum horizontal circumference of the lower leg, taken between the knee and the ankle. (See Fig. 3.)